

# Hubbell Continues the Tradition by



- Hubbell inSIGHT Phase Indicating Disconnect Switches
- Non-Metallic Labelless Circuit-Lock® Switched Disconnect Enclosures
- Disconnects with Jog Switch
- Advantage<sup>™</sup> Series Switch-Rated IEC Pin and Sleeve Floor Boxes
- Watertight Pin and Sleeve Devices
- Corrosion Resistant Devices
- Low Profile Devices

- Meet Energy Conservation Codes and Standards
- Reduce Energy Consumption
- Wired or Wireless Applications
- Integration with Centralized or Distributed Control Systems



For more than a century, Hubbell Wiring Device-Kellems has offered distributors, end-user customers and specifiers the electrical and electronic wiring devices, wire management systems and specialized wiring products and solutions needed for industrial, institutional, commercial and residential markets.

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HUBBEL

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# Focusing on Safety and Efficiency



- SystemOne 4 inch Adjustable Recessed Floor Boxes
- Hubbell SystemOne Floor Boxes and Fire-Rated Poke-Throughs
- Countertop Pop-Up Receptacles
- Table Top Boxes
- Pre-Wired USB Pop-Up Boxes
- Pre-Wired Furniture/Work Boxes
- Powered Seating Boxes
- Cabled Charging Stations
- Power Charging Pedestals
- USB Charging Receptacles
- PlugTrak® Raceway with USB

Ensuring the safety of people and equipment while still effectively delivering power and technology is priority number one, which is why Hubbell products provide essential protection against injury and the dangers of electricity. Hubbell products are innovatively designed to maximize energy efficiency, reduce costs and ultimately lead to a lower total cost of ownership.



# Table of Contents - Sections Overview

### A Straight Blade Devices



- HBL® Extra Heavy Duty Devices
- SNAPConnect® Extra Heavy Duty Devices
- Commercial Specification Grade Devices
- USB Charger Receptacles and Outlets
- Insulgrip® Plugs and Connectors

### B Twist-Lock® and Hubbellock® Devices



- Insul-Lock<sup>™</sup> Devices
- Midget Twist-Lock® Devices
- Twist-Lock® Devices
- Switched Safety Enclosures
- 50A Twist-Lock® Devices
- Hubbellock® Devices

### **C** Watertight Devices



- Watertight Safety-Shroud® Twist-Lock® Devices
- Straight Blade Devices
- Twist-Lock® Devices
- FD Boxes and Angled Adapters
- Heavy Duty Portable Outlet Boxes and Plates

### **D** Switches



- HBL® Extra Heavy Duty Industrial Grade Series
- SNAPConnect® Heavy Duty Series
- Hubbell-PRO Heavy Duty Industrial Series
- Specification Grade Commercial Series
- Low Voltage Commercial Series

### **E Energy Efficiency Solutions**



- Wall Switch Sensors
- Ceiling, Wall and End Mount Sensors
- OPTIMYZER® High Bay and Low Bay Sensors
- MAXX<sup>™</sup> Harsh Environment Sensors
- Automatic Receptacle Control Solutions
- Wireless Sensors and Controls

### F Switched Disconnects and Enclosures



- Non-Metallic and Stainless Steel Enclosures
- MotorQuick® Disconnect Switches
- Circuit-Lock® Fused Disconnects
- Hazardous Locations Devices
- AC Manual Toggle Controllers/Disconnects

### **G** Pin and Sleeve Devices/Mechanical Interlocks



- IEC Pin and Sleeve Watertight Devices
- Advantage<sup>™</sup> Series Switch-Rated Devices
- Low Profile Pin and Sleeve Devices
- Mechanical Interlocks
- UL1686 C1 Insulgrip® Pin and Sleeve Devices
- Hazardous Locations Devices

### **H** Single Pole Devices and Temporary Power



- Series 15 150A Single Pole Devices
- Series 16 & 18 300 & 400A Single Pole Devices
- Spider® II Temporary Power Boxes
- Temporary Lighting
- Pre-Wired Portable Outlet Boxes

### I Asset Monitoring Devices



- RFID Enabled Wiring Devices
- Insulgrip® Twist-Lock® Kits
- Pin and Sleeve Kits
- Series 16 RFID Enabled Single Pole Devices
- Fixed or Portable Reader Options

### J Industrial Connectivity and Control Products



- LINKOSITY® Power Components
- Mini-, Micro-, Nano-Quick Control Connectors
- CableTrak® Hose and Cable Carrier System
- PANEL-SAFE® Power and Data Access Ports
- HI-Impact Industrial Ethernet Products

### K Cable, Cord and Hose Reels



- Weatherproof Cable Reels
- Industrial Power Cord Reels
- Lighted Cord Reels
- Commercial Cord Reels
- Air/Water Hose and Static Discharge Reels

### L Ground Fault Products



- Extra Heavy Duty Industrial Series
- Heavy Duty Commercial LED Series
- SNAPConnect® GFCI Series
- Arc Fault AFCI Receptacles
- GFCI Portable Products

### M Hospital Products



- HBL® Extra Heavy Duty Industrial Series
- Plugs and Connectors
- USB Charger Receptacles
- Extra Heavy Duty Industrial GFCI Receptacles
- Surge Protection Devices
- Hubbellock® Devices

### N SpikeShield® Power Quality Products



- Service/Branch Panel Protection
- Surge Protection Plug Strips
- Surge Protection Receptacles
- SNAPConnect® TR & Power Ind. LED Receptacles
- Isolated Ground Devices

### O Wallplates and Covers



- Snap-On Wallplates
- Nylon and Metal Wallplates
- Pre-Marked Wallplates
- Security Wallplates
- Weatherproof Plates
- Heavy Duty Weatherproof Covers

### P Floor Boxes and Surrface Enclosures



- SystemOne Recessed Concrete Floor Boxes
- SystemOne Flush Floor Boxes
- Flush Floor Boxes and Covers
- Convention Center Utility BoxesCONNEXION 2.0 Zone Distribution System
- Furniture/Work Surface and Table Top Boxes



### Q Fire-Rated Poke-Through (FRPT) Devices



- Hubbell SystemOne Recessed Systems
- Hubbell SystemOne Flush Systems
- 2X2 Flush FRPT Units
- Flush Duplex and Furniture Feed FRPT Units
- Painted or Brushed Aluminum Pedestal FRPT

### R Charging Solutions



- Powered Seating Boxes
- Cabled Charging Stations
- Power Charging Pedestals
- USB Charging Receptacles
- 2X2 USB Work Surface Pop-Up Boxes
- PlugTrak® Raceway with USB Charger Outlets

### **S Aluminum Service Poles**



- Features and Benefits
- Aluminum Series Offering
- Custom Pole Configurations
- Division 16 Specifications

### T Metal and Non-Metallic Raceway



- Metal Raceway and PlugTrak®
- Aluminum Raceway and PlugTrak®
- Non-Metallic Raceway and PlugTrak®
- Pre-Wired Raceway

### U Trench, Wall and Underfloor Duct Products



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- Wall Duct Series
- Underfloor Duct Series
- Underfloor Duct Raceway Activation Kits

### V Wire Basket Tray



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- Flat Style Cross-Wire Basket Tray
- Under Floor Round Cross-Wire Basket Tray
- Preformed Fittings Accessories
- Supports and Brackets

### W Hose and Cable Protection Systems



- TrukTrak<sup>®</sup> Systems
- TredTrak® Systems
- AccessTrak® Systems
- ProTrak™ Systems
- FloorTrak® Systems

### X Wire Management Products



- Pulling Grips
- Support Grips
- Fiber Optic Cable Grips
- Strain Relief for Flexible Cords
- Cord Connectors
- Non-Metallic Liquidtight Conduit & Tubing

### Y Network Wiring and netSELECT® Products



- Modular Jacks and Connectors
- Hubbell iSTATION Products
- In-Wall AV Delivery
- HDMI Products
- Network Enclosures and Modules
- Molded-In Voice/Data/Video

### Z tradeSELECT® Products



- Decorator Products
- USB Charger Receptacles
- Switches and Receptacles
- Lighting Controls
- Countertop Receptacles
- Power Delivery

### AA Marine Products



- ELCI Interface Solutions
- 30A and 50A Cable Sets
- 100A and 200A Cable Sets
- Internationally Rated Devices
- Adapters
- Telephone and Cable TV Devices

### **BB** Other Wiring Products



- Circuit Testers
- Adapters and Fluorescent Starters
- Lockout Devices
- Lampholders and Accessories
- Taps, Adapters, Plugs and Connectors

### **General Technical Data**



- Industry Standards
- Certification Agencies and Markings
- Codes and Standards Organizations
- NEMA and IEC Classifications
- Circuit Wiring Diagrams

### **Hubbell Configuration Charts (page IV-V)**



- NEMA Straight Blade Devices
- NEMA Twist-Lock® Devices

### Catalog Number Index



- Numeric Part Numbers
- Section Page(s) Indicated

### **NEMA Straight Blade Devices**

Г			15 An	npere		20 Am	pere	30 Ar	mpere	50 Ar	npere	60 Ar	npere
	Rating		Receptacle / Conn. Body	Plug / Inlet		otacle / . Body	Plug / Inlet	Receptacle	Plug	Receptacle	Plug	Receptacle	Plug
2 Pole / 2 Wire	125V	1	A-37	A-37 (w   I)		•							
2 Pole	250V	2			A-37	[] = 2-20R	A-37						
Grounding	125V	5	A-8 A-35 to A-40 A-10 A-46 A-12 C-6 to AA-35 A-28 A-34	A-32 A-33 A-35 A-40 C-6 AA-35	A-8 to A-10 A-12 to A-28 A-32 A-34	A-35 A-40 A-46 C-6 AA-37	A-32 A-33 A-35 A-40 C-6 AA-37	A-41  □ □ ×  5-30R	A-41 (F) 1 (S) 5-30P	A-43	A-43		
2 Pole / 3 Wire	250V	6	A-9 A-11 A-23 A-32 C-6 G-15R	A-32 A-36 C-6	A-9 A-11 A-23 A-32 A-36 C-6	© G G-20R	A-32 A-36 C-6	A-41	A-41  ——  6-30P	A-43	A-43  (I)  6-50P		
	277V AC	7	A-37	A-37				A-41 (□G ⊗ ⊗ W ) 7-30R	A-41  V 7-30P	A-43  DG  W  7-50R	A-43  V G V 7-50P		
3 Pole / 3 Wire	125/250V AC	10			A-38	(y	A-38  x I w y 10-20P	A-41	A-41  x y 10-30P	A-43	A-43		
3 Pole	3Ø 250V AC	11	(X ) Z (M) 11-15R	(x - y / z) 11-15P		x	11-20P	(X) //y 11-30R	x /z /z /z	x	11-50P		
e Grounding	125/250V AC	14			A-38	(Y []	A-38	A-42  (Y[] [ X)  14-30R	A-42    X    Y    Y    Y    Y    Y    Y    Y	A-44  (Y[	A-44	A-45  (Y	A-45    X
3 Pole / 4 Wire	3Ø 250V AC	15			A-38	Z []X T5-20R	A-38    V   V   V   V   V   V   V   V   V	A-42	A-42  \(\begin{array}{c} \times \\ \	A-44    CG   CG   C   C   C   C   C   C   C	A-44   V   Z   Z   15-50P	A-45    CG   CG   CG   CG   CG   CG   CG   C	A-45    T   T   T   T   T   T   T   T   T
4P / 4W	3ØY 120/208V AC	18			A-38		A-38	A-42    Z	A-42    X     Z     Y	A-44	A-44   W   Z   Z   Z   Z   Z   Z   Z   Z   Z	A-45	A-45

### **HOW TO USE THIS CHART:**

For quick reference, this chart shows the configuration, primary catalog section and page number where the devices are shown.

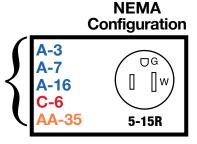


**Open Slots** indicates Receptacle / Connector Body configurations (female).



**Closed Slots** indicates Plug / Inlet configurations (male).

# Catalog Section and Page Number



### **IMPORTANT NOTICE:**

The catalog pages referenced in **BLUE** are Insulgrip<sup>®</sup>, Valise<sup>®</sup>, Safety-Shroud<sup>®</sup> and Watertight Safety-Shroud<sup>®</sup> devices, in **RED** are Watertight devices, and in **ORANGE** are Marine corrosion resistant devices

Г	Rating		15 Ar	npere	20 Ar	npere	30 Ar	npere
	Color Coded		Receptacle /	Plug / Inlet	Receptacle /	Plug / Inlet	Receptacle /	Plug / Inlet
	by Voltage		Conn. Body B-11	B-11	Conn. Body		Conn. Body	, ,
. Wire	125V	L1						
2 Pole / 2 Wire	250V	L2	L1-15R	L1-15P	B-19	B-19		
	125V	L5	B-13 C-7 AA-34	B-12 C-7 AA-34	B-21 C-7 AA-36	B-20 C-7 AA-36	B-29 C-8	B-28 C-8
nding	250V	L6	E5-15R B-13 C-7 L6-15R	B-12 C-7 (10)	B-21 C-7 (F 2) L6-20R	B-20 C-7 Jo	L5-30R B-29 C-8	L5-30P B-28 C-8 100 L6-30P
Pole / 3 Wire Grounding	277V AC	L7	B-13 C-7	B-12 C-7	B-21 C-7 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	B-20 C-7 J <sub>o</sub>	B-29 C-8	B-28 C-8 (1-30P
2 Pole /	480V AC	L8	L7-13H	L7-13F	B-24 (1) (2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	B-24	B-37 (1) (2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	B-37 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
	600V AC	L9			B-24 (S) (L9-20R	B-24 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	B-37	B-37
3P / 3W	125/250V AC	L10			B-24 (x y y ) L10-20R	B-24 (x)	B-31 (x x x y) L10-30R	B-30 × × × × × × × × × × × × × × × × × × ×
9	125/250V AC	L14			B-23 C-8 () () () () () () () () () () () () ()	B-22 C-8 (wi jo) L14-20P	B-31 C-9 ( ) w	B-30 C-9 (vi ) 1 c
Pole / 4 Wire Grounding	3Ø 250V AC	L15			B-23 C-8 () () () () () () () () () () () () ()	B-22 C-8 (x x x x x x x x x x x x x x x x x x x	B-31 C-9	C-9 ( 1) L15-30P
3 Pole / 4 Wi	3Ø 480V AC	L16			B-23 C-8 () ) L16-20R	B-22 C-8 (16-20P	B-33 C-9 ( ) V	B-32 C-9 ( 1 )s L16-30P
	3Ø 600V AC	L17					B-33 C-9 (17-30R	B-32 C-9 ( Jo L17-30P
ire	3ØY 120/208V AC	L18			B-25 L18-20R	B-25 (**) L18-20P	B-36 C-9 ( )	B-36 C-9 (1) Jw
4 Pole / 4 Wire	3ØY 277/480V AC	L19			B-25	B-25	B-36 (L19-30R	B-36 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
	3ØY 347/600V AC	L20			B-25	B-25 ( 1 v)	B-36 (L20-30R	B-36 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
ounding	3ØY 120/208V AC	L21			B-27	B-26 (10) (10) (10) (10) (10) (10) (10) (10)	B-35 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	B-34 X X X X X X X X X X X X X X X X X X X
/ 5 Wire Grounding	3ØY 277/480V AC	L22			B-27	B-26 (	B-35	B-34 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
4 Pole	3ØY 347/600V AC	L23			B-27 ( ) ) ) L23-20R	B-26 ( • 1 ) L23-20P	B-35 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	B-34 (3. )w L23-30P
/ 3W	347V AC	L24			B-24 (**) (**) (**) (**) (**) (**) (**) (**	B-24 (1) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	D 27 🙃	D 27 (a)
2P/	240V AC	L25					B-37 (2) (2) (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	B-37 (1) (1) (2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
4P/5W	3ØY 240/415V AC	L26					B-35	B-34 ( 0 12) L26-30P

М	DGET TWIST	-LOCK® DEV	ICES
	Rating	Receptacle	Plug
2P / 2W	15A 125V	B-7  W  ML-1R	B-6 W NL-1P
2P / 3W Gr	15A 125V	B-7  GR  GR  O  D  ML-2R	B-6 w GR   1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1
3P / 3W	15A 125/250V AC	B-7  Wo ML-3R	B-6

50	A TWIST-LO	CK® DEVICES	
	Rating	Receptacle	Plug
ng	50A 125V Corrosion Resistant ANSI C73-110 / NEMA SS1-50 Marine Products	AA-14 AA-15	AA-14 AA-15
Wire Grounding	50A 125V	B-56	B-56
Pole / 3	50A 250V	B-56	B-56 ( × × ×
2	50A 480V AC	B-56	B-56 ( , , , )
ıg	50A 125/250V Corrosion Resistant ANSI C73-111 / NEMA SS2-50 Marine Products	AA-16 AA-17	AA-16 AA-17
re Grounding	50A 125/250V AC	B-57	B-57
Pole / 4 Wire	50A 3Ø 250V AC	B-57	B-57
3	50A 3Ø 480V AC	B-57	B-57

NC	ON-NEMA TW	IST-L	OCK® D	EVIC	ES
	Rating	Rece	eptacle	F	lug
/ 3 Wire	20A 125/250V	B-45 C-8		B-44 C-8	
3 Pole	30A 125/250V	B-48 C-9	(A)	B-47 C-9	( , )
4 Wire	20A 3ØY 120/208V AC	B-45		B-44	
4 Pole	30A 3ØY 120/208V AC	B-48 C-9		B-47 C-9	(T)
4P/5W Gr	20A 250V 10A 600V AC	B-46		B-46	(,

### Hubbell Wiring Device-Kellems

### **General Information**

Industrial and Commercial Wiring Devices and Systems Kellems Wire Management Products Residential Products Marine Products

#### MEMBER



#### National Electrical Manufacturers Association

NEMA promotes the competitiveness of its member companies by providing a forum for the development of technical standards that are in the best interests of the industry and the users of its products.



#### National Association of Electrical Distributors

Since 1908, NAED has served as the trade association for the electrical distribution industry.

To be an NAED associate member, your company must be a manufacturer or value-added reseller.



#### Restriction of Hazardous Substances

The RoHS Directive stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment".



#### U.S. Green Building Council Member

Hubbell is a US Green Building Council (USGBC) member dedicated to advancing buildings that are environmentally responsible in the way they are designed, built and operated.



#### International Organization for Standardization

ISO (International Organization for Standardization) is the world's largest developer and publisher of International Standards.

Precautions have been taken to assure accuracy of the information in this catalog. Typographical or pictorial errors which are brought to our attention will be corrected in subsequent issues.

Product dimensions in this catalog are nominal and are provided for the convenience of our customers. Hubbell reserves the right to make product changes from time to time, without prior notification, which may change the dimensions shown. We, therefore, recommend they be checked before using for customer projects or product development and specification.

The designs and dimensions of the products listed in this catalog, were correct at the date of publication and are subject to change without notice.

All configuration diagrams shown in the various sections of the catalog are female devices (receptacles, connector bodies, etc.) unless otherwise indicated.

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- ADD-A-SHROUD®
- AUTOGUARD®
- BaseTrak<sup>®</sup>
- CableTrak®
- CircuitGuard®
- Circuit-Lock®
- CircuitPro<sup>®</sup>
- DUA-PULL®
- Elastogrip<sup>®</sup>
- FloorTrak®
- GOTCHA®
- Gripulator<sup>®</sup>

- HBI ®
- Handi-Screw®
- Hubbell<sup>®</sup>
- Hubbell Juniors®
- Hubbellock®
- Hubbellnet®
- Insul-Lock™
- Insulgrip®
- JLOAD®
- Kellems<sup>®</sup>
- LANTrak<sup>®</sup> • LINKOSITY®
- Load:Logic<sup>®</sup>
- MAXX<sup>TM</sup>

- Micro-Quick®
- MotorQuick®
- Nano-Quick®
- netSELECT®

- PlugTrak<sup>®</sup>

- Mini-Quick®

- NEXTSPEED®
- NOT Plug Resistant™
- OPTIMYZER®
- OPTISOK®
- PANEL-SAFE®
- PLUG-CHECK®
- PLUGOUT®
- PolyTrak<sup>®</sup>

- PolyTuff®
  - PremiseTrak®
  - PresSwitch®
  - ProTrak™
  - RACO<sup>®</sup>
  - Safety-Shroud<sup>®</sup>
  - ScrubShield®
  - Seal-Tite<sup>®</sup>
  - Signal-Quick®
  - SNAPConnect®
  - SPEEDGAIN®
  - Spider<sup>®</sup>
  - SpikeShield®
  - Style Line<sup>®</sup>

- Super BaseTrak®
- Super Twist-Lock®
- SWITCHOUT®
- SwivelLok®
- tradeSELECT®
- TredTrak<sup>®</sup>
- TrukTrak®
- Twist-Lock®
- Valise<sup>®</sup>
- Variload®
- VARI-SIZE®
- WallTrak®

UPC Vendor Code No. 783585 - Hubbell Wiring Device-Kellems CAGE No. 74545 © 2017 Hubbell Incorporated

# **SECTION A**

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### Products at a Glance

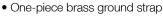


### HBL® Extra Heavy Duty Hospital Grade

- Deep nylon body design increases impact and chemical resistance
- One-piece nickel-plated brass ground strap
- ID marking surface for quick circuit identification
- Square head, 10-thread bronze center rivet
- External back wire clamp



### HBL® Extra Heavy Duty



- Exclusive bypass contact design for greater contact force and reduced heat buildup
- Barbed assembly arms reduce possibility of face/base separation
- Deep face design

### **Commercial Specification Grade**

- Installation ease
  - Single tab breakoff ears
  - Self-grounding staple
  - Easy access split circuit tab
- Tamper-Resistant... NOT Plug Resistant™
- Wrap-around galvanized steel straps



### SNAPConnect® Extra Heavy Duty

- Hospital and Specification Grade
- SNAPConnect<sup>®</sup> modular wiring device system saves installation time
- Eliminates screw terminations
- Steel mounting strap, self-grounding
- Compact size requires minimal space
- Single receptacles available



### **Hubbell-PRO Heavy Duty**

- Specification Grade and Hospital Grade
- Tamper-Resistant... NOT Plug Resistant™
- Power indicating LED feature optional
- Circuit ID marking area on Hospital Grade
- Steel mounting strap, self-grounding

### 4-PLEX Receptacles

- Hospital Grade and Surge styles
- Mounts directly to 4-inch square box
- "A" and "B" circuit ID molded into face
- Removable knockouts for mounting to octagon concrete ring or box
- Heavy duty, triple wipe, brass power and ground contacts



### **USB Charger Receptacles**

- Two Type-C, Type A&C and Type A port configurations, high power 5 Amp, 5 Volt DC USB output
- Heavy duty stainless steel USB ports; rated for 10,000 cord insertions and removals
- Patented Hubbell Tamper-Resistant technology uses cam action shutters; the friction-free design of the mechanism's doors requires much less force to open
- 4 Port and 2 Port outlet available



### **Features and Benefits**

### **Hubbell "Hospital Grade" Devices**

UL requirements for Hospital Grade devices is more stringent than those for standard devices. Hubbell receptacles are designed to meet and exceed the standards.

- Exclusive nickel-plated bypass contact design increases contact pressure, lowering the operating temperature
- Four point grounding system provides redundant grounding for low resistance ground continuity in high abuse areas
- Impact resistant deep face design prevents breakage

Because of these features and others, the benefit is performance, reliability and value for any health care facility.



HBL8200GY



### Housing Design

- Reinforced thermoplastic base provides superior thermal, electrical and mechanical properties
- Providing contact stability, this high performance material will reduce heat buildup giving you long lasting performance
- Deep body design increases impact and chemical resistance



#### **Terminals**

- External wiring clamps allow for visual inspection of the terminals
- Unique strand containment feature on the terminal "bundles" the wire, ensuring 100% clamping of wire strands and reducing heat from the termination



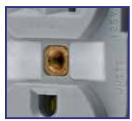
### One-Piece Mounting Strap

- Back wired ground terminal allows faster, easier installation
- One-piece nickel-plated brass integral ground strap for greater corrosion resistance
- Patented ground contact provides redundant grounding



#### Contacts

- Exclusive bypass contacts are made of nickel-plated brass alloy, increasing blade retention, insuring reliable uninterrupted flow of power
- Barbed assembly arms reduce possibility of face/base separation



### Identification

- I.D. marking surface provides quick, sure circuit identification
- All Hospital Grade devices are marked with the green dot symbol, required by UL



### Center Rivet

 Square head, 10-thread bronze center rivet won't rotate, reduces stripping and resists corrosion

### **Features and Benefits**

### **HBL® Extra Heavy Duty Industrial Series**

Hubbell's commitment to quality continually reinforces a philosophy of unrivaled performance. No Hubbell device exemplifies this philosophy more than the HBL5262. While all Hubbell receptacles are designed and manufactured to withstand even the harshest environments, none match the total performance of the HBL5262.

Whether in a factory, office building or school, the Hubbell HBL5262 is the receptacle of choice when people are depending on the safety and reliability of a receptacle.

- One-piece nickel-plated brass ground strap
- Patented bypass contacts
- Back wired ground terminal reduces installation time and increases convenience

The safest, most reliable design for a low resistance flow of fault currents. Oversized "bell" shaped ground contacts, along with nickel plated steel retaining shields, help minimize damage to the grounding system during abrupt pullout.



**HBL5262** 



### Housing Design

- RTP base offers greater heat resistance, plus contact stability
- Providing contact stability, this high tech material will reduce heat buildup, giving you long lasting performance
- Deep nylon body design delivers increased impact resistance



#### **Terminals**

- External bundling terminals contain wire strands and are designed for quick inspection
- Unique strand containment feature on the terminal "bundles" the wire, ensuring 100% clamping of wire strands and reducing heat from the termination



### One-Piece Mounting Strap

- Back wired ground terminal allows faster, easier installation
- One-piece nickel-plated brass ground strap for low resistance of fault currents
- Patented ground contact provides redundant grounding



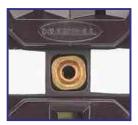
#### Contacts

- Patented "bypass" contacts are made of high grade brass alloy, increasing blade retention, insuring reliable uninterrupted flow of power
- Barbed brass locking arms keep the face locked in place to diminish potential for face/base separation



### Identification

 I.D. marking surface provides quick, sure circuit identification



### Center Rivet

 Square head, 10-thread brass center rivet won't rotate, reduces stripping and resists corrosion

### **Features and Benefits**

### SNAPConnect® Extra Heavy Duty Receptacles

- Modular wiring system eliminates screw terminals
- Speeds installation and trim-out
- Clear polycarbonate terminal housing to inspect contacts
- Available in standard, tamper-resistant and power indicating LED versions
- Abuse resistant nylon for extra heavy use applications
- Stainless steel autoground



### **Labor Savings**

### Save One Minute!

 Rough-in the SNAPConnect® terminal instead of pigtails



### **Housing Design**

- Reinforced thermoplastic base provides superior thermal, electrical and mechanical properties
- Compact size, requires minimal box space
- Clean finished look



### Installation Ease

- Self-grounding clip
- Modular receptacle which requires pigtailed connector below



### Save Over Three Minutes!

• Remove protective packaging and SNAPConnect® device to the circuit



### Identification

- Clear terminal housing for easy inspection of power contacts
- No exposed metal
- Audible SNAP, indicates solid connection
- · Secure, easy grip latch



### Complete Trim-Out in Less Than One Minute!

• Secure mounting screws, attach wallplate, job complete

### **Features and Benefits**

### **Commercial Specification Grade Receptacles**

The Hubbell Tamper-Resistant Mechanism eliminates the frustration and difficulty experienced using TR receptacles with plugs that have sharp, or bent blades. Hubbell TR receptacles work so well there is virtually no perceptible difference in the feel between the TR receptacles and our conventional non-TR receptacles. Trust Hubbell to deliver TamperResistant protection that feels like it's not even there.

- Patented TR design eliminates plug-in difficulty and TR complaints
- Perfect for residential TR applications involving tenants with limited dexterity or hand strength
- For use in locations requiring TamperResistant receptacles
- Best-in-class TR mechanism





Tamper-Resistant

**DR20GRYTR** 

# Tamper-Resistant...





### **Housing Design**

- Durable nylon face and base construction
- Modern architectural appearance, Style Line® decorator face



### Tamper-Resistant... NOT Plug Resistant®

- Patented Cam Action TR Mechanism
- Difficulties due to problematic plugs are minimized



### One-Piece Mounting Strap

- Sturdy construction, wrap-around galvanized steel straps
- Installation ease
- Single tab breakoff ears
- Self-grounding staple



### Contacts

- · Easy access split circuit tab
- Fork terminal capable
- Oversized terminal screws



### Permanently Marked Receptacles for **Automatic Outlet Control Systems**

- These receptacles are embossed with the universally recognized power symbol and the word "CONTROLLED" remains clearly visible after installation
- Available in SNAPConnect® and conventionally wired versions



### Nightlight Receptacle

- Two nightlight LEDs for 0.5 Lumens total
- Tamper-resistant shutters complies with NEC article 406.12
- Back and side wired

### **Features and Benefits**

### **USB Charger Receptacles and Outlets**

More Ways to Charge Faster with Hubbell's line of USB Chargers, available in Type-C, Combination Type A&C or the legacy Type A, all with a USB high power output of 5 Amp 5 Volt DC. Hubbell's USB Charger Duplex Receptacle provides both USB and electrical power in a standard single gang opening. Designed to provide maximum charging for portable electronics, the USB ports are capable of charging two tablets simultaneously.

The 4 Port and 2 Port Charger Outlet feature a USB port door, which when open enables power. When closed, all power is switched OFF. This eliminates all current flow for a "zero" no-load draw. Buildings looking to provide 100% green efficiency in power delivery will maximize LEED and energy efficient design.

#### Common Features

- Green LED indicator to show USB power available
- USB stainless steel ports rated for minimum 10,000 insertions and removals
- Complies with battery charging specification BC1.2
- Designed for commercial, industrial and home use
- Compatible with USB 1.1/2.0/3.0 devices, including Apple<sup>®</sup> products





USB4W



### Types of USB Chargers

- Two Type-C port configurations
- One Type A and one Type-C port configurations
- Two Type A port configurations
- High power 5 Amp, 5 Volt DC USB output



### SNAPConnect® Receptacle

- SNAPConnect<sup>®</sup> devices reduce labor time during installation and when being serviced in the future
- Installation ease
- Self-grounding staple



### **USB Charger Receptacle**

- Standard and Hospital Grade
- Provides both USB and electrical power in a standard single gang opening
- Back and side wired



### 4 Port and 2 Port Outlets

- 4 Port 5 Amp, 5V DC, Type A, class 2.0
- 2 Port 3 Amp, 5V DC, Type A, class 2.0
- Switch activated port door; when open enables power. When closed, all power is switched off, for a "zero" no-load draw
- Shallow depth design for 2 port



### Identification

- Patented Hubbell Tamper-Resistant technology uses cam action shutters; the friction-free design of the mechanism's doors requires much less force to open
- Green LED indicator to show USB power available



### **Switch Combo Outlets**

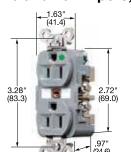
- Two USB ports 2.1 Amp, 5 Volt DC, type A, class 2.0
- Isolated 15 Amp, 120V AC single pole/ 3-way switch

Apple® is a registered trademark of Apple Inc.

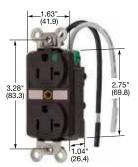




### 15 and 20 Ampere, 125 Volts



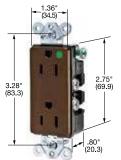
HBL8200GY



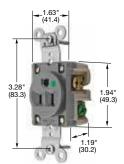
HBL8300SGA



HBL8200ILW



HBL2172



**HBL8210GY** 

Dimensions in Inches (mm)





HBL8210I

**HBL8210R** 

**HBL8210W** 

HBL8284

HBL8284I IG8210





**HBL® Extra Heavy Duty** 

Hospital Grade Receptacles		UL CSA 0.5 HP	UL CSA 1 HP
Duplex	Color	Catalog Number	
Flush, thermoplastic polyester face, back and side wired.	Black Blue Brown Gray Ivory Light Almond Red White	HBL8200BK  - HBL8200 HBL8200GY HBL8200I HBL8200LA HBL8200RED HBL8200W	HBL8300BL HBL8300 HBL8300GY HBL8300I HBL8300LA HBL8300RED HBL8300W
Flush, LED illuminated face, back and side wired.	Gray Ivory Red White	HBL8200ILGY HBL8200ILI HBL8200ILR HBL8200ILW	HBL8300ILGY HBL8300ILI HBL8300ILR HBL8300ILW
Tamper-Resistant receptacle with wire leads. Complies with requirements of NEC® article 517-18(c).	Brown Gray Ivory Light Almond Red White	HBL8200SGA HBL8200SGGYA HBL8200SGIA - HBL8200SGRA HBL8200SGWA	HBL8300SGA HBL8300SGGYA HBL8300SGIA HBL8300SGLA HBL8300SGRA HBL8300SGWA
lsolated ground <sup>∆</sup> .	Orange Red	IG8200 IG8200R	IG8300 IG8300R
MRI Receptacle, Duplex			
MRI receptacle, flush, thermoplastic polyester face, back and side wired. 100% non-ferrous.	lvory Light Almond Red White	HBL8200IMRI HBL8200LAMRI HBL8200RMRI HBL8200WMRI	HBL8300IMRI HBL8300LAMRI HBL8300RMRI HBL8300WMRI
Slender/Compact, Duplex			
Flush, thermoplastic polyester face, back, and side wired, Fed. Spec. verified.	Brown Gray Green Ivory Light Almond Red White	HBL8200H HBL8200HG  HBL8200HI HBL8200HLA HBL8200HRED HBL8200HW	HBL8300H HBL8300HG HBL8300HGN HBL8300HI HBL8300HLA HBL8300HRED HBL8300HW
Style Line® Decorator*			
Flush, nylon face, back and side wired.	Brown Gray Ivory Office White Red White	HBL2172 HBL2172GY HBL2172I - HBL2172R HBL2172WA	HBL2182 HBL2182GY HBL2182I HBL2182OW HBL2182R HBL2182WA
lsolated ground <sup>∆</sup> .	lvory Orange White	- - -	IG2182I IG2182 IG2182WA
Single			
Flush, nylon face, back and side wired, Fed. Spec. verified.	Almond Brown Gray	– HBL8210 HBL8210GY	HBL8310AL HBL8310 HBL8310GY

Ivory

Red White

Brown

Orange

Ivory

Note: <sup>Δ</sup>See section N for additional information on isolated ground devices.

\*Not Fed. Spec. Listed.

Panel mount on 1.94 in.

(49.2) centers.

Isolated ground<sup>a</sup>.

See pages A-47 and A-48 for accessories.

See page Tech-10 for Tamper-Resistant description.
See section M for additional information on Hospital Grade products.

See section O for wallplates.

NEC® is a registered trademark of the National Fire Protection Association (NFPA).

HBL8310I

**HBL8310R** 

**HBL8310W** 

HBL8384I

IG8310











Duplex	Color	Catalog Number	
Flush, thermoplastic polyester face, back and side wired.	Brown	HBL8600	HBL8400
	Ivory	HBL8600I	HBL8400I

Note: See page A-48 for accessories. See section N for wallplates.

**HBL® Extra Heavy Duty** 

**Hospital Grade** Receptacles



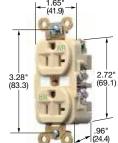




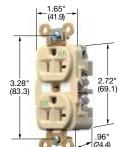
\_1.65"\_ (41.9)

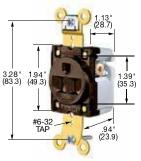
HBL86001

HBL5262

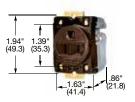


HBL5362IWR





HBL5261



HBL5284

Dimensions in Inches (mm)



Duplex	Color	Catalog Number	
Flush, nylon face,	Black	HBL5262BK	HBL5362BK
back and side wired.	Blue	_	HBL5362BL
	Brown	HBL5262	HBL5362
	Gray	HBL5262GY	HBL5362GY
	lvory	HBL5262I	HBL5362I
	Red	HBL5262R	HBL5362R
	White	HBL5262W	HBL5362W
lsolated ground <sup>∆</sup> .	Gray	IG5262GY	IG5362GY
_	lvory	IG5262I	IG5362I
	Orange	IG5262	IG5362
	Red	IG5262R	IG5362R
	White	_	IG5362W
Non-isolated ground, bulk pack of 100.	Orange	-	HBL5362M4
Weather Resistant,	Black	HBL5262BKWR	HBL5362BKWR
flush, nylon face,	Brown	HBL5262WR	HBL5362WR
back and side wired.	Gray	HBL5262GYWR	HBL5362GYWR
	lvory	HBL5262IWR	HBL5362IWR
	Red	HBL5262RWR	HBL5362RWR
	White	HBL5262WWR	HBL5362WWR
Corrosion resistant.	lvory	HBL52CM62I	_
	Yellow	HBL52CM62	HBL53CM62
Weather Resistant,	Gray	IG5262GYWR	IG5362GYWR
Isolated ground <sup>∆</sup> .	lvory	IG5262IWR	IG5362IWR
	Orange	IG5262WR	IG5362WR
	Red	IG5262RWR	IG5362RWR
	White	-	IG5362WWR
On 4 in. (101.6) round cover.	Brown	HBL5282	-

Flush, nylon face, Black HBL5261BK back and side wired. Brown HBL5261 Gray HBL5261I Ivory White

HBL5261RT HBL5361RT Ring terminal connection. Brown White HBL5261WRT Yellow HBL5261YRT Weather Resistant, **HBL5261WR HBL5361WR** Brown flush, nylon face, HBL5361GRYWR Gray back and side wired. HBL5261IWR HBL5361IWR Ivory Corrosion resistant. Yellow HBL52CM61 HBL53CM61 Panel mount on 1.94 in. (49.3) centers. HBL5284 HBL5357 Brown

Orange

Orange

IG5261

**IG5261WR** 

Note: <sup>Δ</sup>See section N for additional information on isolated ground devices. See pages A-47 and A-48 for accessories.

See page Tech-10 for Weather Resistant descriptions.

See section O for wallplates.

Weather Resistant, Isolated ground<sup>a</sup>.

Single

Isolated ground<sup>∆</sup>.

HBL5361BK

HBL5361 HBL5361GRY

HBL5361I

**HBL5361W** 

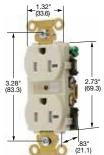
IG5361WR

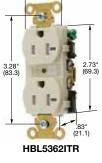
IG5361

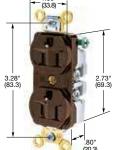




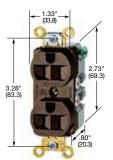
### 15 and 20 Ampere, 125 Volts







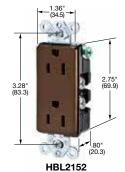
HBL5252



HBL5242



HBL5251



Dimensions in Inches (mm)

### **HBL® Extra Heavy Duty Tamper-Resistant Receptacles**





Duplex			
Description	Color	Catalog Number	
Flush, nylon face,	Black	HBL5262BKTR	HBL5362BKTR
back and side wired.	Blue	HBL5262BLTR	HBL5362BLTR
	Brown	HBL5262TR	HBL5362TR
	Gray	HBL5262GYTR	HBL5362GYTR
	lvory	HBL5262ITR	HBL5362ITR
	Light Almond	HBL5262LATR	HBL5362LATR
	Red	HBL5262RTR	HBL5362RTR
	White	HBL5262WTR	HBL5362WTR

### **HBL® Extra Heavy Duty** Compact Receptacles

Duplex			
Description	Color	Catalog Number	
Flush, nylon face,	Black	HBL5252BK	HBL5352BK
back and side wired.	Blue	_	HBL5352BL
	Brown	HBL5252	HBL5352
	Gray	HBL5252GY	HBL5352GY
	lvory	HBL5252I	HBL5352I
	Red	HBL5252R	HBL5352R
	White	HBL5252W	HBL5352W
On a 4 in. (101.6) round cover.	Brown	HBL5253	-
Flush, nylon face,	Brown	HBL5242	HBL5342
side wired only.	Gray	HBL5242GY	HBL5342GY
	lvory	HBL5242I	HBL5342I
	White	HBL5242W	HBL5342W
Ring terminal connection.	Brown	HBL5242RT	HBL5342RT

### **Single**

Description	Color	Catalog Number		
Flush, side wired only.	Brown Ivory	HBL5251 HBL5251I	- -	
Panel mount 1.75 in.	Brown	HBL5258	HBL5358	
(44.5) centers.	lvory	HBL5258I	-	

### Style Line® Decorator\*

Description	Color	Catalog Number	
Flush, nylon face,	Almond	HBL2152AL	HBL2162AL
back and side wired.	Black	HBL2152BK	HBL2162BK
	Brown	HBL2152	HBL2162
	Gray	HBL2152GY	HBL2162GY
	lvory	HBL2152I	HBL2162I
	Office White	HBL2152OW	HBL2162OW
	White	HBL2152WA	HBL2162WA
Isolated ground <sup>a</sup> .	Gray	-	IG2162GY
9	Orange	IG2152	IG2162

Note: <sup>A</sup>See section N for additional information on isolated ground devices.

\*Style Line Duplex devices are not Fed. Spec. Listed.

See page A-47 for accessories.

See section O for wallplates.

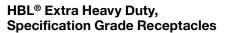




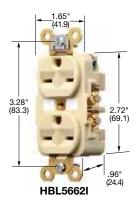
### 15 and 20 Ampere, 250 Volts





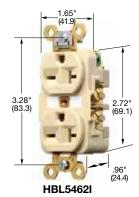


Color	Catalog Number	
Black	-	HBL5462BK
Brown	HBL5662	HBL5462
Gray	-	HBL5462GY
lvory	HBL5662I	HBL5462I
Red	-	HBL5462R
Orange	IG5662	IG5462
	Black Brown Gray Ivory Red	Black – Brown <b>HBL5662</b> Gray – Ivory <b>HBL5662</b> Red –



### Single

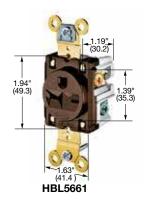
Description	Color	Catalog Number	
Flush, nylon face,	Brown	HBL5661	HBL5461
back and side wired.	Gray	_	HBL5461GY
	lvory	HBL5661I	HBL5461I
	Red	_	HBL5461R
	White	-	HBL5461W
Isolated ground <sup>a</sup> .	Orange	IG5661	IG5461
Panel mount 1.94 in. (49.3) centers.	Brown	HBL5684	-
Ring terminal connection.	Brown	HBL5661RT	_



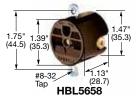
### **Duplex and Single Panel Mount**

Description	Color	Catalog Number		
Flush, nylon duplex face,	Brown	HBL5652	-	
side wired only.	lvory	HBL5652I	-	
Panel mount 1.75 in. (44.5) centers.	Brown	HBL5658	-	

Note: ASee section N for additional information on isolated ground devices. HP ratings are AC only. See page A-47 for accessories.







Dimensions in Inches (mm)





### 15 and 20 Ampere, 125 Volts







SNAPConnect® Extra Heavy Duty **Hospital Grade** • Receptacles

1	1.64' (41.7	, )	
3.28" (83.3)	1 1-	0-0-0	2.62" (66.5)
	1 1-	.8	36" 1.9)

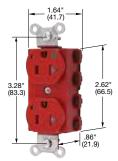
SNAP8300WA

3.3)	0	100	(66.5
ш			
- (	1 1-		
- 1		00	
*	40	.86	.9)
		Υ.	

SNAP8300LATRA

	1.64" (41.7)	-
1	100	
3.28" (83.3)	(F)	2.62" (66.5)
1	I F)	86"
-	505	.86" (21.9)

SNAP8300L



SNAP8300RLTRA



Dimensions in Inches (mm)

Troopital Grade Troopitation		0.5 HP	1 HP
Duplex			
Description	Color	Catalog Number	
Hospital grade, finder groove, nylon face, modular receptacle which requires	Black Brown	SNAP8200BKA SNAP8200A	SNAP8300BKA SNAP8300A
pigtailed connector on page A-15.	Gray Ivory Light Almond Red	SNAP8200GYA SNAP8200IA SNAP8200LAA SNAP8200RA	SNAP8300GYA SNAP8300IA SNAP8300LAA SNAP8300RA
	White	SNAP8200WA	SNAP8300WA
Hospital grade, smooth nylon face, modular receptacle which requires pigtailed contests.	Black Brown Gray	SNAP8200BKNA SNAP8200NA SNAP8200GYNA	SNAP8300BKNA SNAP8300NA SNAP8300GYNA
Assembled in USA.	Ivory Light Almond Red White	SNAP8200INA SNAP8200LANA SNAP8200RNA SNAP8200WNA	SNAP8300INA SNAP8300LANA SNAP8300RNA SNAP8300WNA
Hospital grade, Tamper-Resistant, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	SNAP8200BKTRA SNAP8200TRA SNAP8200GYTRA SNAP8200ITRA SNAP8200LATRA SNAP8200RTRA SNAP8200WTRA	SNAP8300BKTRA SNAP8300TRA SNAP8300GYTRA SNAP8300ITRA SNAP8300LATRA SNAP8300WTRA
Hospital grade, Tamper-Resistant, Split Circuit, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	SNAP8200BKSCTRA SNAP8200SCTRA SNAP8200GYSCTRA SNAP8200ISCTRA SNAP8200LASCTRA SNAP8200RSCTRA SNAP8200WSCTRA	SNAP8300BKSCTRA SNAP8300SCTRA SNAP8300GYSCTRA SNAP8300ISCTRA SNAP8300LASCTRA SNAP8300RSCTRA SNAP8300WSCTRA
Isolated ground <sup>∆</sup> , Hospital grade, Tamper-Resistant.	Orange Red	SNAP8200IGTRA SNAP8200RIGTRA	SNAP8300IGTRA SNAP8300RIGTRA
Hospital grade, with Power Indicating LED, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	SNAP8200BKL SNAP8200L SNAP8200GYL SNAP8200IL SNAP8200LAL SNAP8200RL SNAP8200WL	SNAP8300BKL SNAP8300L SNAP8300GYL SNAP8300IL SNAP8300LAL SNAP8300RL SNAP8300WL
Isolated ground <sup>a</sup> , Hospital grade, with Power Indicating LED.	Orange Red	SNAP8200IGL SNAP8200RIGL	SNAP8300IGL SNAP8300RIGL
Hospital grade, Tamper-Resistant, with Power Indicating LED, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	SNAP8200BKLTRA SNAP8200LTRA SNAP8200GYLTRA SNAP8200ILTRA SNAP8200LALTRA SNAP8200RLTRA SNAP8200WLTRA	SNAP8300BKLTRA SNAP8300LTRA SNAP8300GYLTRA SNAP8300ILTRA SNAP8300LALTRA SNAP8300RLTRA SNAP8300WLTRA
Isolated ground <sup>∆</sup> , Hospital grade,	Orange	SNAP8200IGLTRA	SNAP8300IGLTRA

SNAPConnect® Extra Heavy Duty Hospital Grade 
Single Receptacles

	Hospita	Hospital Grade ●		Hospital Grade ● Tamper-Resistant	
Color	15A 125V	20A 125V	15A 125V	20A 125V	MA
Almond	SNAP8210AL	SNAP8310AL	SNAP8210ALTR	SNAP8310ALTR	
Black	SNAP8210BK	SNAP8310BK	SNAP8210BKTR	SNAP8310BKTR	
Blue	SNAP8210BL	SNAP8310BL	SNAP8210BLTR	SNAP8310BLTR	
Brown	SNAP8210	SNAP8310	SNAP8210TR	SNAP8310TR	
Gray	SNAP8210GY	SNAP8310GY	SNAP8210GYTR	SNAP8310GYTR	
lvory	SNAP8210I	SNAP8310I	SNAP8210ITR	SNAP8310ITR	
Light Almond	SNAP8210LA	SNAP8310LA	SNAP8210LATR	SNAP8310LATR	
Red	SNAP8210R	SNAP8310R	SNAP8210RTR	SNAP8310RTR	
White	SNAP8210W	SNAP8310W	SNAP8210WTR	SNAP8310WTR	

**SNAP8200RIGLTRA** 

TR with Power Indicating LED.

**SNAP8300RIGLTRA** 





15 and 20 Ampere, 125 Volts

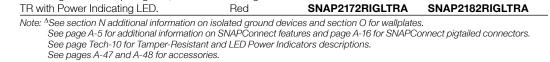
IP20





SNAPConnect® Extra Heavy Duty Hospital Grade ● Receptacles

Style Line® Decorator			
Description	Color	Catalog Number	
Hospital grade, Style Line® decorator,	Black	SNAP2172BKA	SNAP2182BKA
flush, nylon face, modular receptacle	Brown	SNAP2172A	SNAP2182A
which requires pigtailed connector on	Gray	SNAP2172GYA	SNAP2182GYA
page A-15.	Ivory	SNAP2172IA	SNAP2182IA
	Light Almond	SNAP2172LAA	SNAP2182LAA
	Red	SNAP2172RA	SNAP2182RA
	White	SNAP2172WA	SNAP2182WA
Hospital grade, Style Line® decorator,	Black	SNAP2172BKNA	SNAP2182BKNA
flush, nylon face, modular receptacle	Brown	SNAP2172NA	SNAP2182NA
which requires pigtailed connector on	Gray	SNAP2172GYNA	SNAP2182GYNA
page A-15. Assembled in USA.	Ivory	SNAP2172INA	SNAP2182INA
	Light Almond	SNAP2172LANA	SNAP2182LANA
	Red	SNAP2172RNA	SNAP2182RNA
	White	SNAP2172WNA	SNAP2182WNA
Hospital grade, Tamper-Resistant,	Black	SNAP2172BKTRA	SNAP2182BKTRA
Style Line® decorator, flush, nylon face,	Brown	SNAP2172TRA	SNAP2182TRA
modular receptacle which requires	Gray	SNAP2172GYTRA	SNAP2182GYTRA
pigtailed connector on page A-15.	lvory	SNAP2172ITRA	SNAP2182ITRA
Assembled in USA.	Light Almond	SNAP2172LATRA	SNAP2182LATRA
	Red	SNAP2172RTRA	SNAP2182RTRA
	White	SNAP2172WTRA	SNAP2182WTRA
Hospital grade, Tamper-Resistant,	Black	SNAP2172BKSCTRA	SNAP2182BKSCTRA
Split Circuit, Style Line® decorator, flush,	Brown	SNAP2172SCTRA	SNAP2182SCTRA
nylon face, modular receptacle which	Gray	SNAP2172GYSCTRA	SNAP2182GYSCTRA
requires pigtailed connector on page A-15.	lvory	SNAP2172ISCTRA	SNAP2182ISCTRA
Assembled in USA.	Light Almond	SNAP2172LASCTRA	SNAP2182LASCTRA
	Red	SNAP2172RSCTRA	SNAP2182RSCTRA
	White	SNAP2172WSCTRA	SNAP2182WSCTRA
Isolated ground <sup>∆</sup> , Hospital grade,	Orange	SNAP2172IGTRA	SNAP2182IGTRA
Tamper-Resistant.	Red	SNAP2172RIGTRA	SNAP2182RIGTRA
Hospital grade, with Power Indicating LED,	Black	SNAP2172BKL	SNAP2182BKL
Style Line® decorator, flush, nylon face,	Brown	SNAP2172BRL SNAP2172L	SNAP2182L
modular receptacle which requires		SNAP2172C SNAP2172GYL	SNAP2182GYL
pigtailed connector on page A-15.	Gray Ivory	SNAP2172G1L	SNAP2182IL
Assembled in USA.	Light Almond	SNAP2172LL SNAP2172LAL	SNAP2182LAL
Assembled in OSA.	Red	SNAP2172LAL SNAP2172RL	SNAP2182RL
	White	SNAP2172NL	SNAP2182WL
La late I A III a Plate a I			
Isolated ground <sup>a</sup> , Hospital grade,	Orange	SNAP2172IGL	SNAP2182IGL
with Power Indicating LED.	Red	SNAP2172RIGL	SNAP2182RIGL
Hospital grade, Tamper-Resistant,	Black	SNAP2172BKLTRA	SNAP2182BKLTRA
with Power Indicating LED, Style Line®	Brown	SNAP2172LTRA	SNAP2182LTRA
decorator, flush, nylon face, modular	Gray	SNAP2172GYLTRA	SNAP2182GYLTRA
receptacle which requires pigtailed	lvory	SNAP2172ILTRA	SNAP2182ILTRA
connector on page A-15.	Light Almond	SNAP2172LALTRA	SNAP2182LALTRA
Assembled in USA.	Red	SNAP2172RLTRA	SNAP2182RLTRA
	White	SNAP2172WLTRA	SNAP2182WLTRA
la clata di construe dA il la conttal consella	O		ON A DOLOGIOUTE A



SNAP2172IGLTRA

Orange

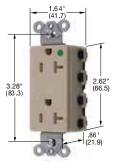
### SNAPConnect® Tester

Isolated ground<sup>a</sup>, Hospital grade,

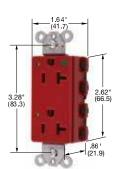
Description	Catalog Number
Circuit Tester for SNAPConnect receptacle terminals,	SNAPCTG
GFCI and standard receptacles	



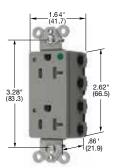
SNAP2182A



SNAP2182ITRA



SNAP2182RL



SNAP2182GYLTRA



**SNAPCTG** 

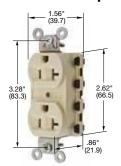
Dimensions in Inches (mm)

**SNAP2182IGLTRA** 





### 15 and 20 Ampere, 125 Volts



SNAP5362IA



SNAP5362LATRA



SNAP5362L



SNAP5362GYLTRA



SNAP52611

Dimensions in Inches (mm)







	Duplex			
	Description	Color	Catalog Number	
	Specification grade, finder groove, nylon face, modular receptacle which requires pigtailed connector on page A-15.	Black Brown Gray Ivory Light Almond Red White	SNAP5262BKA SNAP5262A SNAP5262GYA SNAP5262IA SNAP5262LAA SNAP5262RA SNAP5262WA	SNAP5362BKA SNAP5362A SNAP5362GYA SNAP5362IA SNAP5362LAA SNAP5362RA SNAP5362WA
	Specification grade, smooth, nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	SNAP5262BKNA SNAP5262NA SNAP5262GYNA SNAP5262INA SNAP5262LANA SNAP5262RNA SNAP5262WNA	SNAP5362BKNA SNAP5362NA SNAP5362GYNA SNAP5362INA SNAP5362LANA SNAP5362RNA SNAP5362WNA
	Specification grade, Tamper-Resistant, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP5262BKTRA SNAP5262BLTRA SNAP5262TRA SNAP5262GYTRA SNAP5262ITRA SNAP5262LATRA SNAP5262RTRA SNAP5262WTRA	SNAP5362BKTRA SNAP5362BLTRA SNAP5362TRA SNAP5362GYTRA SNAP5362ITRA SNAP5362LATRA SNAP5362RTRA SNAP5362WTRA
	Specification grade, Tamper-Resistant, Split Circuit, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP5262BKSCTRA SNAP5262BLSCTRA SNAP5262SCTRA SNAP5262GYSCTRA SNAP5262ISCTRA SNAP5262LASCTRA SNAP5262RSCTRA SNAP5262WSCTRA	SNAP5362BKSCTRA SNAP5362BLSCTRA SNAP5362SCTRA SNAP5362SCTRA SNAP5362ISCTRA SNAP5362LASCTRA SNAP5362RSCTRA SNAP5362WSCTRA
	Isolated ground <sup>Δ</sup> , Specification grade, Tamper-Resistant.	Orange	SNAP5262IGTRA	SNAP5362IGTRA
O/P	Specification grade, with Power Indicating LED, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP5262BKL SNAP5262BLL SNAP5262L SNAP5262GYL SNAP5262IL SNAP5262LAL SNAP5262RL SNAP5262WL	SNAP5362BKL SNAP5362BLL SNAP5362L SNAP5362GYL SNAP5362IL SNAP5362LAL SNAP5362RL SNAP5362WL
	Isolated ground <sup>1</sup> , Specification grade, with Power Indicating LED.	Orange	SNAP5262IGL	SNAP5362IGL
	Specification grade, Tamper-Resistant, with Power Indicating LED, smooth nylon face, modular receptacle which requires pigtailed connector on page A-15. Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP5262BKLTRA SNAP5262BLLTRA SNAP5262LTRA SNAP5262GYLTRA SNAP5262ILTRA SNAP5262LALTRA SNAP5262RLTRA SNAP5262WLTRA	SNAP5362BKLTRA SNAP5362BLLTRA SNAP5362LTRA SNAP5362GYLTRA SNAP5362ILTRA SNAP5362LALTRA SNAP5362RLTRA SNAP5362WLTRA
	Isolated ground <sup>∆</sup> , Specification grade,	Orange	SNAP5262IGLTRA	SNAP5362IGLTRA

### SNAPConnect® Extra Heavy Duty Standard Single Receptacles

	Standard Duplex		Standard Duple	Standard Duplex Tamper-Resistant	
Color	15A 125V	20A 125V	15A 125V	20A 125V	<b>/18</b>
Almond	SNAP5261AL	SNAP5361AL	SNAP5261ALTR	SNAP5361ALTR	
Black	SNAP5261BK	SNAP5361BK	SNAP5261BKTR	SNAP5361BKTR	
Blue	SNAP5261BL	SNAP5361BL	SNAP5261BLTR	SNAP5361BLTR	
Brown	SNAP5261	SNAP5361	SNAP5261TR	SNAP5361TR	
Gray	SNAP5261GY	SNAP5361GY	SNAP5261GYTR	SNAP5361GYTR	
lvory	SNAP5261I	SNAP5361I	SNAP5261ITR	SNAP5361ITR	
Light Almond	SNAP5261LA	SNAP5361LA	SNAP5261LATR	SNAP5361LATR	
Red	SNAP5261R	SNAP5361R	SNAP5261RTR	SNAP5361RTR	
White	SNAP5261W	SNAP5361W	SNAP5261WTR	SNAP5361WTR	

TR with Power Indicating LED.









### SNAPConnect® **Extra Heavy Duty Receptacles**

Style	Line®	Decorator
Dogorint	ion	

Style Line® Decorator				_
Description	Color	Catalog Number		_
Specification grade, Style Line® decorator, flush, nylon face, modular receptacle which requires pigtailed connector below.	Black Brown Gray Ivory Light Almond Red White	SNAP2152BKA SNAP2152A SNAP2152GYA SNAP2152IA SNAP2152LAA SNAP2152RA SNAP2152WA	SNAP2162BKA SNAP2162A SNAP2162GYA SNAP2162IA SNAP2162LAA SNAP2162RA SNAP2162WA	-
Specification grade, Style Line® decorator, flush, nylon face, modular receptacle which requires pigtailed connector below. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	SNAP2152BKNA SNAP2152NA SNAP2152GYNA SNAP2152INA SNAP2152LANA SNAP2152RNA SNAP2152WNA	SNAP2162BKNA SNAP2162NA SNAP2162GYNA SNAP2162INA SNAP2162LANA SNAP2162RNA SNAP2162WNA	-
Specification grade, Tamper-Resistant, Style Line® decorator, flush, nylon face, modular receptacle which requires pigtailed connector below. Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP2152BKTRA SNAP2152BLTRA SNAP2152TRA SNAP2152GYTRA SNAP2152ITRA SNAP2152LATRA SNAP2152RTRA SNAP2152WTRA	SNAP2162BKTRA SNAP2162BLTRA SNAP2162TRA SNAP2162GYTRA SNAP2162ITRA SNAP2162LATRA SNAP2162RTRA SNAP2162RTRA SNAP2162WTRA	A
Specification grade, Tamper-Resistant, Split Circuit, Style Line® decorator, flush, nylon face, modular receptacle which requires pigtailed connector below. Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP2152BKSCTRA SNAP2152BLSCTRA SNAP2152SCTRA SNAP2152GYSCTRA SNAP2152ISCTRA SNAP2152LASCTRA SNAP2152RSCTRA SNAP2152RSCTRA SNAP2152WSCTRA	SNAP2162BKSCTRA SNAP2162BLSCTRA SNAP2162SCTRA SNAP2162GYSCTRA SNAP2162ISCTRA SNAP2162LASCTRA SNAP2162RSCTRA SNAP2162WSCTRA	A
Isolated ground <sup>a</sup> , Specification grade, Tamper-Resistant.	Orange	SNAP2152IGTRA	SNAP2162IGTRA	-
Specification grade, with Power Indicating LED, Style Line® decorator, flush, nylon face, modular receptacle which requires pigtailed connector below. Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP2152BKL SNAP2152BLL SNAP2152L SNAP2152GYL SNAP2152IL SNAP2152LAL SNAP2152RL SNAP2152WL	SNAP2162BKL SNAP2162BLL SNAP2162L SNAP2162GYL SNAP2162IL SNAP2162LAL SNAP2162RL SNAP2162WL	
Isolated ground <sup>a</sup> , Specification grade, with Power Indicating LED.	Orange	SNAP2152IGL	SNAP2162IGL	
Specification grade, Tamper-Resistant, with Power Indicating LED, Style Line® decorator, flush, nylon face, modular receptacle which requires pigtailed connector below.  Assembled in USA.	Black Blue Brown Gray Ivory Light Almond Red White	SNAP2152BKLTRA SNAP2152BLLTRA SNAP2152LTRA SNAP2152GYLTRA SNAP2152ILTRA SNAP2152LALTRA SNAP2152RLTRA SNAP2152WLTRA	SNAP2162BKLTRA SNAP2162BLLTRA SNAP2162LTRA SNAP2162GYLTRA SNAP2162ILTRA SNAP2162LALTRA SNAP2162RLTRA SNAP2162WLTRA	A
Isolated ground <sup>A</sup> , Specification grade,	Orange	SNAP2152IGLTRA	SNAP2162IGLTRA	_



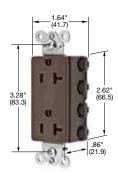
See page Tech-10 for Tamper-Resistant and LED Power Indicators descriptions. See pages A-47 and A-48 for accessories.

See section O for wallplates.

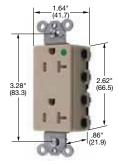
SNAPConnect® Right Angle Pigtailed Connector

ONAL COMMON THIS IN THIS IS IN THE INTERIOR COMMON TO THE INTERIOR C							
Description	Wire Type	General Use	Assembled in USA				
Clear right angle terminal with 6 inch leads	Solid	SNAP1RA	SNAP1RNA				
#12 AWG THHN/THWN-2; Polycarbonate	Stranded	SNAP2RA	SNAP2RNA				
housing material.							

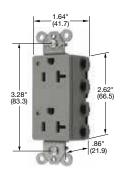
Note: For Assembled in USA products, must order connector with NA suffix.



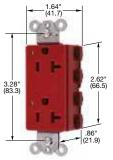
**SNAP2162A** 



SNAP2182ITRA



SNAP2162GYL

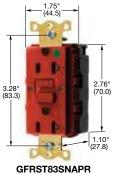


SNAP2162RLTRA

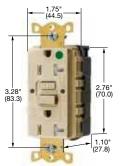


Dimensions in Inches (mm)

### 15 and 20 Ampere, 125 Volts



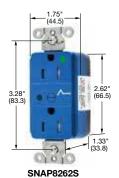




**GFTWRST83SNAPI** 



SNAP8300USBW



Dimensions in Inches (mm)

SNAP1RA







SNAPConnect® GFCI LED Hospital Grade • Catalog Number

•		•		
Hospital Grade SNAPConnect GFCI LED, self-grounding staple, requires connector below, sold separately. Add "NA" suffix for devices Assembled in USA.	Almond Black Brown Gray Ivory Light Almond Red White	GFRST82SNAPAL GFRST82SNAPBK GFRST82SNAP GFRST82SNAPGY GFRST82SNAPI GFRST82SNAPLA GFRST82SNAPR GFRST82SNAPW	GFRST83SNAPAL GFRST83SNAPBK GFRST83SNAP GFRST83SNAPGY GFRST83SNAPI GFRST83SNAPLA GFRST83SNAPR GFRST83SNAPR	

### SNAPConnect® GFCI LED Hospital Grade • **Tamper and Weather Resistant**



Description

Hospital Grade SNAPConnect GFCI TR/WR, self-grounding staple, requires connector below, sold separately. Add "NA" suffix for devices Assembled in USA.

Color Catalog Number Almond GFTWRST82SNAPAL **GFTWRST82SNAPBK** Black Brown **GFTWRST82SNAP** GFTWRST82SNAPGY Gray GFTWRST82SNAPI Ivory Light Almond **GFTWRST82SNAPLA** Red GFTWRST82SNAPR White GFTWRST82SNAPW

**GFTWRST83SNAPAL GFTWRST83SNAPBK GFTWRST83SNAP GFTWRST83SNAPGY GFTWRST83SNAPI GFTWRST83SNAPLA GFTWRST83SNAPR GFTWRST83SNAPW** 

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.









SNAPCo	nnect® U	JSB Cha	rger
Hospital	Grade 🗨	Duplex	Receptacles

Description Hospital Grade SNAPConnect USB Charger, Tamper-Resistant Style Line® decorator duplex receptacle, two USB type 2.0 ports 3 Amp, 5 Volt DC, 15 or 20 Amp, 125 Volt AC.

Color Black Brown Gray Ivory Light Almond Red White

Catalog Number SNAP8200USBBK SNAP8300USBBK SNAP8200USB SNAP8300USB SNAP8200USBGY SNAP8300USBGY SNAP8200USBI SNAP8300USBI SNAP8200USBLA SNAP8300USBLA SNAP8300USBR SNAP8200USBR SNAP8200USBW SNAP8300USBW



15A 125V NEMA 5-15R UL CSA 0.5 HP







SNAPConnect® Surge Protection Hospital Grade Tamper-Resistant Receptacle with Power Indicating LED



Catalog Number Blue SNAP8262S SNAP8262GYS Gray SNAP8262IS Ivory Light Almond SNAP8262LAS SNAP8262RS Red SNAP8262WS

**SNAP8362S** SNAP8362GYS **SNAP8362IS** SNAP8362LAS SNAP8362RS **SNAP8362WS** 

### SNAPConnect® Right Angle Pigtailed Terminal

Description	Wire Type	General Use Catalog Number	Assembled in USA Catalog Number
Clear right angle terminal with 6 inch leads #12 AWG THHN/THWN-2; Polycarbonate housing material.	Solid	SNAP1RA	SNAP1RNA
	Stranded	SNAP2RA	SNAP2RNA

Note: See page Tech-10 for Tamper-Resistant, Weather Resistant and LED Power Indicators descriptions.

### 15 and 20 Ampere, 125 Volts









### SNAPConnect® GFCI LED

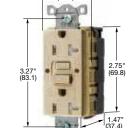
Description	Color	Catalog Number	
SNAPConnect GFCI LED, self-grounding staple, requires connector below, sold separately. Add "NA" suffix for devices Assembled in USA.	Almond Black Brown Gray Ivory Light Almond Red White	GFRST15SNAPAL GFRST15SNAPBK GFRST15SNAP GFRST15SNAPGY GFRST15SNAPI GFRST15SNAPLA GFRST15SNAPR GFRST15SNAPW	GFRST20SNAPAL GFRST20SNAPBK GFRST20SNAP GFRST20SNAPGY GFRST20SNAPI GFRST20SNAPLA GFRST20SNAPR GFRST20SNAPW



**GFRST15SNAPGY** 

### SNAPConnect® GFCI LED, **Tamper and Weather Resistant**

Description	Color	Catalog Number	
SNAPConnect GFCI TR/WR, self-grounding staple, requires connector below, sold separately. Add "NA" suffix for devices Assembled in USA.	Almond Black Brown Gray Ivory Light Almond Red White	GFTWRST15SNAPAL GFTWRST15SNAPBK GFTWRST15SNAP GFTWRST15SNAPGY GFTWRST15SNAPI GFTWRST15SNAPLA GFTWRST15SNAPR GFTWRST15SNAPW	GFTWRST20SNAPAL GFTWRST20SNAPBK GFTWRST20SNAP GFTWRST20SNAPGY GFTWRST20SNAPI GFTWRST20SNAPLA GFTWRST20SNAPR GFTWRST20SNAPW



**GFTWRST20SNAPI** 

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.





ΠG [ ] [ ] w





SNAP15USBW

SNAPConnect® USB Charger, **Duplex Receptacles** 

Description	Color	Catalog Number	
SNAPConnect USB Charger,	Black	SNAP15USBBK	SNAP20USBBK
Tamper-Resistant Style Line®	Brown	SNAP15USB	SNAP20USB
decorator duplex receptacle,	Gray	SNAP15USBGY	SNAP20USBGY
two USB type 2.0 ports 3 Amp,	lvory	SNAP15USBI	SNAP20USBI
5 Volt DC, 15 or 20 Amp, 125 Volt AC.	Light Almond	SNAP15USBLA	SNAP20USBLA
	White	SNAP15USRW	SNAP20LISBW





### SNAPConnect® Surge Protection, Tamper-Resistant Receptacle with Power Indicating LED

Mairi owor maloading LLD	0.5111	1111	
Description	Color	Catalog Number	
SNAPConnect Surge supression,	Blue	SNAP5262S	SNAP5362S
Tamper-Resistant, smooth face, duplex receptacle.	Gray Ivorv	SNAP5262GYS SNAP5262IS	SNAP5362GYS SNAP5362IS
	Light Almond	SNAP5262LAS	SNAP5362LAS
	White	SNAP5262WS	SNAP5362WS









CYOYO **SNAP5262S** 

### SNAPConnect® Tester

Description	Catalog Number
Circuit Tester for SNAPConnect receptacle terminals,	SNAPCTG
GFCI and standard receptacles.	

Note: See page Tech-10 for Tamper-Resistant, Weather Resistant and LED Power Indicators descriptions.



Dimensions in Inches (mm)



### 15 and 20 Ampere, 125 Volts







Two Controlled Faces

20 Amp

SNAP5362C2BK

SNAP2162C2I

SNAP2162C2LA

SNAP2162C2R

**SNAP2162C2W** 

SNAP2162C2BKTRA

SNAP2162C2GYTRA

SNAP2162C2GNTRA

**SNAP2162C2LATRA** 

SNAP2162C2WTRA

SNAP2162C2ITRA

SNAP2162C2TRA





- Permanent power symbol remains clearly visible after installation
- Ocontrol both outlets per device for 100% controlled applications or iust one outlet for 50% controlled applications
- (b) Ideal for commercial buildings, retail, schools, hotel rooms
- Part of the Hubbell Load:Logic™ Plug Control system

SNAP5262C2BK

SNAP2152C2I

SNAP2152C2LA

SNAP2152C2R

SNAP2152C2W

SNAP2152C2BKTRA

SNAP2152C2GYTRA

SNAP2152C2GNTRA

SNAP2152C2LATRA

SNAP2152C2WTRA

SNAP2152C2ITRA

SNAP2152C2TRA

15 Amp

SNAPConnect® Permanently Marked Receptacles 15 Amp

SNAP5262C1BK

Color

Black

Ivorv

Red

White

Black

Gray

Ivorv Lt. Almond

Green

plugload controls.

SNAPConnect®

decorator duplex,

permanently

marked for use

with automatic plugload controls. White

Tamper-Resistant, Brown



(41.7)		Duplex
3.28* (83.3)	2.62" (66.5)	SNAPConnect® standard duplex, permanently marked for use with automatic plugload controls
SNAP5362C1W	TR	SNAPConnect® Tamper-Resistar standard duplex,

	OI W II OOI II IOOL	Dictort	·····	U	U	
	standard duplex,	Blue	SNAP5262C1BL	SNAP5362C1BL	SNAP5262C2BL	SNAP5362C2BL
	permanently	Brown	SNAP5262C1	SNAP5362C1	SNAP5262C2	SNAP5362C2
	marked for use	Gray	SNAP5262C1GY	SNAP5362C1GY	SNAP5262C2GY	SNAP5362C2GY
	with automatic	Green	SNAP5262C1GN	SNAP5362C1GN	SNAP5262C2GN	SNAP5362C2GN
)	plugload controls.	Ivory	SNAP5262C1I	SNAP5362C1I	SNAP5262C2I	SNAP5362C2I
	1 5 -	Lt. Álmond	SNAP5262C1LA	SNAP5362C1LA	SNAP5262C2LA	SNAP5362C2LA
		Red	SNAP5262C1R	SNAP5362C1R	SNAP5262C2R	SNAP5362C2R
		White	SNAP5262C1W	SNAP5362C1W	SNAP5262C2W	SNAP5362C2W
	SNAPConnect®	Black	SNAP5262C1BKTRA	SNAP5362C1BKTRA	SNAP5262C2BKTRA	SNAP5362C2BKTRA
2	Tamper-Resistant,	Brown	SNAP5262C1TRA	SNAP5362C1TRA	SNAP5262C2TRA	SNAP5362C2TRA
	standard duplex,	Gray	SNAP5262C1GYTRA	SNAP5362C1GYTRA	SNAP5262C2GYTRA	SNAP5362C2GYTRA
	permanently	Green	SNAP5262C1GNTRA	SNAP5362C1GNTRA	SNAP5262C2GNTRA	SNAP5362C2GNTRA
	marked for use	Ivory	SNAP5262C1ITRA	SNAP5362C1ITRA	SNAP5262C2ITRA	SNAP5362C2ITRA
	with automatic	Lt. Álmond	SNAP5262C1LATRA	SNAP5362C1LATRA	SNAP5262C2LATRA	SNAP5362C2LATRA
	plugload controls.	White	SNAP5262C1WTRA	SNAP5362C1WTRA	SNAP5262C2WTRA	SNAP5362C2WTRA
	Style Line® D	ecorato	r			
	SNAPConnect®	Black	SNAP2152C1BK	SNAP2162C1BK	SNAP2152C2BK	SNAP2162C2BK
	decorator duplex,	Blue	SNAP2152C1BL	SNAP2162C1BL	SNAP2152C2BL	SNAP2162C2BL
	permanently	Brown	SNAP2152C1	SNAP2162C1	SNAP2152C2	SNAP2162C2
	marked for use	Gray	SNAP2152C1GY	SNAP2162C1GY	SNAP2152C2GY	SNAP2162C2GY
	with automatic	Green	SNAP2152C1GN	SNAP2162C1GN	SNAP2152C2GN	SNAP2162C2GN
	will i autoffiatic	GICCII	OITAI ZIOZOIGIT	OITAI ZIOZOIGIV	011A1 210202011	511A1 2 10202GIN

SNAP2162C1I

SNAP2162C1LA

**SNAP2162C1R** 

**SNAP2162C1W** 

SNAP2162C1TRA

SNAP2162C1ITRA

SNAP2162C1LATRA

SNAP2152C1BKTRA SNAP2162C1BKTRA

SNAP2152C1GYTRA SNAP2162C1GYTRA

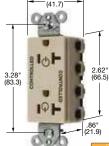
SNAP2152C1GNTRA SNAP2162C1GNTRA

SNAP2152C1WTRA SNAP2162C1WTRA

One Controlled Face Split Circuit Hot Tab

20 Amp

SNAP5362C1BK



SNAP2162C2I





SNAPConnect® Right Angle Pigtailed Connector

SNAP2152C1I

SNAP2152C1R

**SNAP2152C1W** 

SNAP2152C1TRA

SNAP2152C1ITRA

SNAP2152C1LATRA

Lt. Almond SNAP2152C1LA

Description	Solid Wire	Stranded Wire
Clear right angle terminal with 6 inch leads, 600V, #12 AWG THHN/THWN-2; Polycarbonate housing material.	SNAP1RA	SNAP2RA

### Permanent Controlled Recentacle Lahel

remailent Controlled Neceptacle Laber	
Description	Catalog Number
For use in retrofit applications where indication of a controlled receptacle is required. This label is UL approved for marking and labeling. 60 labels of each per pack.	CL60

Dimensions in Inches (mm)

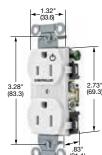


15 and 20 Ampere, 125 Volts

### **Industrial Grade, Permanently Marked Tamper-Resistant Receptacles**

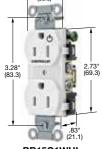


	One Controlled Face Split Circuit Hot Tab Two Controlled Faces		One Controlled Face Split Circuit Hot Tab		rolled Faces
Duplex	Color	15 Amp	20 Amp	15 Amp	20 Amp
Smooth nylon face, duplex, permanently marked for use with automatic outlet control systems, back and side wired.	Black Blue Brown Gray Ivory Lt. Almond Red White	HBL5262C1BLKTR HBL5262C1BLTR HBL5262C1TR HBL5262C1GRYTR HBL5262C1ITR HBL5262C1LATR HBL5262C1RTR HBL5262C1WHITR	HBL5362C1BLKTR HBL5362C1BLTR HBL5362C1TR HBL5362C1GRYTR HBL5362C1ITR HBL5362C1LATR HBL5362C1RTR HBL5362C1WHITR	HBL5262C2BLTR HBL5262C2TR	HBL5362C2BLKTR HBL5362C2BLTR HBL5362C2TR HBL5362C2GRYTR HBL5362C2ITR HBL5362C2LATR HBL5362C2RTR HBL5362C2WHITR



### HBL5362C2BLKTR

BR1	15C	:11	νн

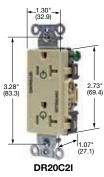


3.28" (83.3)	2.73" (69.3)

## BR20C2GN



DR15C1GRY



### **Permanently Marked Receptacles**

		One Controlled Face Split Circuit Hot Tab		Two Co	ntrolled Faces
Duplex	Color	15 Amp	20 Amp	15 Amp	20 Amp
Smooth nylon face, duplex, permanently marked for use with automatic outlet control systems, back and side wired.	Black Blue Brown Gray Green Ivory Lt. Almond Red White	BR15C1BLK BR15C1BL BR15C1 BR15C1GRY BR15C1GN BR15C1I BR15C1LA BR15C1LA BR15C1R	BR20C1BLK BR20C1BL BR20C1 BR20C1GRY BR20C1GN BR20C1I BR20C1LA BR20C1R BR20C1WHI	BR15C2BLK BR15C2BL BR15C2 BR15C2GRY BR15C2GN BR15C2I BR15C2LA BR15C2R BR15C2R	BR20C2BLK BR20C2BL BR20C2 BR20C2GRY BR20C2GN BR20C2I BR20C2LA BR20C2R BR20C2WHI
Smooth nylon face, Tamper-Resistant, duplex, permanently marked for use with automatic outlet control systems, back and side wired.	Black Blue Brown Gray Green Ivory Lt. Almond Red White	BR15C1BLKTR BR15C1BLTR BR15C1TR BR15C1GRYTR BR15C1GNTR BR15C1ITR BR15C1LATR BR15C1LATR BR15C1WHITR	BR20C1BLKTR BR20C1BLTR BR20C1TR BR20C1GRYTR BR20C1GNTR BR20C1ITR BR20C1LATR BR20C1RTR BR20C1RTR	BR15C2BLKTR BR15C2BLTR BR15C2TR BR15C2GRYTR BR15C2GNTR BR15C2LTR BR15C2LATR BR15C2LATR BR15C2WHITR	BR20C2BLKTR BR20C2BLTR BR20C2TR BR20C2GRYTR BR20C2GNTR BR20C2ITR BR20C2LATR BR20C2RTR BR20C2RTR BR20C2WHITR
Style Line® Dec	orator				
Smooth nylon face, decorator duplex, permanently marked for use with automatic outlet control systems, back and side wired.	Black Blue Brown Gray Green Ivory Lt. Almond Red White	DR15C1BLK DR15C1BL DR15C1 DR15C1GRY DR15C1GN DR15C1I DR15C1LA DR15C1LA DR15C1R	DR20C1BLK DR20C1BL DR20C1 DR20C1GRY DR20C1GN DR20C1I DR20C1LA DR20C1R DR20C1WHI	DR15C2BLK DR15C2BL DR15C2 DR15C2GRY DR15C2GN DR15C2I DR15C2LA DR15C2LA DR15C2R DR15C2R	DR20C2BLK DR20C2BL DR20C2 DR20C2GRY DR20C2GN DR20C2I DR20C2LA DR20C2R DR20C2R
Smooth nylon face, Tamper-Resistant, decorator duplex, permanently marked for use with automatic	Black Blue Brown Gray Green	DR15C1BLKTR DR15C1BLTR DR15C1TR DR15C1GRYTR DR15C1GNTR	DR20C1BLKTR DR20C1BLTR DR20C1TR DR20C1GRYTR DR20C1GNTR	DR15C2BLKTR DR15C2BLTR DR15C2TR DR15C2GRYTR DR15C2GRYTR	DR20C2BLKTR DR20C2BLTR DR20C2TR DR20C2GRYTR DR20C2GNTR

manant Cantrallad Dagantagla Lahal

Red

White

DR15C1ITR

DR15C1LATR

DR15C1WHITR

DR15C1RTR

Permanent Controlled Receptacle Label	
Description	Catalog Number
For use in retrofit applications where indication of a controlled receptacle is required.	CL60
This label is UL approved for marking and labeling, 60 labels of each per pack.	

DR20C1ITR

DR20C1LATR

DR20C1RTR

DR20C1WHITR

Dimensions in Inches (mm)

DR20C2ITR

DR20C2LATR

DR20C2RTR

DR20C2WHITR

DR15C2ITR

DR15C2LATR

DR15C2WHITR

DR15C2RTR

outlet control systems, Ivory

back and side wired. Lt. Almond

### **Features and Benefits**

### **Switched Receptacles for Automatic Receptacle Control**

The Load Control Switched Duplex Receptacle is the latest addition to Hubbell Wiring Device-Kellems' comprehensive offering for automatic receptacle control requirements. Featuring Hubbell's exclusive and patented tamper-resistant mechanism as standard, the unit is capable of controlling other receptacles downstream in the branch circuit.

Hubbell offers this innovative device in wired and wireless options, which are both fully compatible with existing systems. This allows for easy additions and changes to meet current energy codes and standards in current facilities.

#### Common Features

- Half Controlled or Fully Controlled 15A or 20A Options
- Hubbell's Exclusive Tamper-Resistant Mechanism
- Downstream Branch Circuit Control
- Brass Strap
- Permanent NEC 406.3 (E) Markings
- UL498B SA Listed Receptacles with Integral Switching Comply with Supplement SA
- Fed Spec W596G
- Hospital Grade Series Available





HBL5362RFC2W



### Wired Switched Receptacles

 The wired series is designed to be automatically controlled by a low voltage signal from either occupancy sensors, or any other type of control device capable of performing this task, such as a time-of-day control device



### Wireless Switched Receptacles

 The Clear Connect<sup>™</sup> enabled wireless series is a wireless receiver that is controlled by the corresponding occupancy sensor

### Wired Switched Receptacles for Automatic Receptacle Control

		15A			20A
Description	Color	Split Circuit	Fully Controlled	Split Circuit	Fully Controlled
Auto ON/Auto OFF control. Capable of controlling additional receptacles downstream.	Black Brown Gray Green Ivory Lt. Almond White	HBL5262LC1BK HBL5262LC1 HBL5262LC1GY HBL5262LC1GN HBL5262LC1I HBL5262LC1LA HBL5262LC1W	HBL5262LC2BK HBL5262LC2 HBL5262LC2GY HBL5262LC2GN HBL5262LC2I HBL5262LC2LA HBL5262LC2W	HBL5362LC1BK HBL5362LC1 HBL5362LC1GY HBL5362LC1GN HBL5362LC1I HBL5362LC1LA HBL5362LC1W	HBL5362LC2BK HBL5362LC2 HBL5362LC2GY HBL5362LC2GN HBL5362LC2I HBL5362LC2LA HBL5362LC2W

Note: See Section E, page E-31 for technical information. Special order for hospital grade devices.



HBL5362LC2W

### **Wireless Switched Receptacles for Automatic Receptacle Control**

		15A		20A	
Description	Color	Split Circuit	Fully Controlled	Split Circuit	Fully Controlled
Wireless receiver Auto ON/Auto OFF. Capable	Black Brown	HBL5262RFC1BK HBL5262RFC1	HBL5262RFC2BK HBL5262RFC2	HBL5362RFC1BK HBL5362RFC1	HBL5362RFC2BK HBL5362RFC2
of controlling additional	Gray	HBL5262RFC1GY	HBL5262RFC2GY	HBL5362RFC1GY	HBL5362RFC2GY
receptacles downstream.	Green Ivory	HBL5262RFC1GN HBL5262RFC1I	HBL5262RFC2GN HBL5262RFC2I	HBL5362RFC1GN HBL5362RFC1I	HBL5362RFC2GN HBL5362RFC2I
	Lt. Álmond	HBL5262RFC1LA	HBL5262RFC2LA	HBL5362RFC1LA	HBL5362RFC2LA
	White	HBL5262RFC1W	HBL5262RFC2W	HBL5362RFC1W	HBL5362RFC2W

Note: See Section E, page E-31 for technical information. Special order for hospital grade devices.



HBL5362RFC2W







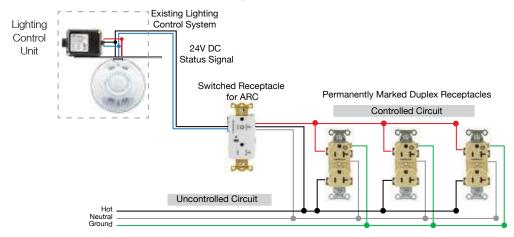


New Codes and Standards mandates that 50% of all receptacles in private offices, open offices and computer classrooms must be automatically controlled by occupancy or time based schedules.

This also includes outlets in modular furniture. Hubbell provides solutions for compliance that are cost effective and installer friendly. Find out more design resources at www.hubbell-wiring.com/energy.aspx

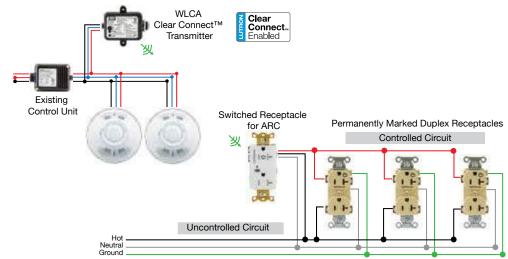
### Wired

Utilizing low voltage wiring provides installers with a familiar method of wiring and installation. Specify Hubbell's new load control receptacle to meet this requirement. Utilize alternating outlet or split receptacle wiring as required to control at least 50% of the outlets in the space.



### Wireless

Wireless communication takes complexity out of retrofit and difficult installations by eliminating low voltage wires running between lighting and receptacle control units. This gives installers flexibility to quickly deploy, add additional devices, and configure and re-configure the system as needed. Hubbell's WL series controls utilize Clear Connect™ communication and are compatible with other Clear Connect™ devices, such as Hubbell's wireless occupancy sensors.



### **Codes and Standards**



#### ASHRAE 90.1

ASHRAE 90.1 is the leading energy building efficiency standard for commercial buildings in North America. Section 8.4.2, ASHRAE 90.1 - 2010 instituted the requirement that in certain spaces at least 50% of all receptacles are to be controlled by either time of day control device, an occupancy sensor or by an automated signal from another control or alarm system.

### California Energy

Section 130.5(d) of California Energy Commission Title 24, Part 6 - 2013 code requires receptacles to have automatic shutoff controls in certain spaces in all buildings.

### NEC 2017



Article 406.3(E) of the NEC® 2017 edition selected the standby ((\*)) symbol as the marking for a receptacle connected to an automatic control system.

Clear Connect™ is a registered trademark of Lutron Electronics Co., Inc.

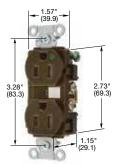




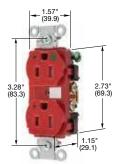
### 15 and 20 Ampere, 125 Volts



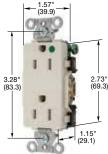
8200LA



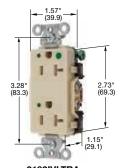
8200TRA



8200REDLTRA



2172LATRA



2182IVLTRA

Dimensions in Inches (mm)







Duplex	Color	Catalog Number	
Hospital grade, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	8200BK 8200 8200GY 8200IV 8200LA 8200RED 8200WHI	8300BK 8300 8300GY 8300IV 8300LA 8300RED 8300WHI
Hospital grade, Tamper-Resistant, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	8200BKTRA 8200TRA 8200GYTRA 8200IVTRA 8200LATRA 8200REDTRA 8200WTRA	8300BKTRA 8300TRA 8300GYTRA 8300IVTRA 8300LATRA 8300REDTRA 8300WTRA
Hospital grade, with Power Indicating LED, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	8200BKL 8200L 8200GYL 8200IVL 8200LAL 8200REDL 8200WL	8300BKL 8300L 8300GYL 8300IVL 8300LALM 8300REDL 8300WL
Hospital grade, Tamper-Resistant, with Power Indicating LED, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	8200BKLTRA 8200LTRA 8200GYLTRA 8200IVLTRA 8200LALTRA 8200REDLTRA 8200WLTRA	8300BKLTRA 8300LTRA 8300GYLTRA 8300IVLTRA 8300LALTRA 8300REDLTRA 8300WLTRA
Style Line® Decorator  Hospital grade,	Black	2172BK	2182BK
Style Line® decorator,	Brown	2172	2182

Style Line® Decorator			
Hospital grade,	Black	2172BK	2182BK
Style Line® decorator,	Brown	2172	2182
flush, nylon face,	Gray	2172GY	2182GY
back and side wired.	lvory	2172IV	2182IV
Assembled in USA.	Light Almond	2172LA	2182LA
	Red	2172RED	2182RED
	White	2172W	2182W
Hospital grade, Tamper-Resistant,	Black	2172BKTRA	2182BKTRA
Style Line® decorator,	Brown	2172TRA	2182TRA
flush, nylon face,	Gray	2172GYTRA	2182GYTRA
back and side wired.	lvory	2172IVTRA	2182IVTRA
Assembled in USA.	Light Almond	2172LATRA	2182LATRA
	Red	2172REDTRA	2182REDTRA
	White	2172WTRA	2182WTRA
Hospital grade,	Black	2172BKL	2182BKL
with Power Indicating LED,	Brown	2172L	2182L
Style Line® decorator,	Gray	2172GYL	2182GYL
flush, nylon face,	lvory	2172IVL	2182IVL
back and side wired.	Light Almond	2172LAL	2182LAL
Assembled in USA.	Red	2172REDL	2182REDL
	White	2172WL	2182WL
Hospital grade, Tamper-Resistant,	Black	2172BKLTRA	2182BKLTRA
with Power Indicating LED,	Brown	2172LTRA	2182LTRA
Style Line® decorator,	Gray	2172GYLTRA	2182GYLTRA
flush, nylon face,	lvory	2172IVLTRA	2182IVLTRA
back and side wired.	Light Almond	2172LALTRA	2182LALTRA

Note: See pages A-47 and A-48 for accessories.

See page Tech-10 for Tamper-Resistant and LED Power Indicators descriptions. See section O for wallplates.

Red

White

Assembled in USA.

2182REDLTRA

**2182WLTRA** 

2172REDLTRA

**2172WLTRA** 





15 and 20 Ampere, 125 and 250 Volts

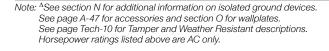
**Hubbell-PRO Heavy Duty** 

**Specification Grade Receptacles** 





Duplex	Color	Catalog Number		
Smooth nylon face, duplex,	Almond	5252AAL	5352AAL	
back and side wired.	Black	5252ABLK	5352ABLK	
	Brown	5252AB	5352AB	
	Gray	5252AG	5352AG	
	lvory	5252AI	5352AI	
	Light Almond	5252ALA	5352ALA	
	Office White	5252AOW	5352AOW	
	Red	5252AR	5352AR	
	White	5252AW	5352AW	
Isolated ground <sup>∆</sup> ,	Almond	IG5252AL	IG5352AL	
smooth face, duplex,	Gray	IG5252GY	IG5352GY	
back and side wired.	lvory	IG5252I	IG5352I	
	Light Almond	IG5252LA	IG5352LA	
	Orange	IG5252	IG5352	
	White	IG5252W	IG5352W	
Isolated ground <sup>a</sup> , Tamper-Resistant,	lvory	IG5252ITR	IG5352ITR	
smooth face, duplex,	Orange	IG5252TR	IG5352TR	4
back and side wired.	White	IG5252WTR	IG5352WTR	
Finder groove nylon face, duplex,	Almond	5262AL	5362AL	
back and side wired.	Black	5262BLK	5362BLK	
	Blue	_	5362BL	
	Brown	5262B	5362B	
	Gray	5262G	5362G	
	lvory	52621	5362I	
	Light Almond	5262LA	5362LA	
	Office White	5262OW	5362OW	
	Red	5262R	5362R	
	White	5262W	5362W	
Weather Resistant,	Black	5262BKWR	5362BKWR	
finder groove nylon face, duplex,	Brown	5262WR	5362WR	
back and side wired.	Gray	5262GYWR	5362GYWR	
	lvory	5262IWR	5362IWR	
	White	5262WWR	5362WWR	
Isolated ground <sup>a</sup> ,	Black	CR5252IGBK	CR5352IGBK	
finder groove face, duplex,	Blue	_	CR5352IGBL	
back and side wired.	Gray	CR5252IGGY	CR5352IGGY	
	lvory	CR5252IGI	CR5352IGI	
	Orange	CR5252IG	CR5352IG	
	Office White	CR5252IGOW	CR5352IGOW	





**CR5252IGW** 





**CR5352IGW** 

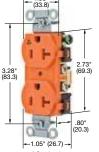
### **Hubbell-PRO Heavy Duty** Specification Grade Recentacles

Specification drade necept	acies	1.5 HP	2 HP	
Duplex	Color	Catalog Number		
Smooth nylon face, duplex,	Almond	5662AL	5462AL	_
back and side wired.	Black	5662BK	5462BK	
	Blue	5662BL	5462BL	
	Brown	5662B	5462B	
	Gray	5662GY	5462GY	
	lvory	5662IV	5462IV	
	Light Almond	5662LA	5462LA	
	Red	5662R	5462R	
	White	5662WHI	5462WHI	

White



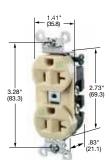
5252AI



IG5352



5262B



5362IWR

Dimensions in Inches (mm)

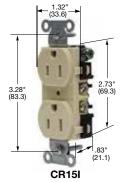


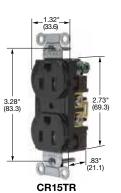
### 15 and 20 Ampere, 125 Volts

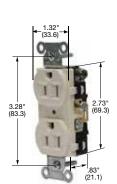




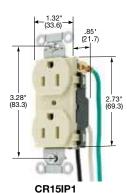








CRF15LA



Commercial **Specification Grade Receptacles** 

Duplex			
Description	Color	Catalog Number	
Smooth nylon face, duplex, side wired only.	Almond Black Brown Gray Ivory Light Almond Office White White	CR15AL CR15BLK CR15 CR15GRY CR15I CR15LA CR15OW CR15WHI	CR20AL CR20BLK CR20 CR20GRY CR20I CR20LA CR20OW CR20WHI
Tamper-Resistant*, smooth nylon face, duplex, side wired only.	Almond Black Brown Gray Ivory Light Almond White	CR15ALTR CR15BLKTR CR15TR CR15GRYTR CR15ITR CR15LATR CR15WHITR	CR20ALTR CR20BLKTR CR20TR CR20GRYTR CR20ITR CR20LATR CR20WHITR
Finder groove, nylon face, duplex, side wired only.	Almond Black Brown Gray Ivory Light Almond Office White White	CRF15AL  CRF15 CRF15GRY CRF15I CRF15LA CRF15OW CRF15WHI	CRF20AL CRF20BLK CRF20 CRF20GRY CRF20I CRF20LA CRF20OW CRF20WHI
Pre-wired receptacles, smooth nylon face, duplex, side wired only, self-grounding, 8" solid wire leads.	Black Brown Gray Ivory Light Almond White	CR15BLKP1 CR15P1 CR15GRYP1 CR15IP1 CR15LAP1 CR15WHIP1	CR20BLKP1 CR20P1 CR20GRYP1 CR20IP1 CR20LAP1 CR20WHIP1
Pre-wired receptacles, smooth nylon face, duplex, side wired only, self-grounding, 8" stranded wire leads.	Black Brown Gray Ivory Light Almond White	CR15BLKP2 CR15P2 CR15GRYP2 CR15IP2 CR15LAP2 CR15WHIP2	CR20BLKP2 CR20P2 CR20GRYP2 CR20IP2 CR20LAP2 CR20WHIP2
Pre-wired receptacles, Tamper-Resistant*, smooth nylon face, duplex, side wired only, self-grounding, 8" solid wire leads.	Black Brown Gray Ivory Light Almond White	CR15BLKTRP1 CR15TRP1 CR15GRYTRP1 CR15ITRP1 CR15LATRP1 CR15WHITRP1	CR20BLKTRP1 CR20TRP1 CR20GRYTRP1 CR20ITRP1 CR20LATRP1 CR20WHITRP1
Pre-wired receptacles,	Black	CR15BLKTRP2	CR20BLKTRP2

Brown

Gray

Ivory

White

Light Almond

CR15TRP2

CR15ITRP2

CR15LATRP2

CR15WHITRP2

CR15GRYTRP2

Note: \*Tamper-resistant devices are not Fed. Spec. Listed. See page A-47 for accessories. See page Tech-10 for Tamper-Resistant descriptions.

See section O for wallplates.

Tamper-Resistant\*, smooth nylon face,

duplex, side wired only, self-grounding,

8" stranded wire leads.

Dimensions in Inches (mm)

CR20TRP2

CR20ITRP2

CR20LATRP2

CR20WHITRP2

CR20GRYTRP2





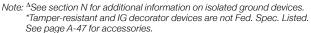
### 15 and 20 Ampere, 125 Volts

### 15A 125V NEMA 5-15R UL CSA U.5 HP



### **Commercial Specification Grade Receptacles**

Duplex			
Description	Color	Catalog Number	
Smooth nylon face, duplex, back and side wired.	Almond Black Blue Brown Gray Ivory Light Almond Office White Red White	BR15AL BR15BLK BR15BL BR15 BR15GRY BR15I BR15LA BR15OW BR15R	BR20AL BR20BLK BR20BL BR20 BR20GRY BR20I BR20LA BR20OW BR20R
Tamper-Resistant*, smooth nylon face, duplex, back and side wired.	Almond Black Blue Brown Gray Ivory Light Almond Red White	BR15ALTR BR15BLKTR BR15BLTR BR15TR BR15GRYTR BR15ITR BR15LATR BR15LATR BR15RTR	BR20ALTR BR20BLKTR BR20BLTR BR20TR BR20GRYTR BR20ITR BR20ITR BR20LATR BR20RTR BR20WHITR
Weather Resistant, smooth nylon face, duplex, back and side wired.	Black Brown Gray Ivory Light Almond White	BR15BLKWR BR15WR BR15GRYWR BR15IWR BR15LAWR BR15WHIWR	BR20BLKWR BR20WR BR20GRYWR BR20IWR BR20LAWR BR20WHIWR
Weather and Tamper-Resistant*, smooth nylon face, duplex, back and side wired.	Black Brown Gray Ivory Light Almond White	BR15BLKWRTR BR15WRTR BR15GRYWRTR BR15IWRTR BR15LAWRTR BR15WHIWRTR	BR20BLKWRTR BR20WRTR BR20GRYWRTR BR20IWRTR BR20LAWRTR BR20WHIWRTR
Isolated ground <sup>A</sup> , smooth nylon face, duplex, side wired only.	Almond Gray Ivory Light Almond Orange White	IG15CRAL IG15CRGRY IG15CRI IG15CRLA IG15CR IG15CRWHI	IG20CRAL IG20CRGRY IG20CRI IG20CRLA IG20CR IG20CRWHI
Isolated ground <sup>A</sup> , Style Line <sup>®</sup> decorator*, smooth nylon face, duplex, back and side wired.	Almond Gray Ivory Light Almond Orange White	IG15DRAL IG15DRGRY IG15DRI IG15DRLA IG15DR	IG20DRAL IG20DRGRY IG20DRI IG20DRLA IG20DR IG20DRWHI



See page Tech-10 for Tamper and Weather Resistant descriptions.

See section O for wallplates.





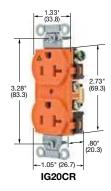








**BR20WRTR** 



Dimensions in Inches (mm)

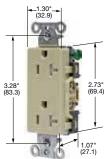




### 15 and 20 Ampere, 125 Volts



DR15GRY



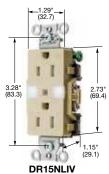
DR20ITR



DR20GRYWRTR



DR20WHIP2



Dimensions in Inches (mm)

### Commercial **Specification Grade Receptacles**





Style	Line®	Deco	rator
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	Description	Color	Catalog Number	
	Smooth nylon face, Style Line® decorator duplex, back and side wired.	Almond Black Brown Gray Ivory Light Almond Red White	DR15AL DR15BLK DR15 DR15GRY DR15I DR15LA DR15R DR15R	DR20AL DR20BLK DR20 DR20GRY DR20I DR20LA DR20R DR20R
TRI	Tamper-Resistant*, Style Line® decorator duplex, smooth nylon face, back and side wired.	Almond Black Brown Gray Ivory Light Almond White	DR15ALTR DR15BLKTR DR15TR DR15GRYTR DR15ITR DR15LATR DR15WHITR	DR20ALTR DR20BLKTR DR20TR DR20GRYTR DR20ITR DR20LATR DR20LATR DR20WHITR
	Weather and Tamper-Resistant*, Style Line® decorator duplex, smooth nylon face, back and side wired.	Black Brown Gray Ivory Light Almond White	DR15BLKWRTR DR15WRTR DR15GRYWRTR DR15IWRTR DR15LAWRTR DR15LAWRTR	DR20BLKWRTR DR20WRTR DR20GRYWRTR DR20IWRTR DR20LAWRTR DR20WHIWRTR
	Pre-wired receptacles, Style Line® decorator duplex, smooth nylon face, back and side wired, self-grounding, 8" solid wire leads.	Black Brown Gray Ivory Light Almond White	DR15BLKP1 DR15P1 DR15GRYP1 DR15IP1 DR15LAP1 DR15WHIP1	DR20BLKP1 DR20P1 DR20GRYP1 DR20IP1 DR20LAP1 DR20WHIP1
	Pre-wired receptacles, Style Line® decorator duplex, smooth nylon face, back and side wired, self-grounding, 8" stranded wire leads.	Black Brown Gray Ivory Light Almond White	DR15BLKP2 DR15P2 DR15GRYP2 DR15IP2 DR15LAP2 DR15WHIP2	DR20BLKP2 DR20P2 DR20GRYP2 DR20IP2 DR20LAP2 DR20WHIP2
TRI	Pre-wired receptacles, Tamper-Resistant*, Style Line® decorator duplex, smooth nylon face, back and side wired, self-grounding, 8" solid wire leads.	Black Brown Gray Ivory Light Almond White	DR15BLKTRP1 DR15TRP1 DR15GRYTRP1 DR15ITRP1 DR15LATRP1 DR15WHITRP1	DR20BLKTRP1 DR20TRP1 DR20GRYTRP1 DR20ITRP1 DR20LATRP1 DR20WHITRP1
TR	Pre-wired receptacles, Tamper-Resistant*, Style Line® decorator duplex, smooth nylon face, back and side wired, self-grounding, 8" stranded wire leads.	Black Brown Gray Ivory Light Almond White	DR15BLKTRP2 DR15TRP2 DR15GRYTRP2 DR15ITRP2 DR15LATRP2 DR15WHITRP2	DR20BLKTRP2 DR20TRP2 DR20GRYTRP2 DR20ITRP2 DR20LATRP2 DR20WHITRP2
TRI	Nightlight receptacle, two nightlight sources for a total of 0.5 Lumens, Tamper-Resistant* shutters complies with NEC article 406.12, back and side wired	Ivory Light Almond White	DR15NLIV DR15NLLA DR15NLWH	- - -

Note: \*Tamper-resistant devices are not Fed. Spec. Listed.

See page A-47 for accessories.

See page Tech-10 for Tamper and Weather Resistant descriptions.

See section O for wallplates.



### 15 and 20 Ampere, 125 Volts

# Hospital Grade USB Charger Type-C, Type A&C and Type A







Description	Color	Catalog Number	
Hospital Grade USB Charger Outlet: two Type-C port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond Red White	USB8200C5BK USB8200C5 USB8200C5GY USB8200C5I USB8200C5LA USB8200C5R USB8200C5W	USB8300C5BK USB8300C5 USB8300C5GY USB8300C5I USB8300C5LA USB8300C5R USB8300C5W
Hospital Grade USB Charger Outlet: one Type A and one Type-C port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond Red White	USB8200AC5BK USB8200AC5 USB8200AC5GY USB8200AC5I USB8200AC5LA USB8200AC5R USB8200AC5W	USB8300AC5BK USB8300AC5 USB8300AC5GY USB8300AC5I USB8300AC5LA USB8300AC5R USB8300AC5W
Hospital Grade USB Charger Outlet: two Type A port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond Red White	USB8200A5BK USB8200A5 USB8200A5GY USB8200A5I USB8200A5LA USB8200A5R USB8200A5W	USB8300A5BK USB8300A5 USB8300A5GY USB8300A5I USB8300A5LA USB8300A5R USB8300A5W

# Commercial Grade USB Charger Type-C, Type A&C and Type A



Description	Color	Catalog Number	
Commercial Grade USB Charger Outlet: two Type-C port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond White	USB15C5BK USB15C5 USB15C5GY USB15C5I USB15C5LA USB15C5W	USB20C5BK USB20C5 USB20C5GY USB20C5I USB20C5LA USB20C5W
Commercial Grade USB Charger Outlet: one Type A and one Type-C port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond White	USB15AC5BK USB15AC5 USB15AC5GY USB15AC5I USB15AC5LA USB15AC5W	USB20AC5BK USB20AC5 USB20AC5GY USB20AC5I USB20AC5LA USB20AC5W
Commercial Grade USB Charger Outlet: two Type A port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond White	USB15A5BK USB15A5 USB15A5GY USB15A5I USB15A5LA USB15A5W	USB20A5BK USB20A5 USB20A5GY USB20A5I USB20A5LA USB20A5W

Note: See page Tech-10 for Tamper-Resistant description. See section O for wallplates.

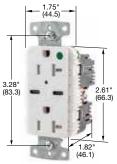
#### **USB Charger 4 Port Outlet**



		intertek
Description	Color	Catalog Number
USB Charger 4 Port	Black	USB4BK
Outlet, Four USB	Brown	USB4
Type 2.0 Ports 5 Amp,	Gray	USB4GY
5 Volt DC decorator.	lvory	USB4I
	Lt. Almond	USB4LA
	White	USB4W

#### **USB Charger 2 Port Outlet**

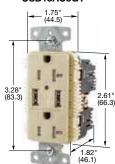
Description	Color	Catalog Number
USB Charger 2 Port	Black	USB2BK
Outlet, Shallow Profile,	Brown	USB2
Two USB Type 2.0	Gray	USB2GY
Ports 3 Amp, 5 Volt DC	lvory	USB2I
decorator.	Lt. Almond	USB2LA
	White	USB2W



USB8300C5W



USB15AC5GY



USB20A5I



USB4W





# 15 and 20 Ampere, 125 Volts

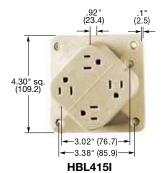


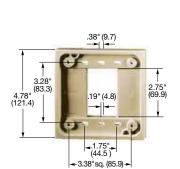
### 4-PLEX® Hospital Grade Recentacles



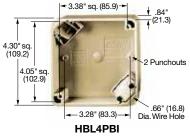


riospital diade • ricceptacies		0.5 HF	I FIF
Description	Color	Catalog Number	
4 outlet high impact resistant	Brown	HBL415H	HBL420H
Polycarbonate construction.	Gray	-	HBL420HGY
Mount to 4 in. square box.	Ivory	HBL415HI	HBL420HI
	Red	HBL415HR	HBL420HR
	White	HBL415HW	HBL420HW









4-PLEX® Receptacles

	JG W
NEMA UL	<b>125V</b> 3 <b>5-15R</b> CSA HP



### Over Size Robertson/Slotted Head Terminal Screws

Description	Color	Catalog Number	
Specification grade.	Black	HBL415BK	HBL420BK
	Brown	HBL415	HBL420
	Gray	HBL415GY	HBL420GY
	lvory	HBL415I	HBL420I
	White	HBL415W	HBL420W
Isolated ground <sup>△</sup> .	Orange	IG415	IG420
Surge suppression.	Blue	HBL415S	HBL420S
	lvory	HBL415IS	HBL420IS

Note: <sup>A</sup>See section N for additional information on isolated ground devices.

Horsepower ratings are AC only.

4-PLEX Receptacles are of a non-metallic design. Product is supplied with isolated ground symbol stickers. Apply if needed. Mounts to 4-inch square box.

#### 4-PLEX® Accessories

Description	Color	Catalog Number
4-PLEX adapter plates for	Blue	HBL4APBL
1- and 2-gang, device boxes.	Brown	HBL4AP
G 6,	Gray	HBL4APGY
	lvory	HBL4API
	Orange	HBL4APO
	Red	HBL4APR
	White	HBL4APW
4-PLEX Portable Box, 4 in. (101.6) square	Black	HBL4PBBK
box with cord grip. Accepts up to .66 in. (16.8)	Brown	HBL4PB
diameter cord.	lvory	HBL4PBI

Note: 4-PLEX Box is not UL listed or CSA Certified. UL listing does not apply when 4-PLEX Receptacle is used with 4-PLEX Box in extension cord application. Supplied with one cord clamp.

Dimensions in Inches (mm)

NEC® is a registered trademark of the National Fire Protection Association (NFPA).

### Products at a Glance



#### **Hospital Grade Plugs and Connectors**

- Hospital Grade with green dot symbol
- Powerful offsetting cord grips clamp on individual conductors
- Transparent angled wiring entrance holes permit "straight in" conductor insertion
- Valise® devices have unique patented clamp type terminals, provide a superior electrical connection



#### Heavy Duty Insulgrip® Plugs and Connectors

- Beveled housing prevents snagging
- Integral VARI-SIZE® insert adjusts to a wide range of cord sizes: .23 to .72 inch (5.8 to 18.3).
- Individually molded face for each blade configuration keeps debris out of plug interior
- Ribbed nylon housing is impact and chemical resistant



#### Watertight and Dust Tight Devices

- Multiple "U-Drive" fast lead body assembly screws
- Color coded Kellems GOTCHA® rings provide increased cord retention
- Powerful nylon cord grip prevents strain on terminals
- Dust and moisture seal keeps out liquids, metal filings and other foreign materials
- Closure plug seals connector body when disconnected from plug

#### **Features and Benefits**

### Insulgrip® 15 and 20 Ampere Plugs and Connector Bodies

Insulgrip products are synonymous with Hubbell's ongoing commitment to discovering ways to make products safer and last longer.

By encasing wiring devices in tough nylon housings, Insulgrip devices ensure high impact, heat, and chemical resistance while insulating current-carrying components from the user for maximum safety.

- The Insulgrip's cord gripping design clamps conductors, not just the cable jacket, making it the industry's most powerful cord grip with superior strain relief.
- Each Insulgrip device is manufactured with roomy, separate wiring chambers to insulate conductors and an individually molded face to keep out dust and debris that can cause contamination over time.



**HBL5266C** 



**HBL5269C** 



### Housing Design

- Ribbed nylon housing provides a secure grip that's impact and chemical resistant
- Beveled housing prevents snagging when dragged across uneven surfaces
- Individually molded face for each blade configuration keeps debris out of plug interior



#### Internal Design

- Powerful cord grips clamp on individual conductors and outer cord jacket to prevent strain on terminations
- Individual wiring terminals are completely enclosed in their own separate chambers



#### Cord Range

- Integral VARI-SIZE® insert adjusts to a wide range of cord sizes: .230"-.720" (5.8-18.3)
- VARI-SIZE<sup>®</sup> pointer set to "smaller than gauge" position. Cord diameter range is .230"-.360" (5.8-9.0). Accepts slotted and Phillips head drivers



#### Assembly

 Multiple drive screw heads provide screwdriver versatility. Pocketed recess for cord grip screws deters slippage of the screwdriver



#### Identification

 Catalog number is visible on the device while in use for easy identification



#### Visual Verification

 Transparent angled wiring entrance holes permit "straight in" conductor insertion and quick visual verification for terminations

#### **Features and Benefits**

#### Valise® Plugs and Connector Bodies

Hubbell Valise plugs go together in seconds but stay together securely for reliable long-term operation. Eight loadbearing, locking lugs in the impact- and crush-resistant nylon body assure a positive grip. Devices feature patented "wire bundling" terminals that are easy to wire and provide positive, reliable terminations



#### **Housing Design**

- Removable cord inserts to accommodate a wide range of cord sizes, .220"-.660" (5.6-16.8)
- Powerful cord grips prevent conductor slippage and strain on wiring terminals
- Eight specially designed load bearing locking lugs insure a positive fit as the blade holder and sides are closed



#### Internal Design

 Unique patented clamp-type terminals provide a superior electrical connection by "bundling" the conductor strands when clamps are tightened

HBL5965VY

- Nylon webs are provided to make wiring quick and easy during assembly
- Two captive multiple drive assembly screws



Hubbell straight blade devices, female connector body, Elastogrip watertight, industrial/commercial grade, 2-pole 3-wire grounding, 15A 125V, NEMA 5-15R, yellow, single pack. Tough nylon body provides superior resistance in harsh abusive environments. IP55 suitability when closure plug inserted or when installed and used properly with mating watertight plug.



#### Watertight Plug Housing Design

- Thermoplastic elastomer housing resists weathering caused by ultraviolet rays and ozone better than rubber; also oil and chemical resistant
- Nylon compression nut keeps water and dust from getting into the body around the cord



#### Watertight Plug Internal Design

• Three separate transparent wiring chambers allow for visual inspection

**HBL15W47** 

- Multiple drive "U-Drive" fast lead body assembly screws
- Neoprene bushing keeps water and dust out
- Color coded Kellems GOTCHA® rings provide increased cord retention



#### Watertight Connector Housing Design

- Closure plug seals connector body when disconnected from plug
- Integral weatherproofing shroud seals connection between plug and connector



#### Watertight Connector Internal Design

- Pretensioned "bypass" design female contacts for abuse resistance and reliability
- Nylon compression nut keeps water and dust from getting into the body around the cord



#### **Dust Tight Plug Housing Design**

- Thermoplastic elastomer housing
- Powerful nylon cord grip prevents strain on terminals



#### **Dust Tight Plug Internal Design**

- Multiple drive "U-Drive" fast lead body assembly screws
- Dust and moisture seal keeps out liquids, metal filings and other foreign materials







HBL8215C





HBL8115V



HBL8219C



**HBL8219CT** 



HBL8119V









Hospital Grade Plugs

Insulgrip® Description	Cord Diameter	Catalog Number	
Black and white nylon.	.230"720" (5.8-18.3)	HBL8215C	HBL8315C
Transparent housing.	.230"720" (5.8-18.3)	HBL8215CT	HBL8315CT
8 position angle plug, transparent housing.	.250"655" (6.4-16.6)	HBL8215CAT*	HBL8315CAT*

#### **Valise®**

Description	Cord Diameter	Catalog Number	
White nylon.	.300"660" (7.6-16.8)	HBL8115V	HBL8364V
Insulation displacement, white nylon.	.300"360" (7.6-9.1)	HBL8013V*	-





**HBL8119V** 



Hospital Grade Connector Bodies

Insulgrip <sup>®</sup>			
Description	Cord Diameter	Catalog Number	
Black and white nylon.	.230"720" (5.8-18.3)	HBL8219C	HBL8319C
Transparent housing.	.230"720" (5.8-18.3)	HBL8219CT	HBL8319CT
Valise <sup>®</sup>			
Description	Cord Diameter	Catalog Number	

.300"-.660" (7.6-16.8)

Note: \*Not Fed. Spec. Listed. See page A-48 for accessories.

White nylon.







### Hospital Grade Plugs

<b>Valise</b> ®			
Description	Cord Diameter	Catalog Number	
Valise plug, white nylon.	.300"660" (7.6-16.8)	HBL8666V	HBL8464V

Note: HP ratings listed above are based on 208 to 240V AC only.





Hospital Grade Connector Bodies

Hoopital Grade	Dominoutor Boards	*****	=
<b>V</b> alise <sup>®</sup>			
Description	Cord Diameter	Catalog Number	
White nylon.	.300"660" (7.6-16.8)	-	HBL8469V













ITABILITY

Insulgrip <sup>®</sup>			
Description	Cord Diameter	Catalog Number	
Black and white nylon.	.230"720" (5.8-18.3)	HBL5266C	HBL5366C
Blue and white nylon.	.230"720" (5.8-18.3)	HBL5266CBL	-
Black nylon extra large cord clamp.	.360"720" (9.1-18.3)	HBL5266EBK	HBL5366EBK
Corrosion resistant yellow nylon.	.230"720" (5.8-18.3)	HBL52CM66C	HBL53CM66C
8-position angle plug, black and white nylon.	.325"655" (8.3-16.6)	HBL5266CA	HBL5366CA
8-position angle plug, transparent enclosure.	.325"655" (8.3-16.6)	HBL5266CAT	-
Anchor lock, black and white nylon.	.230"720" (5.8-18.3)	HBL5280C*	-
Anchor lock, corrosion resistant yellow nylon.	.230"720" (5.8-18.3)	HBL52CM80C*	-
Finger grip, black neoprene, combination screws. CSA only.	.31"43" (7.9-10.9)	HBL5921	-
Fusible, black vinyl housing, slotted screws. CSA only.	.296"625" (7.5-15.9)	HBL5299	-



**HBL5266C** 



HBL5266CA



### Elastogrip®

**Plugs** 

Description	Cord Diameter	Catalog Number	
Yellow elastomer, dust tight. IP20 and IP55 SUITABILITY.	.300"655" (7.6-16.6)	HBL1447	HBL1433
Yellow elastomer, watertight. IP20 and IP55 SUITABILITY.	.300"655" (7.6-16.6)	HBL14W47**	HBL14W33**
Yellow elastomer, watertight. IP65, 66, 67 SUITABILITY.	.375"625" (9.5-15.9)	HBL14W47A	HBL14W33A

**IP20** 

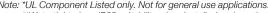


**HBL14W47** 

HBL5965VY

### Valise®

Description	Cord Diameter	Catalog Number	
Yellow nylon.	.220"660" (5.6-16.8)	HBL5965VY	HBL5364VY
Black nylon.	.220"660" (5.6-16.8)	HBL5965VBLK	HBL5364VBK
Gray nylon.	.220"660" (5.6-16.8)	HBL5965VGY	-
Orange nylon, sold in bulk pack of 50.	.220"660" (5.6-16.8)	HBL515PVO	-
Insulation displacement terminals, black nylon.	.230"360" (5.8-9.1)	HBL5966VBLK	-
Insulation displacement terminals, yellow nylon.	.230"360" (5.8-9.1)	HBL5966VY	-



Note: \*UL Component Listed only. Not for general use applications.

\*\*Watertight plugs IP55 suitability when installed and used properly with mating Elastogrip

watertight connector bodies.

Horsepower ratings listed are AC only. See page A-48 for accessories.

HBL5966VBLK











# **IP20**





<b>Connector Bodies</b>	SUITABILITY	UL CSA 0.5 HP	UL CSA 1 HP
Insulgrip <sup>®</sup>			
Description	Cord Diameter	Catalog Number	
Black and white nylon.	.230"720" (5.8-18.3)	HBL5269C	HBL5369C
Blue and white nylon.	.230"720" (5.8-18.3)	HBL5269CBL	-
Black nylon extra large cord clamp.	.360"720" (9.1-18.3)	HBL5269EBK	HBL5369EBK
Corrosion resistant yellow nylon.	.230"720" (5.8-18.3)	HBL52CM69C	HBL53CM69C

Note: See page A-48 for accessories.



HBL15W47

### Elastogrip®

Description	Cord Diameter	Catalog Number	
Yellow elastomer, dust tight. IP20 and IP55 SUITABILITY.	.300"655" (7.6-16.6)	HBL1547	HBL1533
Yellow elastomer, watertight. IP20 and IP55 SUITABILITY.	.300"655" (7.6-16.6)	HBL15W47*	HBL15W33*
Yellow elastomer, watertight. IP65, 66, 67 SUITABILITY.	.375"625" (9.5-15.9)	HBL15W47A	HBL15W33A



HBL5969VY



Valise®			
Description	Cord Diameter	Catalog Number	
Yellow nylon.	.220"660" (5.6-16.8)	HBL5969VY	HBL5369VY
Black nylon.	.220"660" (5.6-16.8)	HBL5969VBLK	HBL5369VBK
Gray nylon.	.220"660" (5.6-16.8)	HBL5969VGY	-
Orange nylon, sold in bulk pack of 50.	.220"660" (5.6-16.8)	HBL515CVO	-
Insulation displacement terminals, black nylon.	.230"360" (5.8-9.1)	HBL5963VBK	-
Insulation displacement terminals, yellow nylon.	.230"360" (5.8-9.1)	HBL5963VY	-



Note: \*Watertight connectors IP55 suitability when closure plug inserted or when installed and used properly with mating Elastogrip watertight plug.

Connector bodies are not HP rated.

See page A-48 for accessories.



For quick visual identification of circuits or configurations.

### Colored Cord Clamps\*

Description	Color	Catalog Number
For use with 15A and 20A, 2 pole/3 wire, insulgrip	Blue	HBLCORDCLAMPBL
plugs and connectors with cord diameter range of	Green	HBLCORDCLAMPGN
.230"720" (5.8-18.3) only.	Orange	HBLCORDCLAMPOR
	Purple	HBLCORDCLAMPP
	Red	HBLCORDCLAMPR
	Yellow	HBLCORDCLAMPY

Note: \*Clamp only. Contains no screws. Order in increments of 10. Not UL Listed or CSA Certified.







### **Flanged Inlets**

5 1.0	0.1.1.1.1	
Description	Catalog Number	
Nylon casing, back wired.	HBL5278C	HBL5378C
Weatherproof, gray, with lift cover and multiple drive screws.	HBL61CM64	-
Weatherproof, black, with lift cover and boot, multiple drive screws.	HBL61CM64BK	-
Stainless steel flange, phenolic body, miniature style, for molded on connectors only, multiple drive screws.	HBL5240*	-

Note: "Specially designed to accept "molded-on" connector bodies. Catalog number HBL5240 will not accept re-wireable size connector bodies listed in this catalog or molded connectors having a "rejection obstruction" as required by Underwriters Laboratories Inc. standard #817 cord sets and power supply cords" effective 7/1/81.

See pages A-47 and A-48 for accessories.





HBL61CM64

15A 125V NEMA 5-15R UL CSA 0 5 HP



Flanged Receptacles

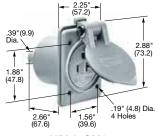
rialiged neceptacies		
Description	Catalog Number	
Nylon casing, back wired.	HBL5279C	HBL5379C
Stainless steel flange, phenolic body, covered terminals, multiple drive screws.	HBL5279	-
Stainless steel flange, brown phenolic (mounting screws packed separately).	HBL5256	-
Weatherproof, gray nylon, with lift cover and boot, multiple drive screws.	-	HBL61CM65**

Note: \*\*Not CSA Certified.

See pages A-47 and A-48 for accessories.







HBL61CM65







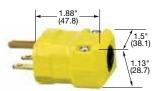
**HBL5666C** 



HBL5669C



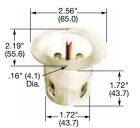
HBL5666CA



HBL5666VY



HBL5669VY



**HBL5678C** 



Dimensions in Inches (mm)





**Plugs** 

Description	Cord Diameter	Catalog Number	
Insulgrip® Plug, black and white nylon.	.230"720" (5.8-18.3)	HBL5666C	HBL5466C
Insulgrip <sup>®</sup> Plug, corrosion resistant, yellow nylon.	.230"720" (5.8-18.3)	HBL56CM66C	HBL54CM66C
8-Position Insulgrip® Angle Plug, black and white nylon.	.325"655" (8.3-16.6)	HBL5666CA	HBL5466CA
Valise® Plug, yellow nylon.	.220"660" (5.6-16.8)	HBL5666VY	HBL5464VY



15A 250V NEMA 6-15R UL CSA



### **Connector Bodies**

Description	Cord Diameter	Catalog Number	
Insulgrip® Connector Body, black and white nylon, multiple drive screws.	.230"720" (5.8-18.3)	HBL5669C	HBL5469C
Valise <sup>®</sup> Connector Body, yellow nylon.	.220"660" (5.6-16.8)	HBL5669VY	HBL5469VY

Note: See page A-48 for accessories.

Insulgrip® Flanged Inlets

Nylon casing, back wired. Note: Flanged inlets are not HP rated. See page A-48 for accessories.

Flanged Receptacles

Description







Catalog Number

**HBL5678C HBL5478C** 



Catalog Number

**HBL5679C** 

HBL5656



20A 250V NEMA 6-20R UL Listed

**HBL5479C** 

Nylon casing, multiple drive screws. Stainless steel flange, brown phenolic

housing (mounting screws packaged separately). Note: Connector bodies are not HP rated. See pages A-47 and A-48 for accessories.

For quick visual identification of circuits or configurations.

#### Colored Cord Clamps\*

Colored Cord Clamps		
Description	Color	Catalog Number
For use with 15A and 20A, 2 pole/3 wire, insulgrip	Blue	HBLCORDCLAMPBL
plugs and connectors with cord diameter range of	Green	HBLCORDCLAMPGN
.230"720" (5.8-18.3) only.	Orange	HBLCORDCLAMPOR
	Purple	HBLCORDCLAMPP
	Red	HBLCORDCLAMPR
	Yellow	HBLCORDCLAMPY

Note: \*Clamp only. Contains no screws. Order in increments of 10. Not UL Listed or CSA Certified.



Description



15A, 125V, 2 Pole, 2 Wire Non-Grounding, Valise® Plugs



Cord Diameter

.218"-.385"

.218"-.385"

(5.5-9.8)

(5.5-9.8)



Catalog Number



HBL5865VY

HBL5866VY

HBL5867VBLK

HBL5865VY

1.25" (31.8)

.88" (22.4)

7 1.25"



<b>Valise®</b>	Connector	<b>Bodies</b>

Yellow nylon, non-polarized.

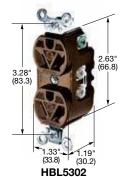
Yellow nylon, polarized.

Black nylon, polarized.

Description	Cord Diameter	Catalog Number	
Yellow nylon.	.218"385"	HBL5869VY	_
	(5.5-9.8)		

Type 17/2 "SVT" cord







15A, 277V AC, 2 Pole, 3 Wire Grounding, **Plugs** 

15A 277V AC NEMA 7-15R UL CSA 2 HP

Description	Cord Diameter	Catalog Number	
Finger grip, black elastomer.	.31"43"	-	HBL5929*
	(7.9-10.9)		

**Receptacles and Connector Bodies** 

moodpiaoroo arra cominocior			neceptacies and connector Deales			
Description	Cord Diameter	Catalog Number				
Receptacle, flush duplex, brown, back and side wired.	-	HBL5302	-			
Connector Body, phenolic and steel body.	.296"625" (7.5-15.9)	HBL5324	-			



Horsepower ratings are AC only. See pages A-47 and A-48 for accessories.





Description

Yellow nylon.

20A, 250V, 2 Pole, 2 Wire Non-Grounding, Valise® Plugs





Catalog Number



HBI 0758VV	



#### Receptacle, Single

3	
Description	Catalog Number
Black phenolic.	HBL5552B -

Cord Diameter

.220"-.660" (5.6-16.8)

Note: Horsepower ratings are AC only and apply to plugs and receptacles only. See pages A-47 and A-48 for accessories.





HBL6810



HBL9977C



HBL8410



HBL8411C



HBL7250



HBL7251C



Description

### 20A, 125/250V, 3 Pole, 3 Wire Non-Grounding, **Receptacles and Plugs**

Receptacle, black phenolic. Plug, Insulgrip®, nylon.



Cord Diameter

.385"-.780"

(9.8-19.8)



Catalog Number

HBL6810



UL Listed 2(1) HP	
_	

HBL9977C

Note: Horsepower ratings listed above are AC only.

Horsepower ratings not in parentheses are phase to phase (208 to 240V AC).

Those in parentheses are phase to neutral (120V AC).

See pages A-47 and A-48 for accessories.



20A, 125/250V, 3 Pole, 4 Wire Grounding, **Receptacles and Plugs** 





Description	Cord Diameter	Catalog Number	
Receptacle, black nylon body, back and side wired.	-	HBL8410	-
Plug, nylon, angle 4-position.	.390"775" (9.9-19.7)	-	HBL8411C

See pages A-47 and A-48 for accessories.



20A, 3Ø 250V AC, 3 Pole, 4 Wire Grounding, **Receptacles and Plugs** 



Description	Cord Diameter	Catalog Number	
Receptacle, black nylon body, back and side wired.	-	HBL8420	-
Plug, nylon, angle 4-position.	.390"775" (9.9-19.7)	-	HBL8421C

Note: Horsepower ratings listed above are AC only.

Horsepower ratings not in parentheses are phase to phase (208 to 240V AC).

Horsepower ratings in parentheses are phase to neutral (120V AC).

See pages A-47 and A-48 for accessories.

### 20A, 3ØY 120/208V AC, 4 Pole, 4 Wire Non-Grounding, Receptacles and Plugs





Description	Cord Diameter	Catalag Numbar	
Description	Cord Diameter	Catalog Number	
Receptacle, black nylon body.	_	HBL7250	-
Plug, nylon, angle, 4-position.	.390"775"	_	HBL7251C
	(9.9-19.7)		

Note: Horsepower ratings are phase to phase (208 to 240V AC). Weatherproof boots for plugs not available. See pages A-47 and A-48 for accessories.







H320R

<b>Ϣ</b> ∰∘ Connectora	IP20 SUITABILITY	
Description		Catalog Number
20/16A 250V AC IEC straight blade.		H320C

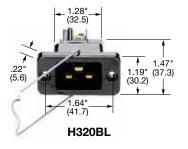


णि क्रि॰ Plug IEC 320 Compatible	IP20 SUITABILITY	
Description		Catalog Number
20/16A 250V AC IEC straight blade.		H320P



U) SP DE TUY Resident DE Inlets	
Description	Catalog Number
20/16A 250V AC IEC straight blade.	H320B
20/16A 250V AC IEC straight blade with retention clamp.	H320BL









# Acceptor® Hazardous Location Receptacles





20A 125\ NEMA 5-20 UL CSA

Description	Catalog Number	
Explosion and dust ignition proof.	_	UGRO20231
Class I, Div. 1 & 2, Groups C, D	-	UGRA20231*
Class II, Div. 1 & 2, Groups F, G		
Class III		
NEMA® 3, 7 B C D, 9 F G		

Note: \*UGRA version includes an adapter plate for mounting to Crouse-Hinds® EDS series and Appleton® EFD series back boxes. UL Listed for Class 1, Div. 2, Groups B, C, D.



UGP15231

(hr)	<b>⊕</b> ®	
Acc	eptor <sup>®</sup>	
Haz	ardous Location Plug	s





UGP20231

Description	Catalog Numb
Explosion and dust ignition proof.	UGP15231

Class I, Div. 1 & 2, Groups B, C, D Class II, Div. 1 & 2, Groups E, F, G Class III NEMA® 3, 7 B C D, 9 F G

3.00° | 2.25° | (57.2) | (57.2) | (117.6)

### **SWB Series Boxes**

Hub Size	1-Gang Dead End	1-Gang Feed Thru
½ in. NPT	SWB1	SWB4
¾ in. NPT	SWB2	SWB5
Class I, Div. 1 & 2, Groups C, D		
Class II, Div. 1 & 2, Groups E, F, G		
Class III		
NEMA® 7 C D, 9 E F G		

Note: SWB series boxes will only accommodate Acceptor Series receptacles, not standard weatherproof covers.



Dimensions in Inches (mm)

NEMA® is a registered trademark of the National Electrical Manufacturers Association.





30A, 125V, 2 Pole, 3 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	30A 125V NEMA 5-30R UL CSA 2 HP	30A 125V NEMA 5-30P UL CSA 2 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	_	HBL9308	_
Receptacle, orange, isolated ground <sup>a</sup> .	-	IG9308	-
Plug, nylon, angle, 4-position.	.625"-1.187" (15.9-30.1)	-	HBL9309*



HBL9308

30A, 125V,
2 Pole, 3 Wire Grounding,
Receptacles and Plugs

neceptacies and Flugs		2	2
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP. Travel Trailer use only.	_	HBLTT30R	-
Plug, nylon, angle. Travel Trailer use only.	.625"-1.187" (15.9-30.1)	-	HBLTT30P

□G

	2.25" (57.15)	
3.28" (83.30)	2.12" 3.68 (53.8) (93.4	3" 17)
	1.81"	
	(45.97)	
	IG9308	

30A, 250V,
2 Pole, 3 Wire Grounding,
Receptacles and Plugs

2 Pole, 3 Wire Grounding, Receptacles and Plugs	SUITABILITY	30A 250V NEMA 6-30R UL CSA 2 HP	30A 250V NEMA 6-30P UL CSA 2 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL9330	-
Receptacle, orange, isolated ground <sup>a</sup> .	_	IG9330	-
Plug, nylon, angle, 4-position	.625"-1.187" (15.9-30.1)	-	HBL9331*

IP20



30A, 277V AC, 2 Pole, 3 Wire Grounding, Receptacles and Plugs	
Description	Cord [
Recentacle black RTP	

2 Pole, 3 Wire Grounding, Receptacles and Plugs	SUIIABILIT	30A 277V AC NEMA 7-30R UL CSA 3 HP	30A 277V AC NEMA 7-30P UL CSA 3 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL9315	-
Plug, nylon, angle, 4-position.	.625"-1.187" (15.9-30.1)	-	HBL9319*



HBL9395

30A, 125/250V,
3 Pole, 3 Wire Non-Grounding,
Receptacles and Plugs

30A, 125/250V, 3 Pole, 3 Wire Non-Grounding, Receptacles and Plugs	IP20 SUITABILITY	30A 125/250V NEMA 10-30R UL Listed 2(2) HP	30A 125/250V NEMA 10-30P UL Listed 2(2) HP
Description	Cord Diameter	Catalog Number	
Receptacle, black phenolic.	_	HBL9350	_
Receptacle, surface mount aluminum housing.	-	HBL9395	-
Plug, Insulgrip <sup>®</sup> , nylon.	.625"-1.00" (15.9-25.4)	-	HBL9337C
Plug, nylon, angle, 4-position.	.625"-1.187" (15.9-30.1)	-	HBL9333

HBL9350

Note: RTP is an abbreviation for reinforced thermoplastic polyester.

<sup>A</sup>See section N for additional information on isolated ground devices..

\*Not Fed. Spec. Listed. See page A-49 for accessories.







30A, 125/250V,	
3 Pole, 4 Wire Grounding	,
Receptacles and Plugs	





30A 125/250V NEMA 14-30P 2(2) HP

Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL9430A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL9431C
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL9432C



30A, 3Ø 250V AC,
3 Pole, 4 Wire Grounding,
Receptacles and Plugs

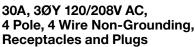
**IP20** 

Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL8430A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL8431C
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL8432C









**IP20** 



Receptacies and Plugs			
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	_	HBL8330A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL8331C

Note: RTP is an abbreviation for reinforced thermoplastic polyester. See pages A-49 and A-50 for accessories.



HBL8331C





50A, 125V, 2 Pole, 3 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	50A 125V NEMA 5-50R UL CSA 2 HP	50A 125V NEMA 5-50P UL CSA 2 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL9360	-
Plug, nylon, angle, 4-position.	.625"-1.187" (15.9-30.2)	-	HBL9361



50A, 250V, 2 Pole, 3 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	50A 250V NEMA 6-50R UL CSA 3 HP	50A 250V NEMA 6-50P UL CSA 3 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	_	HBL9367	-
Plug, nylon, angle, 4-position.	.625"-1.187" (15.9-30.2)	-	HBL9368



50A, 277V AC, 2 Pole, 3 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	50A 277V AC NEMA 7-50R UL CSA 5 HP	50A 277V AC NEMA 7-50P UL CSA 5 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL9365	-
Plug, nylon, angle, 4-position.	.625"-1.187" (15.9-30.2)	-	HBL9379



· · · · · · · · · · · · · · · · · · ·	
Representative of surface	•
mount receptacle	

50A, 125/250V, 3 Pole, 3 Wire Non-Grounding, Receptacles, Connector Body ar	IP20_suitability_	50A 125/250V NEMA 10-50R UL Listed 3(2) HP	50A 125/250V NEMA 10-50P UL Listed 3(2) HP
Description	Cord Diameter	Catalog Number	
Receptacle, black phenolic.	-	HBL7962	-
Receptacle, surface mount aluminum housing.	-	HBL7940	-
Connector body, Insulgrip, nylon.	.625"-1.218" (15.9-30.9)	HBL7515C	-
Plug, Insulgrip, nylon.	.625"-1.218" (15.9-30.9)	-	HBL7513C
Plug, nylon, angle, 4-position.	.625"-1.187" (15.9-30.2)	-	HBL7977



HBL7515C

4.13" (104.9)

HBL7513C

Note: RTP is an abbreviation for reinforced thermoplastic polyester. See pages A-49 and A-50 for accessories.







50A, 125/250V, 3 Pole, 4 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	50A 125/250V NEMA 14-50R UL CSA 3(2) HP	50A 125/250V NEMA 14-50P UL CSA 3(2) HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	_	HBL9450A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL9451C
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL9452C



50A, 3Ø 250V AC, 3 Pole, 4 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	50A 3Ø 250V AC NEMA 15-50R UL CSA 7.5 HP	50A 3Ø 250V AC NEMA 15-50P UL CSA 7.5 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL8450A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL8451C
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL8452C



HBL9452C



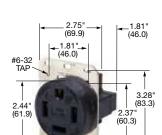
50A, 3ØY 120/208V AC, 4 Pole, 4 Wire Non-Grounding, Receptacles and Plugs	IP20 SUITABILITY	50A 30Y 120/208V AC NEMA 18-50R UL Listed 7.5 HP	50A 30Y 120/208V AC NEMA 18-50P UL Listed 7.5 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL8350A	-
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL8352C

Note: RTP is an abbreviation for reinforced thermoplastic polyester. See page A-50 for accessories.





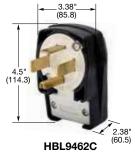
60A, 125/250V, 3 Pole, 4 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	60A 125/250V NEMA 14-60R UL CSA 3(2) HP	60A 125/250V NEMA 14-60P UL CSA 3(2) HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL9460A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL9461C
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL9462C



**HBL9460A** 

60A, 3Ø 250V AC, 3 Pole, 4 Wire Grounding, Receptacles and Plugs	IP20 SUITABILITY	60A 3Ø 250V AC NEMA 15-60R UL CSA 10 HP	GOA 36 250V AC NEMA 15-60P UL CSA 10 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL8460A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL8461C
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL8462C





	(85.8)	
4.5" (114.3)		
	0	2.38" (60.5)

#6-32 TAP		-1.81' (46.0)	
IAP			<u> </u>
1	PAR.		 28" 3.3)
2.44" (61.9)		2.37" (60.3)	
		(34.3)	
47			Į

HBL7301A

60A, 3ØY 120/208V AC, 4 Pole, 4 Wire Non-Grounding, Receptacles and Plugs	IP20 SUITABILITY	60A 30Y 120/208V AC NEMA 18-60R UL Listed 7.5 HP	60A 30Y 120/208V AC NEMA 18-60P UL Listed 7.5 HP
Description	Cord Diameter	Catalog Number	
Receptacle, black RTP.	-	HBL7301A	-
Plug, nylon.	.625"-1.310" (15.9-33.3)	-	HBL7303C
Plug, nylon, angle, 4-position.	.625"-1.310" (15.9-33.3)	-	HBL7302C

Note: RTP is an abbreviation for reinforced thermoplastic polyester. See page A-50 for accessories.

### **Miscellaneous and Combination Receptacles**

2 Pole, 3 Wire Grounding











Description	Catalog Number
Receptacle, display type, brown phenolic with .060 in. brass plate and blank flush plug.	HBL5236
Replacement receptacle for HBL5236.	HBL5236M2
Replacement threaded plug for HBL5236.	HBL5236PLUG*
Receptacle, wooden floors, brown phenolic with .060 in. brass plate, blank flush plug and box.	HBL6236
Receptacle, clock hanger, brown with stainless steel plate.	HBL5235
Four outlet cluster, brown phenolic, steel cover, swivel hook. Cord grip range .296–.562 in. (7.5–14.3) cord not supplied.	HBL9259*

Note: \*Not UL Listed or CSA certified.



HBL5235

#### **Special Combination Duplex Receptacles**

	Brown RTP, 1 feed, 1 return, back/side wired	HBL4792
	Brown RTP, 2 feeds, 1 return, side wired	HBL4794
	Brown RTP, 2 feeds, 2 returns, side wired	HBL4795
	Brown nylon face, 2 circuit, back and side wired	HBL5292
	Ivory nylon face, 2 circuit, back and side wired	HBL5292I
(=  }	Brown nylon face, 2 circuit, back and side wired	HBL5492
	lvory nylon face, 2 circuit, back and side wired	HBL5492I
	Prown DTD 2 foods 1 roturn common ground	HBL7371
	blown HTF, 2 leeds, Fretuin, common glound	HBLISTI
	Brown nylon, side and back wired	HBL5392
		Brown RTP, 2 feeds, 1 return, side wired  Brown RTP, 2 feeds, 2 returns, side wired  Brown nylon face, 2 circuit, back and side wired  Ivory nylon face, 2 circuit, back and side wired  Brown nylon face, 2 circuit, back and side wired  Ivory nylon face, 2 circuit, back and side wired  Ivory nylon face, 2 circuit, back and side wired  Brown RTP, 2 feeds, 1 return, common ground  Brown nylon, side and back wired

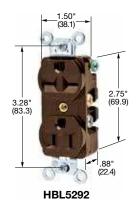
Note: This device will only accept 20A grounding plugs.

Note: RTP is an abbreviation for reinforced thermoplastic polyester.

"Not UL Listed or CSA certified.
See page A-47 for accessories.



HBL9259



Dimensions in Inches (mm)

20A, 125V

#### **Accessories**

For 15 and 20 Ampere, 125 and 250 Volts and 277 Volts AC Devices





### Wallplates, 1-Gang

Description	Color	Duplex Receptacles Catalog Number	Style Line® Receptacles Catalog Number	Single Receptacle Plate 1.40 in. (35.6) Dia. Catalog Number
Nylon, smooth.	Almond Black Brown Gray Ivory Light Almond Office White Orange Red White	NP8BK NP8BK NP8 NP8GY NP8I NP8LA NP8OW NP8OR NP8OR NP8R	NP26AL NP26BK NP26 NP26GY NP26I NP26LA NP26OW - NP26R NP26W	NP7AL NP7BK NP7 NP7GY NP7I NP7LA NP7OW - NP7R NP7W
Stainless steel 302/304, .035 in. (0.9) horizontal brushed finish.		SS8	SS26	SS7
Brass .04 in. (1.0), horizontal brushed finish.		SB8	SB26	SB7
Aluminum .05 in. (1.3), horizontal brushed finish.		SA8	-	SA7



NP8



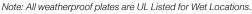


NP26I

SS7

### **Weatherproof Covers**

Description	Duplex Receptacles Catalog Number	Single Receptacle Plate 1.40 in. (35.6) Dia. Catalog Number
RTP, gray, for FS/FD box mounting.	HBL5221	HBL7423WO
RTP, yellow, for FS/FD box mounting.	HBL52CM21	HBL74CM23WO
RTP, gray, for device mounting.	HBL5222	<del>-</del>
RTP, yellow, for device mounting.	HBL52CM22	-
Cast aluminum for FS/FD box mounting.	HBL5206WO	HBL7420
Cast aluminum for device mounting.	HBL5205WO	-



Those with suffix WO are listed for use with cover open, all others with cover closed.

RTP is an abbreviation for reinforced thermoplastic polyester.

See section O for additional information on cover plates.



HBL52CM22



HBL5206WO



HBL7423WO

#### **Accessories**

For 15 and 20 Ampere, 125 and 250 Volts and 277 Volts AC Devices







### **Weatherproof Covers**

For Nylon Flanged Inlets and Flanged Receptacles

Description	Catalog Number
RTP, gray, for FS/FD box mounting.	WP1

Note: RTP is an abbreviation for reinforced thermoplastic polyester. See page O-21 for additional information on weatherproof covers.



**HBL6017** 





**Weatherproof Boots** 



**HBL6018** 

Description	Catalog Number
Seal-Tite® triple seal, black elastomer cover for Insulgrip® plugs (HBL5266C style), when used in a cord set, and connector bodies (HBL5269C style), when used with flanged inlets.	HBL6017
Same as above except yellow.	HBL60CM17
Seal-Tite® triple seal black elastomer cover for Insulgrip® connector bodies when used in a cord set.	HBL6018
Same as above except yellow.	HBL60CM18
Closure plug, black.	HBL6019
Closure plug, yellow.	HBL60CM19
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Note: \*IP55 when installed and used properly with mating components. Boots are not UL Listed or CSA Certified.



HBL60CM19 Shown with HBL6018

### **PLUGOUT®** Device

Description	Catalog Number
Electrical plug lockout devices for 15 and 20A straight blade plugs.	HLDMP**
PLUGOUT® Lockout device for 20 and 30A Hubbell plugs and others.	HLD**

Note: \*\*Not UL Listed or CSA Certified.

See section BB for additional information on lockout devices.



**HLDMP** 

# 4.27" (108.5) 7.27" (184.7)

HLD

#### Inserts

Description	Catalog Number
Replacement cord grip inserts for Valise® device, (bag of 40).	HBLVCGBK**

Note: \*\*Not UL Listed or CSA Certified.

#### **Accessories**

For 3 Wire 30 and 50 Ampere, 125 and 250 Volts and 277 Volts AC





### Wallplates

Description	Color	Single Receptacle Plate 2.16 in. (54.9) Dia. Catalog Number
Nylon, smooth, 1-gang.	Black	NP724BK
Nylon, smooth, 2-gang.	Black	NP703BK
Aluminum, .05 in. (1.3), 1-gang, smooth horizontal brushed finish.		SA723
Stainless steel 302/304, .035 in. (0.9), 1-gang, smooth horizontal brushed finish.		SS723
Stainless steel 302/304, .035 in. (0.9), 2-gang, smooth horizontal brushed finish.		SS703



SS723



(I)



SS703

### **Weatherproof Lift Covers**

Description	Catalog Number
Cast aluminum for FS/FD box mounting for 30A.	HBL9420
Cast aluminum for FS/FD box mounting for 50A.	HBL9425



HBL9420

### **PLUGOUT®** Device

Description	Catalog Number
Electrical plug lockout device for 30, 50 and 60A devices.	HLD2

Note: See section BB for additional information on lockout devices.



HLD2

#### **Accessories**

For 4 Wire 30, 50 and 60 Ampere, 125/250 Volts, 3Ø 250 and 3ØY 120/208 Volts AC







### Wallplates, 2-Gang

Description	Single Receptacle Plate 2.48 in. (63.0) Dia. Catalog Number
Brass .04 in. (1.0), brushed, smooth.	SB701
Stainless steel 302/304, .035 in. (0.9), smooth horizontal brushed finish.	SS701



HBL7777A



### SUITABILITY

# Weatherproof Lift Covers

Description	Catalog Number
RTP, gray, lift cover plate. Will fit FS/FD boxes having plate mounting hole 3.25 in. x 3.75 in. (82.5 x 95.2), centers. Only for use with receptacles on pages A-40 to A-43 with "A" suffix.	HBL7777A
Same as above except yellow.	HBL77CM77A

Note: RTP is an abbreviation for reinforced thermoplastic polyester.



### PLUGOUT® Device

Description	Catalog Number
Electrical plug lockout device for 30, 50 and 60A devices.	HLD2

Note: See section BB for additional information on lockout devices.

Dimensions in Inches (mm)

HLD2

### **Technical Information**



### HBL® Extra Heavy Duty, Straight Blade Hospital Grade Duplex Receptacles

# Specifications HBL8200GY

Receptacles	Part	Description
Typical Specification – Catalog No. HBL8200	Receptacle	15A
Manufacturer's Identification – Hubbell HBL8200	Тор	PBT*
Description – Hospital Grade, Straight Blade Duplex Receptacle	Base	RTP**
Type – 2 Pole, 3 Wire, Grounding	By-Pass Power Contacts	.037 in. (.9) Brass - Nickel Finish
Rating – 15A, 125V	Clamping Plate	.031 in. (.8) Brass - Nickel Finish
Certification: UL Listed to UL 498 File E2186, Fed. Spec. WC596,	Mounting Strap	.050 in. (1.3) Brass - Nickel Finish
Hospital Grade, NEMA® WD-6 Compliant	Line Terminal Screws	#10-32 Silicone Bronze, Multiple Drive
Certified to CSA, C22.2, No. 42 File 285	Hex Head Grounding Screw	#10-32 (Green) Silicon Bronze, Multiple Drive
	Center Assembly Rivet	Silicon Bronze
	Automatic Self-Grounding Clip	Stainless Steel
	Flat Head Mounting Screws	Stainless Steel

#### Performance

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V or 250V as rated.
Current Interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
·	150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green)
Terminal Accommodation	#14-10 AWG stranded or solid copper conductor only.
Product Identification	Ratings are a permanent part of the device.
Environmental – Material	
Flammability	UL 94V-0 and UL 94-5 VA.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).
,	

Note: \*Polybutylene Terephthalate.

<sup>\*\*</sup>Reinforced Thermoplastic Polyester.

### **Technical Information**



### HBL® Extra Heavy Duty, Straight Blade Specification Grade Duplex Receptacles

Specifications HBL5262

Receptacles	Part	Description
Typical Specification – Catalog No. HBL5262	Receptacle	15A
Manufacturer's Identification – Hubbell HBL5262	Тор	Nylon
Description - Heavy Duty Straight Blade Duplex Receptacle	Base	RTP*
Type – 2 Pole, 3 Wire, Grounding	By-Pass Power Contacts	.037 in. (.9) Brass
Rating – 15A, 125V	Wire Clamps	.031 in. (.8) Brass
Certification: UL Listed to UL498 File E2186, Guide RTRT	Mounting Strap	.050 in. (1.3) Brass
Fed. Spec. WC596, Meets NEMA® WD-6 Compliant	Line Terminal Screws	#10-32 Brass, Multiple Drive
Certified to CSA, C22.2, No. 42 File 285	Ground Screw	#10-32 Brass, Multiple Drive (Green)
	Center Assembly Rivet	Brass
	Automatic Self-Grounding Clip	Stainless Steel
	Flat Head Mounting Screws	Steel-Zinc Plated
	Ground Tension Clips	Steel-Nickel Finish

#### **Performance**

Electrical		
Dielectric Voltage	Withstands 2,000V minimum.	
Max. Working Voltage	125V or 250V as rated.	
Current Interrupting Certified for current interrupting at full rated current.		
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at	
	150% of rated current at a power factor of 75%.	
Mechanical		
Terminal Identification	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green).	
Terminal Accommodation #14-10 AWG stranded or solid copper conductor only.		
Product Identification	Ratings are a permanent part of the device.	
Environmental – Material		
Flammability	Top: UL 94V-2.	
•	Base: UL 94V-0 and UL 94-5 VA.	
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).	

Note: \*Reinforced Thermoplastic Polyester.

### **Technical Information**



# HBL® Compact Extra Heavy Duty, Specification Grade Receptacles

#### HBL5252

#### **Specifications**

Receptacles	Part	Description
Typical Specification – Catalog No. HBL5252	Receptacle	15A
Manufacturer's Identification – Hubbell HBL5252	Тор	Nylon
Description – Straight Blade Duplex Receptacle	Base	RTP*
Type – 2 Pole, 3 Wire, Grounding	Triple Wipe Power Contacts	.032 in. (.8) Brass
Rating – 15A, 125V	Wire Clamps	.062 in. (1.8) Steel
Certification – UL Listed to UL 498 File E2186,	Mounting Strap	.050 in. (1.3) Brass
Fed. Spec. WC596, Certified to CSA 22.2, No. 42 File 285	Line Terminal Screws	#8-32 Brass, Multiple Drive
	Ground Screw	#8-32 Brass, Multiple Drive (Green)
	Center Assembly Rivet	Brass
	Automatic Self-Grounding Clip	Stainless Steel
	Flat Head Mounting Screws	Steel-Zinc Plated

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage 125V or 250V as rated.	
Current Interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
	150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL 498 (Brass, White, Green).
Terminal Accommodation	#14-10 AWG stranded or solid copper conductor only.
Product Identification	Ratings are a permanent part of the device.
Environmental – Material	
Flammability	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).

Note: \*Reinforced Thermoplastic Polyester.

Please consult the factory for product dimensions and specifications of other products listed in this catalog.

### **Technical Information**





# HBL® Compact Heavy Duty Style Line®, Specification Grade and Hospital Grade Straight Blade Duplex Receptacles

HBL2152 HI

Spe	cific	atio	ns

Receptacle	Part	Description
Typical Specification – Catalog No. HBL2152	Receptacle	15A
Manufacturer's Identification – Hubbell HBL2152 Receptacle	Тор	Nylon
Description – Straight Blade Duplex Receptacle	Base	Nylon
Type – 2 Pole, 3 Wire Grounding	Triple Wipe Power Contacts	.031 in. (.8) Brass
Rating – 15A, 125V	Wire Clamp	.062 in. (1.8) Steel-Nickel Finish
Certification – UL File No. E2186	Mounting Strap	.050 in. (1.3) Galvanized Steel
Certified to CSA File No. 285	Ground Contact	.031 in. (.8) Brass
	Line Terminal Screws	#8-32 Brass, Multiple Drive
	Ground Screw	#8-32 Brass, Multiple Drive
	Automatic Self-Grounding Staple	Stainless Steel
	Mounting Screws	Zinc Plated Steel
Receptacle	Part	Description
Typical Specification – Catalog No. HBL2172	Receptacle	15A
Mar Carl Carl Life and Life HUDLOGOOD Land	T .	N. 1
vianutacturer's identification – Hubbell HBL2182 Receptacle	Тор	Nylon
•	lop Base	Nylon RTP*
Description – Straight Blade Duplex Receptacle	•	
Description – Straight Blade Duplex Receptacle Type – 2 Pole, 3 Wire Grounding	Base	RTP*
Manufacturer's Identification – Hubbell HBL2182 Receptacle Description – Straight Blade Duplex Receptacle Type – 2 Pole, 3 Wire Grounding Rating – 15A, 125V Certification – UL Listed to UL498 File E2186,	Base Triple Wipe Power Contacts	RTP* .031 in. (.8) Brass
Description – Straight Blade Duplex Receptacle Type – 2 Pole, 3 Wire Grounding Rating – 15A, 125V	Base Triple Wipe Power Contacts Wire Clamp	RTP* .031 in. (.8) Brass .062 in. (1.8) Steel-Nickel Finish
Description – Straight Blade Duplex Receptacle Type – 2 Pole, 3 Wire Grounding Rating – 15A, 125V Certification – UL Listed to UL498 File E2186,	Base Triple Wipe Power Contacts Wire Clamp Mounting Strap	RTP* .031 in. (.8) Brass .062 in. (1.8) Steel-Nickel Finish .050 in. (1.3) Galvanized Steel
Description – Straight Blade Duplex Receptacle Type – 2 Pole, 3 Wire Grounding Rating – 15A, 125V Certification – UL Listed to UL498 File E2186,	Base Triple Wipe Power Contacts Wire Clamp Mounting Strap Ground Contact	RTP* .031 in. (.8) Brass .062 in. (1.8) Steel-Nickel Finish .050 in. (1.3) Galvanized Steel .031 in. (.8) Brass
Description – Straight Blade Duplex Receptacle Type – 2 Pole, 3 Wire Grounding Rating – 15A, 125V Certification – UL Listed to UL498 File E2186,	Base Triple Wipe Power Contacts Wire Clamp Mounting Strap Ground Contact Line Terminal Screws	RTP* .031 in. (.8) Brass .062 in. (1.8) Steel-Nickel Finish .050 in. (1.3) Galvanized Steel .031 in. (.8) Brass #8-32 Brass, Multiple Drive

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V.
Current Interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
	150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green).
Terminal Accommodation	#14-10 AWG stranded or solid copper conductor only.
Product Identification	Ratings are a permanent part of the device.
Environmental – Material	
Flammability	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).

Note: \*Reinforced Thermoplastic Polyester.

Please consult the factory for product dimensions and specifications of other products listed in this catalog.

### **Technical Information**







# SNAPConnect® Straight Blade Duplex Receptacles Specification Grade and Hospital Grade

SNAP8200WA

**SNAP2182A** 

SNAP5362IA

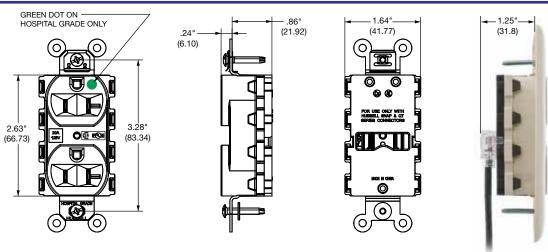
### **Specifications**

Receptacle			Part	Description	
Typical Specification - Catalog No. SNAP8200		g No. SNAP8200	Receptacle	15A	
Manufacturer's Identification – Hubbell SNAP8200		- Hubbell SNAP8200	Тор	Nylon	
Description -	Straight Blade [	Ouplex Receptacle	Base	Nylon	
Type – 2 Pole,	3 Wire, Ground	ling	Triple Wipe Power Contacts	Brass	
Rating – 15A, 125V			Mounting Strap	Galvanized Steel; Brass (HG)	
Certification – UL Listed to UL 498		_ 498	Automatic Self-Grounding Clip	Stainless Steel	
Fed. Spec. W	C596, Certified	to CSA 22.2, No. 42	Flat Head Mounting Screws Steel-Zinc Plated/Self Tappi		
Connector	Contact	Connector Body	Wire		
SNAP1RA	Brass	Clear Polycarbonate	6" Solid copper #12 AWG THHN/THWN-2 600V, T90 Nylon FT-1, PVC 90°C (min).		
SNAP2RA	Brass	Clear Polycarbonate	6" Stranded copper #12 AWG THHN/THWN-2 600V. T90 Nylon FT-1. PVC 90°C (min		

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V as rated.
Current Interrupting	Receptacle certified for current interrupting at full rated current with equivalently rated NEMA® plug.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at 150% of rated DC current.
Mechanical	
Terminal Wire Leads Identification	Terminal wire leads identified in accordance with UL 498 (Black, White, Green).
Product Identification	Ratings are a permanent part of the device.
Environmental – Material	
Flammability	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (without impact).

#### **Dimensions**



NEMA® is a registered trademark of the National Electrical Manufacturers Association.

### **Technical Information**





#### 8200REDLTRA

2182IVLTRA

# **Hubbell-PRO Heavy Duty, Straight Blade Hospital Grade Duplex Receptacles**

#### **Specifications**

Part	Description
Receptacle	15A
Тор	Nylon
Base	Nylon
Triple Wipe Power Contacts	.0295 in. Brass
Clamping Plate	Plated Steel
Mounting Strap	.040 in. Galvanized Steel
Terminal Screws	Plated Steel
Hex Head Grounding Screw	Plated Steel
Automatic Self-Grounding Staple	Stainless Steel
Mounting Screws	Zinc Plated Steel
	Receptacle Top Base Triple Wipe Power Contacts Clamping Plate Mounting Strap Terminal Screws Hex Head Grounding Screw Automatic Self-Grounding Staple

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V.
Current Interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
	150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green)
Terminal Accommodation	#14-10 AWG stranded or solid copper conductor only.
Product Identification	Ratings are a permanent part of the device.
Environmental – Material	
Flammability	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).

### **Technical Information**





# **USB Charger Tamper-Resistant, Straight Blade Hospital Grade and Specification Grade Duplex Receptacles**

USB8300C5R

USB15AC5W

### **Specifications**

USB Charger Receptacle	Part	Description
Typical Specification - Catalog No. USB8300A5 Manufacturer's Identification - Hubbell USB8300A5	Charger Receptacle	Electrical 20 Amp 125V AC USB 5.0 Amp 5V DC
Available Type USB Charger: A, A&C and C	Ports	Type A, 2.0
	LED	Green Indicator
Receptacle	Тор	Nylon
Description - Hospital Grade, Straight Blade Duplex Receptacle	Base	Nylon
Type - 2 Pole, 3 Wire, Grounding	Triple Wipe Power Contacts	.030 in. Cooper Alloy
Rating - 20 Amp, 125V AC, USB 3 Amp, 5V DC	Clamping Plate	Plated Steel
	Mounting Strap	.040 in. Galvanized Steel
Certification – cULus Listed to UL498 and UL1310	Terminal Screws	Plated Steel
Hospital Grade, NEMA® WD-6 Compliant (USB8200 and	Hex Head Grounding Screw	Plated Steel
8300 series only)	Automatic Self-Grounding Staple	Stainless Steel
Complies with battery charging specification USB BC1.2 Complies with Part 15 of the FCC rules Compatible with USB 1.1/2.0/3.0 devices, including Apple produc	Mounting Screws	Zinc Plated Steel

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V.
Current Interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
	150% of rated current at a power factor of 75%.
Mechanical	
USB Port	Stainless Steel Rated for 10,000 plug insertions and removal
Terminal Identification	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green)
Terminal Accommodation	#14-10 AWG stranded or solid copper conductor only.
Product Identification	Ratings are a permanent part of the device.
Circuit Feed-Through	20 Amp 125 Volt
Environmental – Material	
Flammability	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).

### **Technical Information**





#### 5252A

5262

# **Hubbell-PRO Heavy Duty, Straight Blade Specification Grade Duplex Receptacles**

#### **Specifications**

Receptacle, Smooth Nylon Face	Part	Description
Typical Specification – Catalog No. 5252A	Receptacle	15A
Manufacturer's Identification – Hubbell 5252A Receptacle	Тор	Nylon
Description – Straight Blade Duplex Receptacle	Base	RTP*
Type – 2 Pole, 3 Wire, Grounding	Triple Wipe Power Contacts	.031 in. (.8) Brass
Rating – 15A, 125V	Wire Clamp	.062 in. (1.8) Steel-Nickel Finish
Certification – UL Listed to UL498 File E2186	Mounting Strap	.040 in. (1) Galvanized Steel
Certified to CSA File No. 285	Ground Contact	.031 in. (.8) Brass
NEMA® WD-6 Compliant	Line Terminal Screws	#8-32 Brass, Multiple Drive
·	Ground Screw	#8-32 Brass, Multiple Drive
	Center Assembly Staple	.040 in. (1) Galvanized Steel
	Automatic Self-Grounding Staple	Stainless Steel
	Mounting Screws	Zinc Plated Steel
Receptacle, Finder Groove Face	Part	Description
Typical Specification – Catalog No. 5262	Receptacle	15A
Manufacturer's Identification – Hubbell 5262 Receptacle	Тор	Nylon
Description – Straight Blade Duplex Receptacle	Base	RTP*
Type – 2 Pole, 3 Wire, Grounding	Triple Wipe Power Contacts	.031 in. (.8) Brass
Typo Z I olo, o Wilo, Grounding		.001 III. (.0) DI a33
Rating – 15A, 125V	Wire Clamp	.062 in. (1.8) Steel-Nickel Finish
2.	·	* *
Rating – 15A, 125V Certification – UL Listed to UL498 File E2186,	Wire Clamp	.062 in. (1.8) Steel-Nickel Finish
Rating – 15A, 125V	Wire Clamp Mounting Strap	.062 in. (1.8) Steel-Nickel Finish .040 in. (1) Galvanized Steel
Rating – 15A, 125V Certification – UL Listed to UL498 File E2186, Fed. Spec. WC596, Certified to CSA C22.2, No. 42	Wire Clamp Mounting Strap Ground Contact	.062 in. (1.8) Steel-Nickel Finish .040 in. (1) Galvanized Steel .031 in. (.8) Brass
Rating – 15A, 125V Certification – UL Listed to UL498 File E2186, Fed. Spec. WC596, Certified to CSA C22.2, No. 42	Wire Clamp Mounting Strap Ground Contact Line Terminal Screws Ground Screw	.062 in. (1.8) Steel-Nickel Finish .040 in. (1) Galvanized Steel .031 in. (.8) Brass #8-32 Brass, Multiple Drive
Rating – 15A, 125V Certification – UL Listed to UL498 File E2186, Fed. Spec. WC596, Certified to CSA C22.2, No. 42	Wire Clamp Mounting Strap Ground Contact Line Terminal Screws	.062 in. (1.8) Steel-Nickel Finish .040 in. (1) Galvanized Steel .031 in. (.8) Brass #8-32 Brass, Multiple Drive #8-32 Brass, Multiple Drive

#### **Performance**

Withstands 2,000V minimum.
125V.
Certified for current interrupting at full rated current.
Max 30°C temperature rise at full rated current after 50 cycles of overload at
150% of rated current at a power factor of 75%.
Terminals identified in accordance with UL 498 and CSA (Brass, White, Green)
#14-10 AWG stranded or solid copper conductor only.
Ratings are a permanent part of the device.
UL 94V-2.
Maximum continuous 75°C; minimum -40°C (w/o impact).

Note: \*Reinforced Thermoplastic Polyester.

Please consult the factory for product dimensions and specifications of other products listed in this catalog.

### **Technical Information**











### **Commercial Specification** Grade Receptacles

**DR20GRYWR** 

Specifications
----------------

Part	Standard	Weather Resistant
Тор	Nylon	Nylon (UV Rated)
Base	Nylon	Nylon
Double Wipe Power Contacts	.030 in. (.8) Brass	.030 in. (.8) Brass
Wire Clamp	.062 in. (1.6) Steel-Nickel Plated	.062 in. (1.6) Steel-Nickel Plated
Finish		
Mounting Strap	.040 in. (1) Steel (Galvanized)	.040 in. (1) Galvanized Steel
Ground Contact	.031 in. (.8) Brass	.031 in. (.8) Brass
Line Terminal Screws	#8-32 Plated Steel, Multiple Drive	#8-32 Stainless Steel, Multiple Drive
Ground Screw	#8-32 Plated Steel, Multiple Drive	#8-32 Stainless Steel, Multiple Drive
Automatic Self-Grounding Staple	Stainless Steel	Stainless Steel
Mounting Screws	Zinc Plated Steel	Stainless Steel
Certification		
UL Listed	UL498	UL498
Fed. Spec.	WC596*	WC596*
Certified to CSA	C22.2, No. 42	C22.2, No. 42

#### **Performance**

Electrical		
Dielectric Voltage	Withstands 2,000V minimum.	Withstands 2,000V minimum.
Max. Working Voltage	125V.	125V.
Current Interrupting	Certified for current interrupting at full rated current.	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 100 cycles of overload at 150% of rated current.	Max 30°C temperature rise at full rated current after 100 cycles of overload at 150% of rated current.
Mechanical		
Terminal Identification	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green).	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green).
Terminal Accommodation	#14-10 AWG stranded or solid copper conductor only.	#14-10 AWG stranded or solid copper conductor only.
Product Identification	Ratings are a permanent part of the device.	Ratings are a permanent part of the device.
Environmental – Material		
Flammability	UL 94V-2.	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).	Maximum continuous 75°C; minimum -40°C (w/o impact).

Note: \*Decorator and Commercial Tamper-Resistant devices are not Fed. Spec. Listed.

### **Technical Information**



4-PLEX® Receptacles

### **Specifications**

HBL415I

Receptacle	Part	Description
Typical Specification - Catalog No. HBL415	Receptacle	15 or 20A
Manufacturer's Identification – Hubbell 4-PLEX HBL415	Тор	Polycarbonate
Description - Straight Blade, Multiple Outlet Receptacle	Base	Polycarbonate
Type – 2 Pole, 3 Wire, Grounding	Power Contacts	.032 in. (.8) Brass
Rating 15A, 125V	Ground Contacts	.031 in. (.8) Brass
Certification – Listed to UL Standard 498 File E2186	Ground Plate	.032 in. (.8) Plated Steel
Certified to CSA 22.2, No. 42 File 285	(Hospital Grade)	.050 in. (1.3) Plated Steel
	Line and Neutral Terminal Plate	.031 in. (.8) Brass
	Line Terminal Screw	#8-32 Brass
	Ground Screw	#8-32 Brass (Green)

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V.
Current Interrupting	Capable of withstanding a fault level of 1000A, per UL498.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload
	current at 150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL498 and CSA (Brass, White, Green)
Terminal Accommodation	#14-12 AWG stranded or solid copper conductor only.
Product Identification	Ratings are a permanent part of the device.
Environmental	
Flammability	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).

### **Technical Information**





Insulgrip® Plugs and Connector Bodies

**HBL5266C** 

HBL5269C

# **Specifications**

Plugs Part	Description	
Typical Specification – Catalog No. HBL5266C	Plug	15A
Manufacturer's Identification – Hubbell HBL5266C	Housing	Nylon – Black
Description – Straight Body Plug	Blade Holder	Nylon – Natural
Type – 2 Pole, 3 Wire, Grounding	Retainer	Polycarbonate – Clear
Rating – 15A, 125V	Cord Clamp	Nylon – Natural
Verified to Fed. Spec. WC596	Contact Blades	.060 in. (1.5) Brass
Certification – UL Listed to UL498 File E1706,	Ground Contact Blade	.040 in. (1.0) Copper Alloy
CSA Certified to C22.2 No. 42 File 280	Line Terminal Screws	#8-32 Brass, Multiple Drive
IP Suitability – IP20	Ground Screw	#8-32 Brass, Multiple Drive (Green)
	Wire Clamps	.062 in. (1.6) Steel – Nickel Finish
	TTITO CIGITIPO	11 = 2 (112) = 112 1
Connector Bodies	Part	Description
Connector Bodies  Typical Specification – Catalog No. HBL5269C	· ·	
	Part	Description
Typical Specification - Catalog No. HBL5269C	Part Connector Body	Description 15A
Typical Specification – Catalog No. HBL5269C Manufacturer's Identification – Hubbell HBL5269C	Part Connector Body Housing	Description 15A Nylon – Black
Typical Specification – Catalog No. HBL5269C Manufacturer's Identification – Hubbell HBL5269C Description – Straight Body Connector	Part Connector Body Housing Contact Holder	Description  15A  Nylon – Black  Nylon – Natural
Typical Specification – Catalog No. HBL5269C Manufacturer's Identification – Hubbell HBL5269C Description – Straight Body Connector Type – 2 Pole, 3 Wire, Grounding	Part Connector Body Housing Contact Holder Retainer	Description  15A  Nylon – Black  Nylon – Natural  Polycarbonate – Clear
Typical Specification – Catalog No. HBL5269C Manufacturer's Identification – Hubbell HBL5269C Description – Straight Body Connector Type – 2 Pole, 3 Wire, Grounding Rating – 15A, 125V	Part  Connector Body Housing Contact Holder Retainer Cord Clamp	Description  15A  Nylon – Black  Nylon – Natural  Polycarbonate – Clear  Nylon – Natural
Typical Specification – Catalog No. HBL5269C Manufacturer's Identification – Hubbell HBL5269C Description – Straight Body Connector Type – 2 Pole, 3 Wire, Grounding Rating – 15A, 125V Verified to Fed. Spec. WC596	Part  Connector Body Housing Contact Holder Retainer Cord Clamp Power Contacts	Description  15A  Nylon – Black  Nylon – Natural  Polycarbonate – Clear  Nylon – Natural  .040 in. (1.0) Copper Alloy

### Performance

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V or 250V as rated.
Current Interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
	150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL498 and CSA (Brass, White, Green)
Terminal Accommodation	#18-10 AWG copper conductors only.
Product Identification	Ratings are a permanent part of the device.
Torque Range	12 in./lb. terminal screws, 7 in./lb. assembly screws.
Cord Diameter Range	.230720 in. (5.8-18.3) integral cord grip.
Environmental – Material	
Flammability	UL 94HB or better.
Operating Temperature	Maximum continuous 75°C; minimum – 40°C (w/o impact).

### **Technical Information**

Valise® Plugs and Connectors





HBL5965VY

HBL5969VY

### **Specifications**

Plugs	Part	Description
Typical Specification - Catalog No. HBL5965VY	Plug	15A
Manufacturer's Identification – Hubbell HBL5965VY	Housing	Nylon
Description - Straight Body Plug	Contact Blades	Brass
Type – 2 Pole, 3 Wire, Grounding	Ground Blade	Brass
Rating – 15A, 125V	Line Terminal Screws	Steel-Copper, Multiple Drive
Verified to Fed. Spec. WC596	Ground Screw	Steel (Green), Multiple Drive
Certification – UL Listed to UL 498 File E1706,	Cable Inserts	Poly Phenylene Oxide
CSA Certified to C22.2 No. 42 File 280C	Wire Clamps	Steel
IP Suitability – IP20	Body Holding Screws	Steel, Multiple Drive
Connector Bodies	Part	Connector
Connector Bodies  Typical Specification – Catalog No. HBL5969VY	Part Connector Body	Connector 15A
Typical Specification – Catalog No. HBL5969VY	Connector Body	15A
Typical Specification – Catalog No. HBL5969VY Manufacturer's Identification – Hubbell HBL5969VY	Connector Body Housing	15A Nylon
Typical Specification – Catalog No. HBL5969VY Manufacturer's Identification – Hubbell HBL5969VY Description – Straight Body Connector	Connector Body Housing Contact and Ground Springs	15A Nylon Brass
Typical Specification – Catalog No. HBL5969VY Manufacturer's Identification – Hubbell HBL5969VY Description – Straight Body Connector Type – 2 Pole, 3 Wire, Grounding	Connector Body Housing Contact and Ground Springs Line Terminal Screws	15A Nylon Brass Steel-Copper, Multiple Drive
Typical Specification – Catalog No. HBL5969VY Manufacturer's Identification – Hubbell HBL5969VY Description – Straight Body Connector Type – 2 Pole, 3 Wire, Grounding Rating – 15A, 125V	Connector Body Housing Contact and Ground Springs Line Terminal Screws Ground Screw	15A Nylon Brass Steel-Copper, Multiple Drive Steel (Green), Multiple Drive
Typical Specification – Catalog No. HBL5969VY Manufacturer's Identification – Hubbell HBL5969VY Description – Straight Body Connector Type – 2 Pole, 3 Wire, Grounding Rating – 15A, 125V Verified to Fed. Spec. WC596	Connector Body Housing Contact and Ground Springs Line Terminal Screws Ground Screw Cable Inserts	15A Nylon Brass Steel-Copper, Multiple Drive Steel (Green), Multiple Drive Poly Phenylene Oxide

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V or 250V as rated.
Current interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
	150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL 498 and CSA (Brass, White, Green).
Terminal Accommodation	Copper conductors only.
	2 Wire 15A Only #18-14 AWG,
	2 Wire 20A & 3 Wire #18-12 AWG,
	Hospital Grade #16-12 AWG,
	I.D. Valise #18-16 AWG.
Product Identification	Molded Rating on Device Face.
Torque	12 in./lb. terminal screws, 7 in./lb. assembly screws.
Cord Diameter Range	2-Wire 15A Only .218–.385 in. (5.5–9.8),
	2-Wire 20A & 3 Wire .220–.660 in. (5.6–16.8),
	Hospital Grade .300–.660 in. (7.6–16.8),
- · · · · · · · · · · · · · · · · · · ·	I.D. Valise .230360 in. (5.8-9.1).
Environmental – Material	
Flammability	UL 94V-2.
Operating Temperature	Maximum continuous 75°C; minimum -40°C (w/o impact).
Standards	
NEMA® WD1	
NEMA® Configurations	

NEMA® is a registered trademark of the National Electrical Manufacturers Association.

Listed to UL Standard UL498

Certified to CSA Standard C22.2 No. 42 Verified to Federal Spec WC596

# Straight Blade Devices

#### **Technical Information**









#### **IEC 320 Devices**

H320R	H320C	H320P	H320B

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Receptacle

Ticocptacic	
Catalog Number	H320R
Description	IEC Configuration compatible straight blade panel mount receptacle.
Type	2 Pole + earth.
Rating	16A 250V AC for European service;
-	20A 250V AC for North American service.
Certification	UL Listed 20A 250V AC – File No. E2186;
	CSA Certified 20A 250V AC - File No 17337.
Terminal Accommodation	North American – #16-12 AWG stranded or solid copper conductor only.
	International – 1.55mm2–2.5mm2.
Connector	
	Linno
Catalog Number	H320C
Description	IEC Detachable straight blade connector.
Type	2 Pole + earth.
Rating	16A 250V AC for European service;
	20A 250V AC for North American service.
Configuration	IEC 60320-1 Style appliance coupler, C19.
Certification	UL Listed 20A 250V AC – File No. E1706;
	CSA Certified 20A 250V AC – File No. 17337;
	UL Classified to IEC 320, 16A 250V AC – File No. E111246;
Cord Accommodation	North American – 16/3SJ-12/3SJ (.325–.475 in. dia.);
	International – (HAR cord) 3x1.5mm2–3x2.5mm2 (8mm–12mm dia.).
IP Suitability	IP20.
Plug	
Catalog Number	H320P
Description	IEC Configuration compatible straight blade Valise® plug.
Туре	2 Pole + earth.
Rating	16A 250V AC for European service;
riding	20A 250V AC for North American service.
Certification	UL Listed 20A 250V AC – File No. E1706;
Continoation	CSA Certified 20A 250V AC – File No. 17337.
Cord Accommodation	North American – 16/3 SJ-12/3SJ (.325–.475 in. dia.);
Cord Accommodation	
IP Suitability	International – (HAR cord) 3x1.5mm2 3x2.5mm2 (8–12mm dia.). IP20.
, and the second se	II ZU.
Inlet	
Catalog Number	H320B and H320BL
Rating	16A 250V AC for European service;
	20A 250V AC for North American service.
Configuration	IEC 60320-1 Style appliance coupler, C20.
Certification	UL Listed 20A 250V AC – File No. E1706;
	CSA Certified 20A 250V AC – File No. 17337;
	UL Classified to IEC 320, 16A 250V AC - File No. E111246;
Terminal Accommodation	
	· · · · · · · · · · · · · · · · · · ·
9	20A 250V AC for North American service. IEC 60320-1 Style appliance coupler, C20. UL Listed 20A 250V AC – File No. E1706; CSA Certified 20A 250V AC – File No. 17337;

# **Straight Blade Devices**

#### **Technical Information**





Heavy Duty Insulgrip® Plugs and Receptacles

#### Specifications

BL9431C

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Plug	Part	Description
Typical Specification - Catalog No. HBL9431C	Plug	30A
Manufacturer's identification - Hubbell HBL9431C	Housing	Supertough Nylon
Description - Straight Body Plug	Blade Holder & Retainer	Reinforced Thermoplastic Polyester
Type - 3 Pole, 4 Wire, Grounding	Blades	Brass
Rating - 30A, 125/250V	Terminal Screws	% in. Allen Head, Plated Steel
Certification - UL Listed File E1706, CSA Certified*	Box Terminals	Copper Alloy
P Suitability - IP20	Cord Clamps	Reinforced Thermoplastic Polyester
•	Mounting and Clamp Screws	Stainless Steel
	Cord Grip Range	.625-1.310 in. (15.9-33.3)
Receptacle	Part	Description
ypical Specification - Catalog No. HBL9430A	Receptacle	30A
Manufacturer's Identification - Hubbell HBL9430A	Housing Construction	Reinforced Thermoplastic Polyester
Description - Single Receptacle	Mounting Plate	.062 in. (1.5) Pre-Plated Steel
Type - 3 Pole, 4 Wire, Grounding	Contacts	Brass
Rating - 30A, 125/250V	Ground Shunt	Brass
Certification - UL Listed File E2186, CSA Certified	Terminal Screws	% in. Allen Head, Plated Steel
	Box Terminals	Copper

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 2,000V minimum.
Max. Working Voltage	125V or 250V as rated.
Current Interruption	Certified for current interrupting at full rated current.
Temperature Rise	Max 30°C temperature rise at full rated current after 50 cycles of overload at
	150% of rated current at a power factor of 75%.
Mechanical	
Terminal Identification	Terminals identified in accordance with UL 498 (Brass, White, Green).
Terminal Accommodation	#12 AWG through #4 AWG copper wire only.
Production Identification	Ratings are a permanent part of the device.
Environmental	
Flammability	Receptacle: UL 94 VO.
•	Plug: UL 94 HB (Housing), UL 94 VO (Blade Holder and Retainer).
Operating Temperature	Maximum continuous 60°C, minimum -40°C (w/o impact).

Note: \*Listed to UL Standard 498 (Attachment Plugs and Receptacles), Certified to CSA Standard 42M (General Use Receptacles, Attachments, Plugs and Singular Wiring Devices) where applicable.

# **SECTION B**

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## Twist-Lock® Devices

#### Products at a Glance



#### Insul-Lock™ Devices

- Miniature 25 Amp power connections
- Connectors accept up to #12/3 AWG SO cable meeting NEC 520.68 requirements for extra-hard usage cords or cables
- Panel mount devices utilize .25 inch spade style tabs
- Interchangeable with other similar brands
- Suitable for use in UL1640 applications



#### Midget Twist-Lock® Devices

- Smaller body size for use in tighter fit applications where larger products can't
- Abuse resistant nylon housing

#### Midget Valise® Devices

- Powerful, cord-gripping jaws designed to eliminate conductor slip and strain on terminals
- Patented locking lugs interlock the two sections together providing a secure assembly



#### Insulgrip® Twist-Lock® Devices

- Tough ribbed nylon housing for secure gripping
- Insulated nylon construction to keep non-current carrying parts from becoming energized
- Integral dust shield protects wiring chamber from dust and contaminants
- Voltage color coding on receptacle face facilitates proper mating of devices



#### Safety-Shroud® Twist-Lock® Devices

- Tough nylon shroud protect blades from damage and abuse
- Prevents exposure to potential arc
- Lockout/tagout hole allows compliance with OSHA regulation 29 CFR 1910.147
- Accepts conventional NEMA locking plugs



#### 50 Amp Insulgrip® Devices

- Heavy duty design built for heavy duty applications
- Thermoplastic cord grips are designed with offset gripping jaws to hold connectors as well as the jacket
- Stainless steel shroud restricts mismating with the wrong device
- Padlock capable shroud allows compliance to OSHA lockout/tagout regulation 29 CFR 1910.147



#### Hubbellock® Devices

- Enhanced safety because access to live female contacts is restricted by the springloaded safety shutter
- No "lazy" connections because a springloaded safety shutter automatically ejects the plug if it hasn't been properly locked into the female device. This eliminates teasing of the contacts, a major cause of contact burn-up



#### Watertight Safety-Shroud® Devices

- Gland seal prevents water ingress at cord entrance
- Strong PBT body for heavy duty applications
- Closure cap creates environmental seal when device is not in use
- Vsible color coded rating label on devices ensure proper mating

#### **Features and Benefits**

#### Insul-Lock™ Connectors and Panel Mount Devices

Miniature 25 Amp Power Connections.

Ideal for use with LED lighting and other applications including multiple screen video walls. The rear of the connector is black to blend in when used in visible areas.

Available in both inline and panel mount styles, Hubbell's Insul-Lock™ Connectors have a quick release, vibration resistant latch. Hubbell's connections intermate with other similar brands.

- Meets NEC 520.68 requirements for extra-hard usage cords or cables
- Panel mount devices utilize .25 inch spade style tabs
- Interchangeable with other similar brands
- Suitable for use in UL1640 applications



**HBLPMIBL** 



#### **Housing Design**

- Impact-resistant thermoplastic construction
- Industry standard mating
- Color coded blue for power in and gray for power out



#### **Connector Housing**

- Insulgrip style body design for a secure grip
- Color coded blue for power in and gray for power out



#### **Connector Body**

- Connectors accept up to #12/3 AWG SO cable
- Multiple strain relief collets to accomodate cable range



#### Locking Latch

- Turn and latch feature prevents nuisance disconnects
- · Quick release locking latch to ensure positive connection



#### Contacts

 Panel mount devices accept commonly available .25 inch spade style connectors



#### Panel Mount

• Divided panel mounts available for use with non-insulated terminations



#### Insul-Lock™ Connectors and Panel Mount Devices



#### **Inline Connectors**

Description	Style	Color	Catalog Number
25 Amp	Power In	Blue	HBLCPIBL
25 Amp	Power Out	Gray	HBLCPOGY



#### **Panel Mounts**

Description	Style	Color	Catalog Number
25 Amp	Power In	Blue	HBLPMIBL
25 Amp	Power In, Divided	Blue	HBLPMIDBL
25 Amp	Power Out	Gray	HBLPMOGY
25 Amp	Power Out, Divided	Gray	HBLPMODGY



Power In



Power Out





HBLPMIBL F

HBLPMIDBL (Divided)

**HBLPMOGY** 

**HBLPMODGY** (Divided)

#### Acessories

Description	Catalog Number
Panel Mount Retainer Plate	HBLPMRP
Panel Mount M3x.5 Screw, 8mm Long	HBLPMSC



#### Certifications

UL Recognized component for USA and Canada.

Note: Not for make or break under load.

Dimensions in Inches (mm)

#### **Features and Benefits**

#### Midget 15 Amp Plugs and Connector Bodies

Hubbell's Valise® insulation displacement terminal for Midget Twist-Lock® Plugs and Connector Bodies are the right choice for economy, wiring speed and long life.

- Nylon webs join two sections together which makes assembly of the Valise<sup>®</sup> style device quick and easy
- Patented locking lugs interlock the two sections together when the device is assembled providing a secure assembly
- Powerful, cord-gripping jaws designed to eliminate conductor slip and strain on terminals
- "TURN & PULL" marking is highly visible, reducing possible damage to equipment by attempting disconnection prior to unlocking





HBL7593V

Note: The cut-away views below are construction elements pertaining specifically to the Valise® style series.



#### Housing Design

- Totally insulated body adds extra measure of safety
- Abuse resistant nylon housing



#### Contacts

- The insulation displacement terminal reduces the time required for wire preparation and provides uniformity in the quality of termination
- Powerful, cord-gripping jaws designed to eliminate conductor slip and strain on terminals



#### One-Piece Design

- Nylon webs join two sections together which makes assembly of the device quick and easy
- Patented locking lugs interlock the two sections together when the device is assembled providing a secure assembly, even in the most abusive environments



#### Assembly

 Assembly screws have multiple drive heads for screwdriver versatility. Only two assembly screws are needed to close this device, make the wire terminations and retain the cord



#### Identification

 Rating marked on surface provides quick, sure circuit identification



#### Markings

 "TURN & PULL" marking is highly visible, reducing possible damage to equipment by attempting disconnection prior to unlocking



#### **Midget Plugs and Flanged Inlets**



HBL7465V



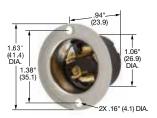
**HBL7594V** 



HBL7594



HBL7570



HBL7466, HBL7467



Dimensions in Inches (mm)







Plugs		15A 125V NEMA ML-1P	15A 125V NEMA ML-2P	15A 125/250V AC NEMA ML-3P
Description	Cord Dia.	Catalog Number		
Valise® plug, black nylon, multiple drive screw terminals.	.220"385" (5.6-9.8)	HBL7465V*	-	-
Valise® plug, black nylon, insulation displacement terminals.	.300"430" (7.6-10.9)	-	HBL7594V	-
Black nylon cover, phenolic body, multiple drive screw terminals.	.281"421" (7.1-10.7)	-	HBL7594	-
Angle plug, black nylon cover, phenolic body, multiple drive screw terminals.	.335"421" (8.5-10.7)	-	HBL7570	-
Valise® plug, black nylon, with insulation displacement terminals.	.300"430" (7.6-10.9)	-	-	HBL7485V*
Black nylon body, phenolic base, multiple drive screw terminals, cord grip.	.281"421" (7.1-10.7)	-	-	HBL7485*
Same as above, except angle cord grip.	.335"421" (8.5-10.7)	-	-	HBL7432*

#### Flanged Inlets

Description	Catalog Number		
Stainless steel flange, polarized, exposed terminals.	HBL7467*	-	-
Stainless steel flange, not polarized, exposed terminals.	HBL7466*	-	-
Exposed terminals, black nylon flange.	-	HBL7595N	-
Exposed terminals, stainless steel flange.	-	HBL7595	-
Covered terminals, stainless steel flange, accepts cord .500" (12.7) dia.	-	HBL7551	-
Exposed terminals, black nylon flange.	-	-	HBL7486N*
Exposed terminals, stainless steel flange.	_	_	HBL7486*

Note: See page B-8 for accessories.
\*UL Listed only.

Male ML-2P devices have hollow center ground sleeves.

Male ML-3P devices have solid center neutral pins.









#### **Midget Connector Bodies and Flanged Receptacles**

IP20







Connector	<b>Bodies</b>
-----------	---------------

Odfinector Bodies		NEMA ML-1R	NEMA ML-2R	NEMA ML-3R
Description	Cord Dia.	Catalog Number		
Valise® connector body, black nylon, polarized, multiple drive screws.	.220"385" (5.6-9.8)	HBL7464 <b>V</b> *	-	-
Valise® connector body, black nylon, insulation displacement terminals.	.300"430" (7.6-10.9)	-	HBL7593V	-
Black nylon cover, phenolic body, screw terminals.	.281"421" (7.1-10.7)	-	HBL7593	-
Angle connector body, black nylon cover, phenolic body, screw terminals.	.335"421" (8.5-10.7)	-	HBL7571	-
Valise® type, black nylon, with insulation displacement terminals.	.300"430" (7.6-10.9)	-	-	HBL7484V*
Black nylon body, phenolic base, cord grip.	.281"421" (7.1-10.7)	-	-	HBL7484*
Same as above, except for angle cord grip.	.335"421" (8.5-10.7)	-	-	HBL7433*



**HBL7464V** 



HBL7593V

#### **Flanged Receptacles**

Description	Catalog Number		
Stainless steel flange, exposed terminals.	HBL7468*	-	-
Exposed terminals, black nylon flange.	-	HBL7596N	-
Exposed terminals, stainless steel flange.	-	HBL7596	-
Covered terminals, stainless steel flange, accepts cord .500" (12.7) in dia.	-	HBL7598	-
Exposed terminals, black nylon flange.	-	-	HBL7487N*
Exposed terminals, stainless steel flange.	-	-	HBL7487*
Covered terminals, stainless steel flange, accepts cord .500" (12.7) in diameter.	-	-	HBL7489*





Note: See page B-8 for accessories.

\*UL Listed only.

Female ML-2R devices have solid center ground pins. Female ML-3R devices have hollow center neutral sleeves.



HBL7571



HBL7484V









Dimensions in Inches (mm)

# Twist-Lock® Devices

#### **Midget Accessories**



**HBL7490V** 



HBL7459V



HBL4890



HBL7495V





Weatherproof Accessories for ML-1

Description	Catalog Number
Seal-tite® cover, black elastomer, for use with a HBL7465V plug when used with a HBL7464V connector body or a HBL7464V connector when used with a flanged inlet.	HBL7490V*
Seal-tite® cover, black elastomer, for use with a HBL7464V connector body and combination of HBL7465V plug and HBL7490V cover.	HBL7459V*
Closure cover for use with HBL7466 or HBL7467. Bead chain is nickel-plated.	HBL4890

#### **Weatherproof Accessories for ML-2**

Description	Catalog Number
Seal-Tite® cover, black elastomer, for use with a HBL7594V plug when used with a HBL7593V connector body or a HBL7593V connector body when used with a flanged inlet.	HBL7495V*
Seal-Tite® cover, black elastomer, for use with a HBL7593V connector body and a combination of HBL7594V plug and HBL7495V cover.	HBL7440V*
Closure cover for use with HBL7595 or HBL7595N.	HBL4889

#### **Weatherproof Accessories for ML-3**

Description	Catalog Number
Seal-Tite® cover, black elastomer, for use with a HBL7485V or HBL7485 plug when used with a HBL7484V or HBL7484 connector body when used with a flanged inlet.	HBL7495V*
Seal-Tite® cover, black elastomer, for use with a HBL7484V or HBL7484 connector body and a combination of HBL7485V or HBL7485 plug and HBL7495V cover.	HBL7440V*
Closure cover for use with HBL7486 or HBL7486N.	HBL4889

 $\textit{Note: $^{*}\textit{IP}55$ suitability when installed and used properly with plug and connector body combinations.}$ 

#### **Features and Benefits**

#### Insulgrip® 15 Amp Plugs and Connector Bodies

Insularip products are synonymous with Hubbell's ongoing commitment to discovering ways to make products safer and last longer.

By encasing wiring devices in tough nylon housings, Insulgrip devices ensure high impact, heat, and chemical resistance while insulating current-carrying components from the user for maximum safety.

- The Insulgrip's cord gripping design clamps conductors, not just the cable jacket, making it the industry's most powerful cord grip with superior strain relief
- Each Insulgrip device is manufactured with roomy, separate wiring chambers to insulate conductors and an individually molded face to keep out dust and debris that can cause contamination over time



**HBL4720C** 



HBL4729C



#### Housing Design

- Ribbed nylon housing provides a secure grip that's impact and chemical resistant
- Beveled housing prevents snagging when dragged across uneven surfaces
- Individually molded face for each blade configuration keeps debris out of plug interior



#### Internal Design

- Powerful cord grips clamp on individual conductors and outer cord jacket to prevent strain on terminations
- Individual wiring terminals are completely enclosed in their own separate chambers



#### Cord Range

- Integral VARI-SIZE® insert adjusts to a wide range of cord sizes: .230-.720 inch (5.8-18.3)
- VARI-SIZE® pointer set to "smaller than gauge" position. Cord diameter range is .230-.360 inch (5.8-9.0). Accepts slotted and Phillips head drivers



#### Assembly

• "Multiple drive" screw heads provide screwdriver versatility. Pocketed recess for cord grip screws deters slippage of the screwdriver



#### Identification

• Catalog number is visible on the device while in use for easy identification



#### Visual Verification

• Transparent angled wiring entrance holes guide conductor insertion and allow for quick visual verification of terminations

# Twist-Lock® Devices

#### **Features and Benefits**

#### 15 Amp Duplex Twist-Lock® Receptacles

Hubbell Wiring Device-Kellems line of duplex Twist-Lock® receptacles are designed to deliver premium service and longer life. This rugged product design establishes a new standard for 15 amp locking receptacles. A reinforced thermoplastic top and base encapsulates the brass alloy contacts that are locked together for unequaled assembly strength. Wiring and installation is simplified with back and side wire terminations, integral wire restraints, and combination head screws. The integral split circuit capability offers flexibility. Available in 2 pole, 3 wire configurations including isolated ground and corrosion resistant versions.

- Superior spring characteristics for increased contact force, secure connections and longer life
- High-conductivity, corrosion resistant material for reliable, low resistance to fault currents
- Easy and reliable installation for stranded and solid wire
- Features split circuit capability in the field
- The assembly locks together to make the most abuse resistant receptacle ever



**HBL4700** 



#### Housing Design

- Reinforced thermoplastic construction
- High impact and heat resistance provides maximum safety and longer life



#### **Terminals**

- Single point break-off tabs
- High performance internal wiring clamps and open terminal design provide for the use of forked terminals



#### One-Piece Design

- Mounting strap tabs lock the body and base together
- · Brass mounting strap with stainless steel grounding clip



- Single piece, all brass contacts
- All terminals are back and side wired including the ground



#### Identification

• Rating marked on surface provides quick, sure circuit identification



#### Center Rivet

• Square head, 10-thread bronze center rivet won't rotate, reduces stripping and resists corrosion



#### 15 Amp, 125 Volts 2 Pole, 2 Wire, Non-Grounding

IP20



15A 125V NEMA L1-15P 0.5 HP

i lage		0.5 HP
Description	Cord Dia.	Catalog Number
Black and white nylon, polarized. Multiple drive screws.	.230"720" (5.8-18.3)	HBL7545C

Note: See page B-51 for accessories.



**HBL7545C** 

#### **Flanged Inlets**

Plugs

Description	Catalog Number
Nylon casing, polarized, backwired, Multiple drive screws.	HBL7524C
Note: See page B-50 for accessories.	



NEMA L1-15R 0.5 HP



#### **Connector Bodies**

Description	Cord Dia.	Catalog Number
Black and white nylon. Multiple drive screws.	.230"720" (5.8-18.3)	HBL7506C

Note: See page B-51 for accessories.

HBL7524C



HBL7506C

#### Receptacles

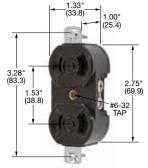
Description	Catalog Number
Duplex, flush, black phenolic.	HBL7540
Single, flush, black phenolic.	HBL7535
Single, panel mount, 115/16" (49.2) centers, black phenolic.	HBL7498

Note: See pages B-50 and B-51 for accessories.

#### **Flanged Receptacles**

Description	Catalog Number
Insulgrip nylon casing, backwired. Multiple drive screws.	HBL7526C
Metal flange, stainless steel casing, black phenolic, exposed terminals.	HBL7526

Note: See pages B-50 and B-51 for accessories. Only receptacles and plugs are HP rated. HP ratings are AC only.



HBL7540







Dimensions in Inches (mm)



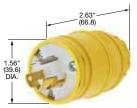
# 15 Amp, 125, 250 Volts and 277 Volts AC 2 Pole, 3 Wire, Grounding



HBL4720C



HBL4720CA



HBL24W47



HBL4723VY



HBL4716C



551.







15A 125V NEMA L5-15P 0.5 HP

15A 250V NEMA L6-15F 1.5 HP

15A 277V AC NEMA L7-15F 2 HP

Plugs		0.5 HP	1.5 HP	2 HP
Description	Cord Dia.	Catalog Number		
Insulgrip plug, black and white nylon. Multiple drive screws. Fed Spec WC596	.230"720" (5.8-18.3)	HBL4720C	HBL4570C	HBL4770C
All black nylon.	.230"720" (5.8-18.3)	HBL4720CBK	-	-
Insulgrip angle plug, 8 position angle, black and white nylon. Multiple drive screws.	.325"655" (8.3-16.6)	HBL4720CA	HBL4570CA	HBL4770CA
Insulgrip plug, corrosion resistant, yellow and white nylon. Multiple drive screws. Fed Spec WC596	.230"720" (5.8-18.3)	HBL47CM20C	HBL45CM70C	HBL47CM70C
Elastogrip <sup>®</sup> plug, yellow elastomer, dust tight.	300"655" (7.6-16.6)	HBL2447	-	-
Elastogrip plug, yellow elastomer, water/dust tight.	300"655" (7.6-16.6)	HBL24W47	-	-
Valise® plug, yellow nylon.	.220"660" (5.6-16.8)	HBL4723VY	HBL4573VY	HBL4773VY
Valise® plug, black nylon.	.220"660" (5.6-16.8)	HBL4723VBK	HBL4573VBK	HBL4773VBK

**IP20** 

Note: See page B-51 for accessories.

**Flanged Inlets** 

Description	Catalog Number	Catalog Number		
Insulgrip flanged inlet, nylon casing, back wired.	HBL4716C	HBL4586C	HBL4786C	
Stainless steel casing, brown phenolic.	HBL4716*	HBL4586*	HBL4786*	
Corrosion resistant, stainless steel casing, yellow melamine.	HBL47CM16*	-	-	

Note: See page B-50 for accessories.

HP ratings are AC only.

Only plugs are HP rated.

See page B-69 for technical information on Insulgrip devices.

<sup>\*</sup>These flanged inlets will not accept Valise® connector bodies.





#### 15 Amp, 125, 250 Volts and 277 Volts AC 2 Pole, 3 Wire, Grounding

**IP20** 



NEMA L5-15R





\$)	
250V	15A 277
250V	15A 277

Connector	<b>Bodies</b>
Description	

Connector Bodies		0.5 HP	1.5 HP	2 HP
Description	Cord Dia.	Catalog Number		
Insulgrip connector body, black and white nylon. Multiple drive screws.	.230"720" (5.8-18.3)	HBL4729C	HBL4579C	HBL4779C
All black nylon.	.230"720" (5.8-18.3)	HBL4729CBK	-	-
Insulgrip connector body, 8 position angle, black and white nylon. Multiple drive screws.	.325"655" (8.3-16.6)	HBL4729CA	-	-
Insulgrip connector body, corrosion resistant, yellow and white nylon. Multiple drive screws.	.230"720" (5.8-18.3)	HBL47CM29C	HBL45CM79C	HBL47CM79C
Elastogrip connector body, yellow elastomer, dust tight.	.300"655" (7.6-16.6)	HBL2547	-	-
Elastogrip® connector body, yellow elastomer, water/dust tight.	.300"655" (7.6-16.6)	HBL25W47**	-	-
Valise® connector body, yellow nylon.	.220"660" (5.6-16.8)	HBL4729VY	HBL4579VY	HBL4779VY
Valise® connector body, black nylon.	.220"660" (5.6-16.8)	HBL4729VBK	HBL4579VBK	HBL4779VBK

Note: See page B-49 for accessories.

HBL4729C



HBL25W47

# HBL4729VY

# .93"

HBL4700



HBL4710



Dimensions in Inches (mm)

#### Receptacles

- 1000 p 100100			
Description	Catalog Number	<u> </u>	
Duplex, flush, brown RTP face, back and side wired. Duplex, flush, ivory RTP face, back and side wired.	HBL4700* HBL4700I*	HBL4550* -	HBL4750* -
Duplex, ring terminal connection.	HBL4700RT*	HBL4550RT*	-
Duplex, isolated ground, flush, orange RTP face, back and side wired.	IG4700A*	IG4550A*	-
Duplex, corrosion resistant, yellow RTP face, back and side wired.	HBL47CM00*	-	-
Single, flush, black nylon face, back and side wired.	HBL4710	HBL4560	HBL4760
Same as HBL4760 without mounting screws, ears. Terminal screws backed out, back and side wired.	-	-	HBL4760C
Single, ring terminal connection.	HBL4710RT	HBL4560RT	_
Single, isolated ground, flush, orange nylon face, back and side wired.	IG4710	IG4560	-
Single, black nylon face mounted on a 4" (101.6) round box cover, back and side wired.	HBL4711	-	HBL4761
Single, panel mount, black nylon face, side wired only, 1.75" or 1.937" (44.5 or 49.2) mounting centers.	HBL4713	HBL4563	HBL4763
N 1 0 D 50 1D 51 (			

Note: See pages B-50 and B-51 for accessories.

#### **Flanged Receptacles**

Description	Catalog Number		
Insulgrip flanged receptacle, nylon casing, back wired.	HBL4715C	HBL4585C	HBL4785C
Stainless steel casing, brown phenolic.	HBL4715	HBL4585	HBL4785
Corrosion resistant, stainless steel casing, yellow melamine.	HBL47CM15	-	-

Note: See pages B-50 and B-51 for accessories.

HP ratings are AC only.

RTP is an abbreviation for reinforced thermoplastic polyester.

See section M for additional information on isolated ground devices.

\*Supplied with break-off tabs for split circuit wiring.

\*\*Watertight connector body IP55 suitability when closure plug is inserted or when installed and used properly with watertight plug.



# Twist-Lock® Devices

#### **Features and Benefits**

#### Insulgrip® 20 and 30 Amp Plugs and Connector Bodies

Our 20 and 30 amp Insulgrip® plugs and connectors maintain Hubbell's classic integrity, solid construction and safety features that make these devices the "industry standard".

Insulgrip's cord gripping design clamps the conductors, not just the cable jacket, making it the industry's most powerful cord grip. The cord grips also provide a clean, one-piece look and makes it stronger.

Insulgrip's design guards against contamination. The nylon body and housing of the plugs and connectors are resistant to industrial chemicals, solvents and hydrocarbons. The face of each plug is molded specific to the blade configuration, eliminating holes that attract debris. And finally, our dust shield provides additional protection from contamination.

Additional features that make Insulgrip the industry standard are our improved contacts that provide better terminations, an exclusive double rivet design for the female contacts and an easy to read identification system.

The Hubbell Twist-Lock® line of plugs and connectors remain the broadest in the industry. Hubbell has you covered – proven performance, innovation and selection.







#### Housing Design

- Tough ribbed nylon housing for secure gripping
- Insulated nylon construction to keep non-current carrying parts from becoming energized



#### Internal Design

- Integral dust shield protects wiring chamber from dust or contaminants.
   Single-piece shield/housing eliminates need for separate step at installation
- Wiring chambers separate and positively insulate conductors and promote easy inspection



#### Cord Range

- Two-part cord grip tightens with two screws for maximum retention force
- Broad gripping area to accommodate wide range of cable diameters



#### Assembly

• Self-threading screws specially designed for secure assembly



#### Identification

 Product identification is visible while device is in use. Markings include catalog number and ratings printed in the IEC color scheme on the currentcarrying portion of the device



#### Contacts

- Improved terminations include #10 multiple drive screws and thicker .080 inch clamping nuts
- Funneled holes to permit "straight-in" conductor insertion
- Contoured binding plates ensures strong wire retention

#### **Features and Benefits**

#### Insulgrip® Standard Locking Receptacles

Twist-Lock® receptacles combine functional design features, unparalleled quality to deliver ultimate performance.

The high-impact nylon face of each Hubbell Twist-Lock receptacle has a colored ring. Keyed to an internationally recognized color coding scheme, this ring enables mating devices to be matched quickly. It's just one more example of user-oriented thinking at Hubbell.

The terminals in each Hubbell Twist-Lock receptacle are mechanically and electrically the finest available. These terminals incorporate unique design features to contain and hold conductors, including an external back wiring "wraparound" clamp, a wire restraint recess and more.

The materials used in every receptacle are of the highest quality. The all brass mounting system provides a safer, lower resistance ground path than those made of steel. The thick wall base is constructed of an engineered thermoplastic to offer the benefits of a thermoset, yet with much greater impact resistance.

Hubbell Twist-Lock Receptacles: Voltage color coding on the outside. Proven designs and quality materials on the inside. Any way you look at them, they are the standard of the industry.















HBL2310



#### Housing Design

- High-impact, abuse-resistant nylon face
- Glass-Reinforced thermoplastic base (PBT) has the desirable characteristics of a thermoset material, including heat, flame resistance and dimensional stability. The impact resis-tance it provides, however, is much greater than that of a thermoset



#### Wiring Design

 Wire restraint recess for both back and side wiring, greatly reduces the possibility of loosening the terminal connection



#### Mounting Strap

 All-brass mounting and grounding system provides a lower resistance ground path and greater resistance to corrosion than steel mounting systems



#### Terminals

- #10 brass terminal screw provides greater strength and resistance to corrosion and stripping
- Anti-rotational clamp has a stop to limit the amount of cocking when only one side is used. Accommodates both back and side wiring



#### Identification

- Face color coding by voltage facilitates locating and mating of proper devices
- Boss diameter is 1.562 inch on 20A and 30A devices for simplifying installation and accessory selection



#### Contacts

 One-piece contact with long spring arm (low stress) and oxide cutting nibs: prevents stress and overheating associated with riveted contact and short spring arms

# Twist-Lock® Devices

#### **Features and Benefits**

#### Watertight Safety-Shroud® Twist-Lock® System

- Virtually eliminates bent and broken plug blades, leading to longer equipment life
- Extends life of mating receptacles by eliminating damage caused by insertion of bent blades
- Extra protection for personnel by significantly reducing chance of inadvertent contact with blades when connecting or disconnecting energized receptacles and connector bodies
- Reduces exposure to arcing when connecting or disconnecting plugs under load
- Compliance with California Code of Regulations, Title 8, Article 51, subsection 2510.7(b), which requires shrouding for devices exceeding 300 volts
- Lockout/tagout hole allows compliance with OSHA regulation 29 CFR 1910.147





**HBL2733SW** 

Note: Works with Mechanical Interlocks, see page B-41 for additional information.



#### **Housing Design**

- One-piece, engineered thermoplastic housing is impact-resistant for heavy duty industrial environments
- Blades are recessed for protection against bending and breaking
- Closure cap is included for environmental seal when device is not in use



#### Assembly

- Cord grip screw recess minimizes screwdriver slippage
- All screws are #10 multiple drive head



#### Cord Range

- Assorted TPE seal glands can accommodate a wide range of cord sizes from #16-3 Type SJ to #8-5 Type S, SO
- Sealing gland and thermoplastic guard assure sealing when fully connected



## Panel or Box Mount Receptacles and Inlets

- High impact, thermoplastic housing for heavy duty industrial environments
- Mounting screw recesses minimize screwdriver slippage
- Accepts all mating NEMA locking plugs and most connector bodies, allowing interchangeability with existing devices



#### Identification

- Catalog number and color-coded voltage rating are easily visible even when in use
- Alignment arrows and lock and unlock symbols provide a visual indication that devices are properly connected



#### Spring-Loaded Cover

 One-step, push-to-close, spring-loaded cover with latch allows for fast opening and closing of lift cover

Result: environmental sealing is assured

#### **Features and Benefits**

#### Safety-Shroud® Twist-Lock® System

- Mates with most NEMA locking connector bodies
- Virtually eliminates bent and broken plug blades
- Provides protection for personnel by reducing chance of inadvertent contact with blades when connecting or disconnecting energized devices
- Reduces exposure to arcing when connecting or disconnecting under load
- Extends life of mating receptacles by eliminating damage caused by insertion of bent blades
- Complies with California Code of Regulation, which requires shrouding for devices exceeding 300 volts
- Lockout/tagout hole allows compliance to OSHA regulation 29 CFR 1910.147
- Allows engagement with Mechanical Interlock Enclosure which virtually prevents make and break under load



**HBL2611S** 



Note: All screws are #10 multiple drive head.

Works with Mechanical Interlocks, see page B-41 for additional information.





#### Housing Design

 Impact resistant shroud made of engineered thermoplastic protects blades against bending or breaking



#### **Housing Design**

- Engineered thermoplastic housing is impact and corrosion resistant, making it suitable for heavy duty industrial environments
- Accepts conventional NEMA locking plugs



#### Safety

- External keying on plug devices allows quick mating of devices
- Lockout/tagout hole allows compliance with OSHA regulation 29 CFR 1910.147



# Safety-Shroud® Twist-Lock® Receptacles

 The Safety-Shroud Twist-Lock single gang receptacles were designed to mount in virtually all standard and FS/FD type boxes, allowing easy conversion of existing NEMA locking receptacles to Safety-Shroud Twist-Lock receptacles



#### Identification

- Catalog number and color-coded voltage rating are visible even when in use
- Alignment arrows with lock and unlock symbols provide a visual indication that devices are properly connected



#### Boxes Available

• The semi-flush receptacles install in (RACO type 242/255) boxes, with ½ raised 2-gang device mount covers (RACO type 778/841) and a 2-gang FD type box. Standard 4 inch and 411/16 in. square boxes 21/8 in. deep

# Twist-Lock® Devices

#### **Compatibility and Environmental Protection Chart**

#### Twist-Lock® Receptacles

# Twist-Lock® Connector Bodies











Watertight Safety-Shroud

Watertight Safety-Shroud Mechanical Interlock Enclosure

Safety-Shroud

Switched Enclosure NEMA

Watertight Safety-Shroud

rtignt Shroud Insulgrip

#### Twist-Lock® Plugs

Watertight Safety-Shroud	YES Type 4X, Type 12	YES Type 4X, Type 12K	YES Type 1	NO	NO	YES Type 4X, Type 12	YES Type 1
Safety-Shroud	YES Type 1	YES Type 1	YES Type 1	NO	NO	YES Type 1	YES Type 1
Insulgrip	YES Type 1	NO	YES Type 1	YES Type 3R	YES Type 1	YES Type 1	YES Type 1

#### Twist-Lock® Inlets

NEMA	NA	NA	NA	NA	NA	NO	YES Type 1
Watertight Safety-Shroud	NA	NA	NA	NA	NA	YES Type 4X, Type 12	YES Type 1

Type 1 Indoor
Type 3R Raintight

Type 4X Hose-directed water and corrosion resistant
Type 12 Dust tight, drip-proof without knockouts
Type 12K Dust tight, drip-proof with knockouts

YES Interchangeable
NO Does not interchange
NA Not Applicable

Note: See Technical section for full description of enclosure types.



#### 20 Amp, 250 Volts 2 Pole, 2 Wire, Non-Grounding



Description	Cord Dia.	Catalog Number
Black and white nylon, polarized, multiple drive screws.	.220"720" (5.6-18.3)	HBL7102C

HBL7102C

Flanged Inlets

**Pluas** 

Description	Catalog Number
Nylon casing, back wired, polarized, multiple drive screws.	HBL8815C

Note: See page B-50 for accessories.

Note: See page B-51 for accessories.





### **Connector Bodies**

		ZIIF
Description	Cord Dia.	Catalog Number
Black and white nylon, multiple drive screws.	.220"720" (5.6-18.3)	HBL7101C

Note: See page B-51 for accessories.



#### HBL7101C

#### Receptacles

Description	Catalog Number
Single, black phenolic.	HBL7210B
Single, mounted on 4" (101.6) round box cover, black phenolic.	HBL7217B

Note: See pages B-50 and B-51 for accessories.



HBL7210B

#### Flanged Receptacles

Description	Catalog Number
Insulgrip nylon casing, back wired, multiple drive screws.	HBL8809C
Metal flange, stainless steel casing, black phenolic, exposed terminals	HBL3226

Note: See pages B-50 and B-51 for accessories. Only receptacles and plugs are HP rated. HP ratings are AC only.





HBL3226

Dimensions in Inches (mm)





#### 20 Amp, 125, 250 Volts and 277 Volts AC 2 Pole, 3 Wire, Grounding

Pluas



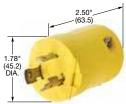
**HBL2321SW** 



HBL2321S



HBL2311



HBL2311VY



**HBL2325SW** 



Dimensions in Inches (mm)







		IIIF	2111	Z IIF
Watertight Safety-Shroud®		IP66	SUITABILITY	UL Type 4x, 12
Description	Cord Dia.	Catalog Number		
Black Valox® housing, white Valox® clamps.	.360"930" (9-24)	HBL2311SW	HBL23219	SW HBL2331SW

Safety-Shroud®	IP20 SUITABILITY			TY
Description	Cord Dia.	Catalog Number		
Black and white nylon body, white Valox® shroud. Can be used with the Insulgrip Connector Bodies.	.360"930" (9-24)	HBL2311S	HBL2321S	HBL2331S

Insulgrip <sup>®</sup>	IP20 SUITABILITY			Y
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.360"930" (9-24)	HBL2311	HBL2321	HBL2331
Corrosion resistant, yellow nylon.	.360"930" (9-24)	HBL23CM11	HBL23CM21	-
All black nylon.	.360"930" (9-24)	HBL2311BK	HBL2321BK	-
Cord clamps with removable inserts. All black nylon.	.360"930" (9-24)	HBL2311EBK	HBL2321EBK	-

Note: See page B-52 for accessories.

Note. See page B-32 for accessories.					
Valise <sup>®</sup>			IP20 SUITABILITY	(I) (I)	
Description	Cord Dia.	Catalog Number			
Yellow nylon.	.325"720" (8.26-18.3)	HBL2311VY	HBL2321VY	HBL2331VY	
Corrosion resistant, yellow nylon.	.325"720" (8.26-18.3)	HBL23CM11V	-	-	
Black nylon.	.325"720"	HBL2311VBK	HBL2321VBK	HBL2331VBK	

(8.26-18.3)

Note: See page B-53 for accessories.

#### Flanged Inlets

Watertight Safety-Shroud®	IP66	SUITABILITY UL	UL Type 4x, 12	
Description	Catalog Number			
Gray Valox® housing and flange.	HBL2315SW	HBL2325SW	HBL2335SW	
Gray Valox <sup>®</sup> housing and flange, reverse service (Not shown).	-	HBL2325SWR	-	

Note: See page B-54 for accessories.

Insulgrip <sup>®</sup>	IP20 SUITABILITY		
Description	Catalog Number		
Nylon casing, back wired.	HBL2315	HBL2325	HBL2335

Note: See page B-52 for accessories.

See pages B-69 and B-70 for technical information on Twist-Lock and Watertight Safety-Shroud devices.
See page B-74 for technical information on Valise® plugs and connectors.

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

**HBLMITL** - For use with Watertight Safety-Shroud receptacles, see page B-41.







20 Amp, 125, 250 Volts and 277 Volts AC 2 Pole, 3 Wire, Grounding



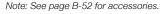




#### **Connector Bodies**

NEMA L5-20R 1 HP

Watertight Safety-Shroud®		IP66 SUITABILITY UL Type 4x, 12		
Cord Dia.	Catalog Number			
.360"930" (9-24)	HBL2313SW	HBL2323	SW HBL2333SW	
	IP20 SUITABILITY			
Cord Dia.	Catalog Number			
.360"930" (9-24)	HBL2313	HBL2323	HBL2333	
.360"930" (9-24)	HBL23CM13	HBL23CN	123 –	
.360"930" (9-24)	HBL2313BK	HBL2323I	ВК -	
.360"930" (9-24)	HBL2313EBK	HBL2323I	EBK –	
	.360"930" (9-24)  Cord Dia360"930" (9-24) .360"930" (9-24) .360"930" (9-24) .360"930"	Cord Dia. Catalog Number .360"930" HBL2313SW  Cord Dia. Catalog Number .360"930" HBL2313 (9-24) .360"930" HBL23CM13 (9-24) .360"930" HBL2313BK (9-24) .360"930" HBL2313EBK	Cord Dia. Catalog Number  .360"930" HBL2313SW HBL23233 (9-24)  IP20 SUIT.  Cord Dia. Catalog Number  .360"930" HBL2313 HBL2323 (9-24)  .360"930" HBL23CM13 HBL23CM (9-24)  .360"930" HBL2313BK HBL2323I (9-24)  .360"930" HBL2313BK HBL2323I	







Valise <sup>®</sup>		I	P20 SUITABILITY	
Description	Cord Dia.	Catalog Number		
Yellow nylon.	.325"720" (8.26-18.3)	HBL2313VY	HBL2323VY	-
Black nylon.	.325"720" (8.26-18.3)	HBL2313VBK	HBL2323VBK	HBL2333VBK

Note: See page B-53 for accessories.



Watertight Safety-Shroud®	IP66 SUITABILITY UL Type 4x, 12		
Description	Catalog Number		
Gray Valox® housing and flange, back wired.	HBL2310SW	HBL2320SW	HBL2330SW
Note: See page B-54 for accessories.			

Safety-Shroud® Twist-Lock®



Description	Catalog Number		
Gray Valox® angle housing, one gang, back wired.	HBL2310AR	HBL2320AR	HBL2330AR
Gray Valox® surface mounting, one gang, back wired	. HBL2310SR	HBL2320SR	HBL2330SR
Gray Valox® semi-flush, two gang, back wired.	HBL2310SR2	HBL2320SR2	HBL2330SR2

Single Flush Receptac	les
-----------------------	-----

Single Flush Receptacles		IP20 SUITABILITY		
Description	Catalog Number			
Black nylon face, back and side wired.	HBL2310	HBL2320	HBL2330	
Blue nylon face, back and side wired.	HBL2310M7	HBL2320M4	-	
Isolated ground, orange nylon face, back and side wired.	IG2310	IG2320	-	
Corrosion resistant, yellow nylon face, back and side wired.	HBL23CM10	-	-	
Ring terminal connection.	HBL2310RT	HBL2320RT	-	

Note: See page B-52 for accessories.

Insulgrip® Flanged Receptacles

Description	Catalog Number		
Nylon casing, back wired.	HBL2316	HBL2326	HBL2336

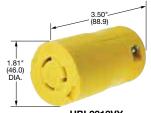
Note: See page B-52 for accessories.



HBL2323SW



HBL2313



HBL2313VY



**HBL2320SW** 



HBL2320AR



HBL2320SR

Dimensions in Inches (mm)





# 20 Amp, 125/250, 3Ø 250 and 3Ø 480 Volts AC 3 Pole, 4 Wire, Grounding







20A 125/250V NEMA L14-20

20A 3Ø 250V A NEMA L15-20 3 HP

20A 3Ø 480V AC NEMA L16-20P 3 HP



HBL2421SW



HBL2421S



HBL2411





**Plugs** 

Watertight Safety-Shroud®		IP66 SUITABILITY UL Type 4x, 12		
Description	Cord Dia.	Catalog Number		
Black Valox® housing, white Valox® clamps.	.350"-1.150" (9-29)	HBL2411SW	HBL2421SW	HBL2431SW
Safety-Shroud®	IP20 SUITABILITY			
Description	Cord Dia.	Catalog Number		
Black and white nylon body, white Valox® shroud. Can be used with the Insulgrip Connector Bodies.	.350"-1.150" (9-29)	HBL2411S	HBL2421S	HBL2431S

Note: See page B-52 for accessories.

Insulgrip <sup>®</sup>	IP20 SUITABILITY			
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	HBL2411	HBL2421	HBL2431
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL24CM11	HBL24CM21	HBL24CM31
All black nylon.	.350"-1.150" (9-29)	HBL2411BK	-	-

Note: See page B-52 for accessories.

#### **Flanged Inlets**

Watertight Safety-Shroud®	IP66	SUITABILITY UL	Type 4x, 12
Description	Catalog Number		
Gray Valox® housing and flange.	HBL2415SW	HBL2425SW	HBL2435SW
Note: See page B-54 for accessories.			

Insulgrip <sup>®</sup>	IP20 SUITABILITY		
Description	Catalog Number	•	
Nylon casing, back wired.	HBL2415	HBL2425	HBL2435

Note: See page B-52 for accessories.

See pages B-69 and B-70 for technical information on Twist-Lock and Watertight Safety-Shroud devices.

**HBLMITL** - For use with Watertight Safety-Shroud receptacles, see page B-41.



Dimensions in Inches (mm)





20 Amp, 125/250, 3Ø 250 and 3Ø 480 Volts AC

3 Pole, 4 Wire, Grounding



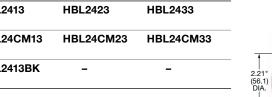


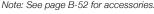


**Connector Bodies** 

**NEMA L16-20R** 

Watertight Safety-Shroud®		IP66 SUITABILITY UL Type 4x, 12		
Description	Cord Dia.	Catalog Number		
Black Valox® housing, white Valox® clamps.	.350"-1.150" (9-29)	HBL2413SW	HBL2423SW	HBL2433SW
Insulgrip <sup>®</sup>		IP20 SUITABILITY		Υ
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	HBL2413	HBL2423	HBL2433
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL24CM13	HBL24CM23	HBL24CM33
All black nylon.	.350"-1.150" (9-29)	HBL2413BK	-	-









HBL2413

#### **Receptacles**

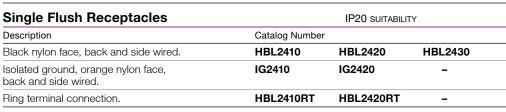
Watertight Safety-Shroud®	IP66	SUITABILITY	UL Type 4x, 12
Description	Catalog Number		
Gray Valox® housing and flange, back wired.	HBL2410SW	HBL2420S	W HBL2430SW
Note: Con some D. E.A. for some since			

Note: See page B-54 for accessories.

Safety-Shroud® Twist-Lock®

IP20 SUITABILITY	
0 00	

Description	Catalog Number		
Gray Valox® angle housing, one gang, back wired.	HBL2410AR	HBL2420AR	HBL2430AR
Gray Valox® surface mounting, one gang, back wired.	HBL2410SR	HBL2420SR	HBL2430SR
Gray Valox® semi-flush, two gang, back wired.	HBL2410SR2	HBL2420SR2	HBL2430SR2



Note: See page B-52 for accessories.

# 1.75" (44.5) **HBL2420SW**



HBL2420AR

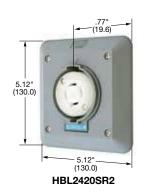
#### Insulgrip® Flanged Receptacles

<u> </u>	•		
Description	Catalog Number		
Nylon casing, back wired.	HBL2416	HBL2426	HBL2436

Note: See page B-52 for accessories.









Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Dimensions in Inches (mm)





20 Amp, 347, 480, 600 and 125/250 Volts AC 2 Pole, 3 Wire, Grounding and 3 Pole, 3 Wire, Non-Grounding











HBL2341

Plugs		20A 347V AC NEMA L24-20P	20A 480V AC NEMA L8-20P 3 HP	NEMA L9-20P	
Description	Cord Dia.	Catalog Number	r		
Black and white nylon.	.360"930" (9-24)	HBL3721	HBL2341	HBL2351	-
Black and white nylon	.300"-1.050"	-	-	-	HBL2361

Note: See page B-52 for accessories.

#### Flanged Inlets

Description	Catalog Number				
Nylon casing, back wired.	HBL3725	HBL2345	HBL2355	HBL2365	

Note: See page B-52 for accessories.













		3.86"(98.0)	
1.97" (50.0) DIA.			2.26" (57.4) DIA.
	- 53		

HBL2343

#### Connector Bodies

Odiniootoi Do	aioo		з пР		2 (I) HP
Description	Cord Dia.	Catalog Numb	per		
Black and white nylon.	.360"930" (9-24)	HBL3723	HBL2343	HBL2353	-
Black and white nylon (Not shown).	.300"-1.050" (7.6-26.7)	-	-	-	HBL2363

Note: See page B-52 for accessories.

#### Single Flush Receptacles

Description	Catalog Numb	per		
Black nylon face, back and side wired.	HBL3720	HBL2340	HBL2350	HBL2360
Watertight Safety-Shroud®, gray Valox® housing and flange, back and side wired, (Not shown).	-	HBL2340SW	-	-
Isolated ground, orange nylon face, back and side wired.	-	IG2340	-	-

Note: See page B-52 for accessories.

# 1.56" (39.6) DIA. 2 3.28" (83.3)

HBL2340

#### **Flanged Receptacles**

Description	Catalog Number			
Nylon casing, back wired.	HBL3726	HBL2346	HBL2356	HBL2366

Note: See page B-52 for accessories.

See page B-69 for technical information. See page B-39 for switched enclosure.

See page B-42 for Add-A-Shroud® kit. For use with connector bodies.

Only receptacles and plugs up to 480V AC are HP rated.

HP ratings are AC only.



Dimensions in Inches (mm)







20 Amp, 3ØY 120/208, 277/480 and 347/600 Volts AC 4 Pole, 4 Wire, Non-Grounding

**IP20** 







**Plugs** 

Description	Cord Dia.
Black and white nylon.	.350"-1.150" (9-29)

A 3ØY 120/208V NEMA L18-20P **NEMA L19-20P** 5 HP

Note: See page B-52 for accessories.

Catalog Number HBL2441 HBL2451 HBL2461



HBL2441

Flanged Inlets

Description	Catalog Number		
Nylon casing, back wired.	HBL2445	HBL2455	HBL2465

Note: See page B-52 for accessories.







NEMA L18-20R





20A 347/600V AC NEMA L20-20R

Connector	<b>Bodies</b>
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Joinicotor Boarco		2 HP	5 HP		
Description	Cord Dia.	Catalog Number			
Black and white nylon.	.350"-1.150" (9-29)	HBL2443	HBL2453	HBL2463	

Note: See page B-52 for accessories.



**Single Flush Receptacles** 

Description	Catalog Number	Catalog Number			
Black nylon face, back and side wired.	HBL2440	HBL2450	HBL2460		

Note: See page B-52 for accessories.

Flanged Receptacles

Description	Catalog Number		
Nylon casing, back wired.	HBL2446	HBL2456	HBL2466

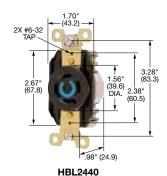
Note: See page B-52 for accessories.

See page B-69 for technical information. See page B-39 for switched enclosure.

See page B-42 for Add-A-Shroud® kit. For use with connector bodies.

Only receptacles and plugs up to 480V AC are HP rated.

HP ratings are AC only.





Dimensions in Inches (mm)





#### 20 Amp, 3ØY 120/208, 277/480 and 347/600 Volts AC 4 Pole, 5 Wire, Grounding





**NEMA L22-20F** 



4.40' <u>-</u> (111.8)

**HBL2511SW** 



Safety-Shroud <sup>®</sup>			IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number			
Black and white nylon body, white Valox® shroud. Can be used with the Insulgrip Connector Bodies		HBL2511S	-	-	

Note: See page B-40 for accessories.



HBL2511S

Insulgrip <sup>®</sup>		IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	HBL2511	HBL2521	HBL2531
All black nylon.	.350"-1.150" (9-29)	HBL2511BK	-	-
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL25CM11	-	-
Black and white for flat cable.	.350"-1.150" (9-29)	HBL2511FC	-	-

Note: See page B-52 for accessories.



HBL2511

#### Flanged Inlets

Watertight Safety-Shroud®	IP66 SUITABILITY	UL Type 4x, 12
Description	Catalog Number	
Gray Valox® housing and flange.	HBL2515SW -	-

Note: See page B-52 for accessories.

Insulgrip <sup>®</sup>	IP20 SUITABILITY		
Description	Catalog Number	r	
Nylon casing, back wired.	HBL2515	HBL2525	HBL2535

Note: See page B-52 for accessories.

See pages B-69 and B-70 for technical information on Twist-Lock and Watertight Safety-Shroud devices.

**HBL2515SW** 

#### Twist-Lock® 3-Phase Circuit Tester



Description	Rating	Catalog Number		
3-Phase Circuit Tester	3Ø 120/208V AC Min. Voltage: 90V AC	HBL3PT2511	-	-

Note: Testers in other NEMA configurations can be developed upon request. See page B-53 for additional circuit testers.



Dimensions in Inches (mm)



**HBLMITL** - For use with Watertight Safety-Shroud receptacles, see page B-41.







#### 20 Amp, 3ØY 120/208, 277/480 and 347/600 Volts AC

(9-29)

4 Pole, 5 Wire, Grounding







#### **Connector Bodies** Watertight Safety-Shroud®

Description

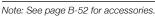
Black Valox® housing, white Valox® clamps.

	2 HP	5 HP			
	IP66 su	ITABILITY	UL Typ	e 4x, 12	
Cord Dia.	Catalog Number				
.350"-1.150"	HBL2513SW	-		-	



**HBL2513SW** 

Insulgrip <sup>®</sup>		IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	HBL2513	HBL2523	HBL2533
All black nylon.	.350"-1.150" (9-29)	HBL2513BK	-	-
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL25CM13	-	-
Black and white for flat cable.	.350"-1.150" (9-29)	HBL2513FC	-	-

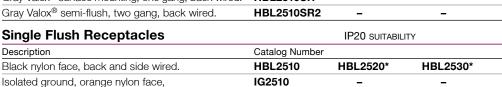




#### Receptacles

Watertight Safety-Shroud®	IP66 SUITABILITY	UL Type 4x, 12		
Description	Catalog Number			
Gray Valox® housing and flange, back wired.	HBL2510SW -	=		
Note: See page B-54 for accessories.				

Safety-Shroud <sup>®</sup> Twist-Lock <sup>®</sup>		IP20 SUITABILITY	
Description	Catalog Number		
Gray Valox® angle housing, one gang, back wired.	HBL2510AR	-	-
Gray Valox® surface mounting, one gang, back wired.	HBL2510SR	-	-
Gray Valox® semi-flush, two gang, back wired.	HBL2510SR2	-	-



Note: See page B-52 for accessories. \*Not Fed Spec.

back and side wired.

# 1.75" (44.5) **HBL2510SW**

HBL2510AR

#### Insulgrip® Flanged Receptacles

Description	Catalog Number				
Nylon casing, back wired.	HBL2516	HBL2526	HBL2536		

Note: See page B-52 for accessories.









Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Dimensions in Inches (mm)





# 30 Amp, 125, 250 Volts and 277 Volts AC 2 Pole, 3 Wire, Grounding



**HBL2611SW** 



**HBL2621S** 



HBL2621



HBL2611VY





Dimensions in Inches (mm)

# W JG



**HBL2621SW** 

**IP66** SUITABILITY



UL Type 4x, 12

NEMA L5-30P 2 HP

Catalog Number

**HBL2611SW** 

30A 250V NEMA L6-30P 2 HP

30A 277V AC IEMA L7-30P

white Valox® clamps.	(9-24)				
Safety-Shroud®		IP20 SUITABILIT	гү		
Description	Cord Dia.	Catalog Number			
Black and white nylon body, white Valox® shroud. Can be used with the Insularin Connector Radies	.360"930" (9-24)	HBL2611S	HBL2621S	-	

Cord Dia.

.325"-.930"

Note: See page B-40 for accessories.

Insulgrip <sup>®</sup>		IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.360"930" (9-24)	HBL2611	HBL2621	HBL2631
Heat stabilized, gray nylon, 220° F (104° C).	.360"930" (9-24)	HBL2611F	HBL2621F	-
Corrosion resistant, yellow nylon.	.360"930" (9-24)	HBL26CM11	HBL26CM21	-
All black nylon.	.360"930" (9-24)	HBL2611BK	HBL2621BK	-
Cord clamps with removable inserts. All black nylon.	.360"930" (9-24)	-	HBL2621EBK	-

Note: See page B-52 for accessories.

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<b>Valise</b> ®	IP20 SUITABILITY			
Description	Cord Dia.	Catalog Number		
Yellow nylon.	.590"930" (15.0-23.6)	HBL2611VY	HBL2621VY	-
Corrosion resistant, yellow nylon.	.590"930" (15.0-23.6)	HBL26CM11V	-	-
Black nylon.	.590"930" (15.0-23.6)	HBL2611VBK	HBL2621VBK	-

Note: See page B-53 for accessories.

#### Flanged Inlets

Watertight Safety-Shroud®	IP66 SUITABILITY UL Type 4x, 12
Description	Catalog Number
Gray Valox® housing and flange.	HBL2615SW HBL2625SW -
Reverse service, gray Valox® housing and flange (use with HBL2613SR), (Not shown).	HBL2615SWR

Note: See page B-54 for accessories.

, 9			
Insulgrip <sup>®</sup>	IP20 SUITABILITY		
Description	Catalog Number		
Nylon casing, back wired.	HBL2615	HBL2625	HBL2635
Heat stabilized, gray nylon, 220° F (104° C).	HBL2615F	HBL2625F	-
Nylon casing, weather protective, die cast aluminum, back wired, self closing lift cover.	HBL2615M3	-	-

Note: See page B-52 for accessories.

See pages B-69 and B-70 for technical information on Twist-Lock and Watertight Safety-Shroud devices. See page B-74 for technical information on Valise plugs and connectors.





30 Amp, 125, 250 Volts and 277 Volts AC 2 Pole, 3 Wire, Grounding

Cord Dia.

(9-24)

(9-24)

.360"-.930"

.360"-.930"







**Connector Bodies** Watertight Safety-Shroud®

Description

Black Valox® housing,

white Valox® clamps.

Reverse service, black Valox®

housing, white Valox® clamps (use

with HBL2615SWR), (Not shown).

30A 125V NEMA L5-30R 2 HP IP66 SUITABILITY UL Type 4x, 12 Catalog Number HBL2613SW HBL2623SW HBL2613SR



**HBL2613SW** 

	-	3.86" (98.0)	1
1.97" (50.0) DIA.			2.26" (57.4) DIA.
DIA.	N		

HBL2623







**HBL2610SW** 



HBL2620AR



Insulgrip <sup>®</sup>		IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.360"930" (9-24)	HBL2613	HBL2623	HBL2633
Heat stabilized, gray nylon, 220° F (104° C).	.360"930" (9-24)	HBL2613F	HBL2623F	-
Corrosion resistant, yellow nylon.	.360"930" (9-24)	HBL26CM13	HBL26CM23	-
All black nylon.	.360"930" (9-24)	HBL2613BK	HBL2623BK	-

Note: See page B-52 for accessories.

neter eee page B e2 for accessories					
Valise <sup>®</sup>			IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number			
Yellow nylon.	.590"930" (15.0-23.6)	HBL2613VY	HBL2623VY	-	
Corrosion resistant, yellow nylon.	.590"930" (15.0-23.6)	HBL26CM13V	-	-	
Black nylon.	.590"930" (15.0-23.6)	HBL2613VBK	HBL2623VBK	-	
Cord clamps with removable inserts. All black nylon.	.360"930" (9-24)	-	HBL2623EBK	-	
·					

Note: See page B-53 for accessories.

Recentacles

neceptacies	
Watertight Safety-Shroud®	IP66 SUITABILITY UL Type 4x, 12
Description	Catalog Number
Gray Valox® housing and flange, back wired.	HBL2610SW HBL2620SW -
Note: See page B-54 for accessories.	

Safety-Shroud® Twist-Lock®		IP20 SUITABILITY	
Description	Catalog Number		
Gray Valox® angle housing, one gang, back wired.	HBL2610AR	HBL2620AR	_
Gray Valox® surface mounting, one gang, back wired.	HBL2610SR	HBL2620SR	_
Gray Valox® semi-flush, two gang, back wired.	HBL2610SR2	HBL2620SR2	-

-, - , 5- 5, -			
Single Flush Receptacles		IP20 SUITABILIT	Υ
Description	Catalog Number		
Black nylon face, back and side wired.	HBL2610	HBL2620	HBL2630
Blue nylon face, back and side wired.	HBL2610M6	HBL2620M6	-
solated ground, orange nylon face, back and side wired.	IG2610	IG2620	-
Corrosion resistant, yellow nylon face, back and side wired.	HBL26CM10	HBL26CM20	-
Ring terminal connection.	HBL2610RT	HBL2620RT	-
Note: See page B-52 for accessories.			

Insulgrip® Flanged Receptacles

ilibulgrip Flarigeu neceptacies			
Description	Catalog Numbe	r	
Nylon casing, back wired.	HBL2616	HBL2626	HBL2636
Heat stabilized, gray nylon, 220° F (104° C).	HBL2616F	HBL2626F	-

Note: See page B-52 for accessories.





# 30 Amp, 125/250 and 3Ø 250 Volts AC 3 Pole, 3 Wire, Non-Grounding and 3 Pole, 4 Wire, Grounding

**Plugs** 







0A 125/250V A NEMA L10-30P

0A 125/250V A NEMA L14-30F 2 (2) HD

30A 3Ø 250V AC NEMA L15-30P 3 HP

2.94" (74.7) DIA.

HBL2711SW

Watertight Safety-Shroud®		<b>IP66</b> s	UITABILITY UL	UL Type 4x, 12	
Description	Cord Dia.	Catalog Number			
Black Valox® housing, white Valox® clamps.	.350"-1.150" (9-29)	-	HBL2711SW	HBL2721SW	
C-f-t OlI®			.Doo		

Safety-Shroud <sup>®</sup>		IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number		
Black and white nylon body, white Valox® shroud. Can be used with the Insulgrip Connector Bodies.	.350"-1.150" (9-29)	-	HBL2711S	HBL2721S

Note: See page B-40 for accessories.

4.21\* (106.9) 2.33\* (56.6) DIA.

**HBL2711S** 

Insulgrip <sup>®</sup>	IP20 SUITABILITY			Υ
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	-	HBL2711	HBL2721
Black and white nylon, (Not shown).	.300"950" (7.6-24.1)	HBL2661	-	-
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	-	HBL27CM11	HBL27CM21
All black nylon.	.350"-1.150" (9-29)	-	HBL2711BK	-

Note: See page B-52 for accessories.



HBL2711

#### **Flanged Inlets**

Watertight Safety-Shroud®	IP66	SUITABILITY (	JL Type 4x, 12
Description	Catalog Number	•	
Gray Valox® housing and flange.	-	HBL2715SV	W HBL2725SW
Reverse service, gray Valox® housing and flange (use with HBL2713SR), (Not shown).	-	HBL2715SV	VR –

Note: See page B-54 for accessories.



HBL2715SW

3X.19" (4.8) DIA 2.27"

3.06" (57.7)
DIA. (58.1)
R. 1.34" 120° TYP. (34.0)

R. 1.34" 120° TYF.
(34.0) HBL2715

Dimensions in Inches (mm)

Insulgrip <sup>®</sup>		IP20 SUITABILIT	Υ
Description	Catalog Number		
Nylon casing, back wired.	-	HBL2715	HBL2725
Nylon casing, back wired, (Not shown).	HBL2665	-	-
Nylon casing, weather protective, die cast aluminum, back wired, self closing lift cover.	-	HBL2715M3	-

Note: See page B-52 for accessories.

See pages B-69 and B-70 for technical information on Twist-Lock and Watertight Safety-Shroud devices.



HBLMITL - For use with Watertight Safety-Shroud receptacles and reverse service inlet, see page B-41.







30 Amp, 125/250 and 3Ø 250 Volts AC 3 Pole, 3 Wire, Non-Grounding and 3 Pole, 4 Wire, Grounding







Connector Bodies

EMA L10-30R NEMA L14-30 2 (2) HP 30A 3Ø 250V AC NEMA L15-30R 3 HP

Watertight Safety-Shroud®		IP66	SUITABILITY UL	Type 4x, 12
Description	Cord Dia.	Catalog Number		
Black Valox® housing, white Valox® clamps.	.350"-1.150" (9-29)	-	HBL2713SW	HBL2723SW
Reverse service, black Valox® housing, white Valox® clamps (use with HBL2715SWR), (Not shown).	.350"-1.150" (9-29)	-	HBL2713SR	_



Insulgrip <sup>®</sup>		IP20 SUITABILIT	Υ	
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	-	HBL2713	HBL2723
Black and white nylon, (Not shown).	.300"950" (7.6-24.1)	HBL2663	-	-
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	-	HBL27CM13	HBL27CM23
All black nylon.	.350"-1.150" (9-29)	-	HBL2713BK	-



Note: See page B-52 for accessories.

Receptacles

Watertight Safety-Shroud®	IP66	SUITABILITY	UL Type 4x, 12
Description	Catalog Number		
Gray Valox® housing and flange, back wired.	_	HBL2710S	W HBL2720SW
Note: See page R-54 for accessories			



Safety-Shroud® Twist-Lock®

Description

Catalog Number

Gray Valox® angle housing, one gang, back wired.

Gray Valox® surface mounting, one gang, back wired.

Gray Valox® semi-flush, two gang, back wired.

- HBL2710SR

HBL2720SR

HBL2720SR2

Single Flush Receptacles IP20 SUITABILITY Description Catalog Number HBL2710 HBL2720 Black nylon face, back and side wired. Black nylon face, back and side wired, (Not shown). **HBL2660** IG2710 IG2720 Isolated ground, orange nylon face, back and side wired. HBL2710RT Ring terminal connection. **HBL2720RT** Note: See page B-52 for accessories.



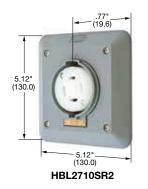
Insulgrip® Flanged Receptacles

Description	Catalog Number		
Nylon casing, back wired.	-	HBL2716	HBL2726

Note: See page B-52 for accessories.









Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Dimensions in Inches (mm)





#### 30 Amp, 3Ø 480 and 3Ø 600 Volts AC 3 Pole, 4 Wire, Grounding





10 HP



HBL2731SW



HBL2731S

**Plugs** 

Watertight Safety-Shroud <sup>®</sup>	IP66	IP66 SUITABILITY UL Type 4x, 12	
Description	Cord Dia.	Catalog Number	Π
Black Valox® housing, white Valox® clamps.	.350"-1.150" (9-29)	HBL2731SW HBL2741SW	
Safety-Shroud®	ID20 CUITARILITY		

Safety-Shroud <sup>®</sup>	IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number	
Black and white nylon body, white Valox® shroud. Can be used with the Insulgrip Connector Bodies.	.350"-1.150" (9-29)	HBL2731S	HBL2741S

Note: See page B-40 for accessories.

Insulgrip <sup>®</sup>	IP20 SUITABILITY		
Description	Cord Dia.	Catalog Number	
Black and white nylon.	.350"-1.150" (9-29)	HBL2731	HBL2741
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL27CM31	HBL27CM41

Note: See page B-52 for accessories.



HBL2731

#### **Flanged Inlets**

Watertight Safety-Shroud®	IP66 SUITABILITY UL Type 4x, 12	
Description	Catalog Number	
Gray Valox® housing and flange.	HBL2735SW HBL2745S	W

Note: See page B-54 for accessories. Insulgrip® IP20 SUITABILITY

Description	Catalog Number	
Nylon casing, back wired.	HBL2735	HBL2745

**HBLMITL** - For use with Watertight Safety-Shroud

Note: See page B-52 for accessories.

See pages B-69 and B-70 for technical information on Twist-Lock and Watertight Safety-Shroud devices.



3X .19" (4.8) DIA.	2.27"(57.7)
3.06" (77.7) DIA.	2.23" (56.6) DIA.
	120° TYP.
R. 1.34"—/ (34.0)	120 111.
(0)	HBL2735

Dimensions in Inches (mm)









#### 30 Amp, 3Ø 480 and 3Ø 600 Volts AC 3 Pole, 4 Wire, Grounding





NEMA I 16-30F

30A 3Ø 600V AC NEMA L17-30R

COLLINGUISI DOUISO	IV HP			
Watertight Safety-Shroud®	6 SUITABILITY UL Type 4x, 12			
Description	Cord Dia.	Catalog Number		
Black Valox® housing, white Valox® clamps.	.350"-1.150" (9-29)	HBL2733SW	HBL2743SW	
Insulgrip <sup>®</sup>	IP20 SUITABILITY			
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	HBL2733	HBL2743	
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL27CM33	HBL27CM43	



**HBL2733SW** 

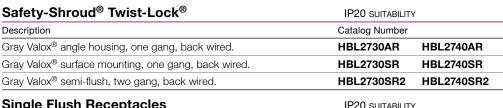
HBL2733

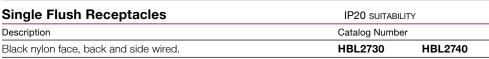
Note: See page B-52 for accessories.

Connector Bodies

#### Receptacles

Watertight Safety-Shroud®	IP66 SUITABILITY UL Type 4x, 12				
Description	Catalog Number				
Gray Valox® housing and flange, back wired.	HBL2730SW HBL2740SW				
Note: See page B-54 for accessories.					
Safety-Shroud <sup>®</sup> Twist-Lock <sup>®</sup>	IP20 SUITABILITY				
Description	Catalog Number				





Note: See page B-52 for accessories.

#### Insulgrip® Flanged Receptacles

Description	Catalog Number		
Nylon casing, back wired.	HBL2736	HBL2746	

Note: See page B-52 for accessories.

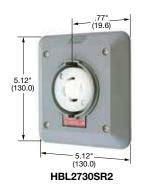














Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Dimensions in Inches (mm)





#### 30 Amp, 3ØY 120/208, 277/480 and 347/600 Volts AC 4 Pole, 5 Wire, Grounding

4.40"-







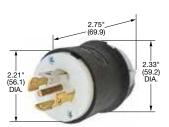


**NEMA L26-30F** 

**HBL2811SW** 



**HBL2811S** 



HBL2811





Dimensions in Inches (mm)

**Plugs** 

Watertight Safety-Shroud®			IP66 SUITABILITY	UL Type 4x,	12
Description	Cord Dia.	Catalog Number	er		
Black Valox <sup>®</sup> housing, white Valox <sup>®</sup> clamps.	.350"-1.150" (9-29)	HBL2811SW	HBL2801	HBL2821SW	HBL2831SW

Safety-Shroud® IP20 SUITABILITY					
Description	Cord Dia.	Catalog Number			
Black and white nylon body, white Valox® shroud. Can be used with the Insulgrip Connector Bodies.		HBL2811S	-	-	-

Note: See page B-40 for accessories.

Insulgrip® IP20 SUITABILITY					
Description	Cord Dia.	Catalog Number			
Black and white nylon.	.350"-1.150" (9-29)	HBL2811	-	HBL2821	HBL2831
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL28CM11	-	-	-
Black and white for flat cable.	.350"-1.150" (9-29)	HBL2811FC	-	-	-
All black nylon.	.350"-1.150" (9-29)	HBL2811BK	-	-	-

Note: See page B-52 for accessories.

#### **Flanged Inlets**

Watertight Safety-Shroud®	IP66 SUITABILITY	UL Type 4x, 12	
Description	Catalog Number		
Gray Valox® housing and flange.	HBL2815SW HBL2805	-	-
Note: See page B-54 for accessories.			

Insulgrip® IP20 SUITABILITY Description Catalog Number HBL2825 HBL2835 Nylon casing, back wired. HBL2815

Note: See page B-52 for accessories.

See pages B-69 and B-70 for technical information on Twist-Lock and Watertight Safety-Shroud devices.

#### Twist-Lock® 3-Phase Circuit Tester



Description	Rating	Catalog Number			
3-Phase Circuit Tester	3Ø 120/208V AC Min. Voltage: 90V AC	HBL3PT2811	-	-	-

Note: Testers in other NEMA configurations can be developed upon request. See page B-53 for additional circuit testers.

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



HBLMITL - For use with Watertight Safety-Shroud receptacles, see page B-41.









## 30 Amp, 3ØY 120/208, 277/480 and 347/600 Volts AC

4 Pole, 5 Wire, Grounding







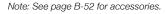


**NEMA L26-30R** 

## **Connector Bodies**

Watertight Safety-S	hroud <sup>®</sup>	IP66 SUITABILITY	UL Type 4x, 12	
Description	Cord Dia.	Catalog Number		
Black Valox® housing, white Valox® clamps.	.350"-1.150" (9-29)	HBL2813SW HBL2803	HBL2823SW	-

write valox clamps.	(9-29)				
Insulgrip® IP20 SUITAB				) SUITABILITY	
Description	Cord Dia.	Catalog Number			
Black and white nylon.	.350"-1.150" (9-29)	HBL2813	-	HBL2823	HBL2833
Corrosion resistant, yellow nylon.	.350"-1.150" (9-29)	HBL28CM13	-	-	-
Black and white for flat cable.	.350"-1.150" (9-29)	HBL2813FC	-	-	-
All black nylon.	.350"-1.150" (9-29)	HBL2813BK	-	-	-





**HBL2813SW** 



HBL2813

#### Receptacles

Watertight Safety-Shroud®		IP66 SUITABILITY	UL Type 4x, 12
Description	Catalog Number	er	
Gray Valox® housing and flange, back wired.	HBL2810SW	_	HBL2820SW HBL2830SW
Note: See page B-54 for accessories.			

Safety-Shroud® Twist-Lock®			IP20 SUITABILITY	
Description	Catalog Number			
Gray Valox® angle housing, one gang, back wired.	HBL2810AR	-	-	-
Gray Valox® surface mounting, one gang, back wired.	HBL2810SR	-	-	-
Gray Valox® semi-flush, two gang, back wired.	HBL2810SR2	-	-	-

Single Flush Receptacles		IP20	SUITABILITY	
Description	Catalog Numbe	er		
Black nylon face, back and side wired.	HBL2810	HBL2800	HBL2820	HBL2830
Isolated ground, orange nylon face, back and side wired.	IG2810	-	-	-
Ring terminal connection.	HBL2810RT	-	-	-

Note: See page B-52 for accessories.

## Insulgrip® Flanged Receptacles

	<u> </u>					
Description		Catalog Number				
Nylon casing, b	ack wired.	HBL2816	-	HBL2826	HBL2836	

Note: See page B-52 for accessories.



**HBL2810SW** 



HBL2810AR



**HBL2810SR** 

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



#### 30 Amp, 3ØY 120/208, 277/480 and 347/600 Volts AC 4 Pole, 4 Wire, Non-Grounding









		(69	9.9)	
1	3	V	M	2.26"
1.97" (50.0) DIA.				2.26" (57.4) DIA.
	1000	1		<u> </u>

HBL2751

Plugs		NEMA L18-30P 3 HP	NEMA L19-30P 10 HP	NEMA L20-30P
Description	Cord Dia.	Catalog Number		
Black and white nylon.	.350"-1.150" (9-29)	HBL2751	HBL2761	HBL2771
Note: See page B-53 for accessories.				

3X .19" (4.8) DIA.	2.27"	-
3.06" (77.7) DIA.	-91	2.23" (56.6) DIA.
		<u> </u>
R. 1.34"—	120° TYP.	
(34.0)	HBL2755	

Fla	ar	iged	Inlets

Description	Catalog Number			
Nylon casing, back wired.	HBL2755	HBL2765	HBL2775	
Note: See page B-52 for accessories.				







Con	necto	r Ro	odiba

Connector Bodies		3 HP	10 HP		
Description	Cord Dia.	Catalog Number			
Black and white nylon.	.350"-1.150"	HBL2753	HBL2763	HBL2773	

Note: See page B-52 for accessories.



## **Single Flush Receptacles**

Description	Catalog Number			
Black nylon face, back and side wired.	HBL2750	HBL2760	HBL2770	

Note: See page B-52 for accessories.

# 2X #6-32 TAP < 1.56" | (b) (39.6) | DIA. 2.38" (60.5) 1.05" (26.6) HBL2750

## Flanged Receptacles

Description	Catalog Number		
Nylon casing, back wired.	HBL2756	HBL2766	HBL2776

Note: See page B-52 for accessories.

See page B-69 for technical information on Twist-Lock devices.





## 30 Amp, 480 and 600 Volts AC 2 Pole, 3 Wire, Grounding

IP20







Plugs

Description	Cord Dia.	Catalog Numb	per	
Black and white nylon.	.325"930" (8.25-24)	HBL2601	HBL2641	HBL2651

Note: See page B-52 for accessories.



HBL2651

#### **Flanged Inlets**

Description	Catalog Number			
Nylon casing, back wired.	HBL2605	HBL2645	HBL2655	

Note: See page B-52 for accessories.









30A 600V AC NEMA L9-30R

**Connector Bodies** 

Commodian Dounce			3 FIF		
Description	Cord Dia.	Catalog Numb	per		Ī
Black and white nylon.	.325"930" (8 25-24)	HBL2603	HBL2643	HBL2653	

Note: See page B-52 for accessories.





Single Flush Recentacles

enigio i lacii i locopiacios			
Description	Catalog Numb	per	
Black nylon face, back and side wired.	HBL2600	HBL2640	HBL2650

Note: See page B-52 for accessories.

## **Flanged Receptacles**

Description	Catalog Number	
Nylon casing, back wired.	- HBL2646	HBL2656

Note: See page B-52 for accessories.

See page B-69 for technical information on Twist-Lock devices.





#### **Features and Benefits**

#### **Switched Safety Enclosures**

The Switched Twist-Lock® and Hubbellock® Enclosures integrate a receptacle and a switch to produce distinct advantages for the user. This enclosure replaces box, switch, cover and all in a compact design that meets Type 3R Rainproof or 12K Dust-tight requirements.

The receptacle is angled downward for a low profile, and it maintains a low profile while accommodating either a 20 or 30 Amp Twist-Lock receptacle or 30 Amp, 4 wire Hubbellock receptacle. The enclosure can be used in top, bottom or back feed applications. The handle is designed to be locked in the OFF position for lockout protection.

Hubbell has developed the Switched Safety Enclosure because users want to be able to disconnect higher voltage devices confidently. Hubbell responded with a line of Switched Safety Enclosures for Twist-Lock and Hubbellock receptacles.

The provision of the integral switch and the receptacle in a compact, non-metallic enclosure encourages the safe operating practice of disconnecting at the switch rather than the plug and receptacle.

For plants and factories in a wide variety of industries, as well as light industrial facilities, Hubbell's Switched Enclosures offer an upgrade that's convenient, compact and easy to install.





#### Housing Design

- Angled 20 or 30 amp Hubbell Twist-Lock receptacle provides low profile and helps control cable arc of bend
- Large receptacle gasketless door and hinge assembly
- Enclosure back is designed for top, bottom or back feed options



#### Internal Design

- Horsepower rated switch
- Heavy duty internal frame bonds conduit and all grounds and has a DIN rail to accommodate the switch



#### Safety

 Lockable handle provides lockout protection for greater safety and complies with OSHA lockout requirements



#### Wiring

 Premolded conduit entry hole is offset to prevent water condensation from falling directly on interior electrical components



#### Installation

 Moveable feet may be used in horizontal or vertical position or may be removed and premarked holes drilled for Type 1 or 3R installations

#### Switched Twist-Lock® and Hubbellock® Enclosures



UL Listed, CSA Certified Type 3R and 12K Enclosure Rating IP54 SUITABILITY

#### Switched Enclosure Ready for Twist-Lock® Receptacle Addition

Ideal unit for stockroom. This single unit provides the complete enclosure ready to accept any Hubbell 20 or 30A Twist-Lock receptacle.

Description	Ratings	Catalog Number
Switched Twist-Lock enclosure accommodates any NEMA 2 pole, 3 wire to 4 pole, 5 wire grounding receptacle (sold separately).	Amperage, voltage, and horsepower ratings will be determined by the choice of the NEMA 20 or 30A Twist-Lock receptacle selected.	SETL3
Auxiliary contact.	"Break After Main Break", 1 set of n/o contacts, 1 set of n/c contacts.	HBLAC1
Auxiliary contact.	"Break Before Main Break", 1 set of n/o contacts.	HBLAC2



Completely pre-wired with a Twist-Lock receptacle, these application oriented combinations are available to satisfy your needs.

Description	Amps	Voltage	NEMA Config.	Horsepower	Switched Enclosure	Use Twist-Lock Plug
Switched Twist-Lock enclosure with a pre-wired HBL2720 receptacle.	30	3Ø 240V AC	L15-30R	3	SE2720A	HBL2721
Switched Twist-Lock enclosure with a pre-wired HBL2730 receptacle.	30	3Ø 480V AC	L16-30R	10	SE2730A	HBL2731

#### Switched Enclosure Ready for Hubbellock® Receptacle Addition

Ideal unit for stockroom. This single unit provides the complete enclosure ready to accept your 30A, 4 wire Hubbellock receptacle choice.

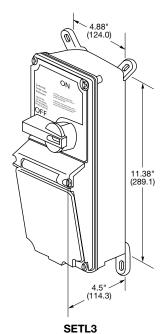
Description	Ratings	Catalog Number
Switched enclosure for use with 3 pole 4 wire 30A Hubbellock receptacle (sold separately).	Amperage, voltage, and horsepower ratings will be determined by the choice of the 4 wire Hubbellock receptacle selected.	SEHBL3
Auxiliary contact.	"Break After Main Break", 1 set of n/o contacts, 1 set of n/c contacts.	HBLAC1
Auxiliary contact.	"Break Before Main Break", 1 set of n/o contacts.	HBLAC2

**Replacement Mounting Feet** 

Description	Catalog Number
For 30A switches.	HBLRFT1 <sup>∆</sup>

Note: <sup>A</sup> Package of 10 feet and 10 screws.

See page B-72 for technical information on Switched Safety Enclosures.









HBLAC2



HBLRFT1

#### **Features and Benefits**

#### **Mechanical Interlock Switched Safety Enclosures**

Hubbell offers the only mechanical interlock for Twist-Lock®. This new, unfused mechanical interlock for Watertight Safety-Shroud® Twist-Lock® integrates a watertight receptacle with a linked disconnect switch to provide a mechanically interlocked receptacle. This virtually eliminates the possibility of making or breaking the circuit while under load or making a casual or "lazy" connection.

The switch cannot be turned ON until the plug is properly inserted and locked, and the plug cannot be removed until the switch is turned OFF. All these protective features are included in a compact Type 4X hose-directed water and corrosion resistant enclosure that allows for top, bottom or back feed options.

The non-metallic enclosure is nonconductive, yet has an internal frame to assure ground continuity with metallic conduit.

In addition, this interlock works with all Safety-Shroud Twist-Lock Plugs. The new unfused mechanical interlock for Watertight Safety-Shroud Twist-Lock can be locked out as a method of compliance with OSHA lockout/tagout regulations.





#### **Housing Design**

- Angled 20 or 30 amp Hubbell Watertight Safety-Shroud Twist-Lock receptacle provides watertight, low profile and mechanical interlock capabilities (ordered separately)
- Enclosure back is designed for top, bottom or back feed options



#### Internal Design

- Horsepower rated switch
- Heavy duty internal frame bonds conduit and all grounds and has a DIN rail to accommodate the switch



#### Safety

- Lockable handle provides lockout protection for greater safety and complies with OSHA lockout requirements
- Heavy duty interlock linkage prevents make and break under load



#### Wiring

 Premolded conduit entry hole is offset to prevent water condensation from falling directly on interior electrical components, while speeding installation by making it easier to pull conductors



#### Installation

 Moveable feet may be used in horizontal or vertical position or may be removed and premarked holes drilled for Type 1 or 3R installations

#### **Mechanical Interlock Switched Safety Enclosures**



UL Listed, CSA Certified TYPE 4, 4X and TYPE 12K Enclosure Rating

IP66

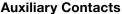
#### Mechanical Interlock Ready for Twist-Lock® Receptacle Addition

This unit is a complete enclosure ready to accept any 20 or 30A Watertight Safety-Shroud Twist-Lock Receptacle.

Description	Ratings	Catalog Number
Mechanical Interlock	Amperage and voltage ratings will be determined	HBLMITL
accommodates 20A or 30A	by the choice of the Watertight Safety-Shroud	
Watertight Safety-Shroud	Twist-Lock selected. Supplied with 3/4" NPT Hub.	
Twist-Lock receptacles.		

## Accepts the following Watertight Safety-Shroud® Twist-Lock® Receptacles: 20 Amp

Rating	Voltage AC	NEMA Config.	Max. HP Rating*	Receptacle Catalog Number	Use Watertight Safety-Shroud Twist-Lock Plug
2 Pole, 3 Wire	120	L5-20	1	HBL2310SW	HBL2311SW
	208-240	L6-20	2.5	HBL2320SW	HBL2321SW
	277	L7-20	3	HBL2330SW	HBL2331SW
3 Pole, 4 Wire	120/240	L14-20	2.5	HBL2410SW	HBL2411SW
	240 3Ø	L15-20	5 (3@208V)	HBL2420SW	HBL2421SW
	480 3Ø	L16-20	10	HBL2430SW	HBL2431SW
4 Pole, 5 Wire	120/208 3ØY	L21-20	3	HBL2510SW	HBL2511SW
30 Amp					
2 Pole, 3 Wire	120	L5-30	1	HBL2610SW	HBL2611SW
	208-240	L6-30	3	HBL2620SW	HBL2621SW
3 Pole, 4 Wire	120/240	L14-30	3	HBL2710SW	HBL2711SW
	240 3Ø	L15-30	7.5	HBL2720SW	HBL2721SW
	480 3Ø	L16-30	15	HBL2730SW	HBL2731SW
	600 3Ø	L17-30	15	HBL2740SW	HBL2741SW
4 Pole, 5 Wire	120/208 3ØY	L21-30	7.5	HBL2810SW	HBL2811SW
	277/480	L22-30	7.5	HBL2820SW	HBL2821SW
	347/600	L23-30	7.5	HBL2830SW	HBL2831SW
30 Amp Reve	erse Service				
2 Pole, 3 Wire	120	L5-30	1	HBL2615SWR	HBL2613SR
3 Pole, 4 Wire	120/240	L14-30	3	HBL2715SWR	HBL2713SR
3 Pole, 4 Wire	240 3Ø	L15-30	7.5	HBL2725SWR	HBL2723SR



ruxillar y Comtacto		
Description	Ratings	Catalog Number
Auxiliary contact.	"Break After Main Break", 1 set of n/o contacts, 1 set of n/c contacts.	HBLAC1
Auxiliary contact.	"Break Before Main Break", 1 set of n/o contacts.	HBLAC2

#### **Replacement Parts**

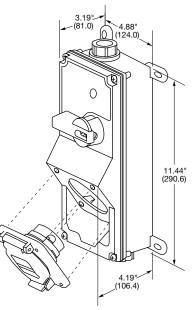
Description	Catalog Number
Ground block.	HBL30RGB
Neutral block.	HBL30RNB
Replacement switch.	HBLDS3RS

#### **Replacement Mounting Feet**

Description	Catalog Number
For 30A switches.	HBLRFT1 <sup>△</sup>

Note: \*HP ratings for the final unit are determined by the HP rating of the switch, limited by the full load current capability of the receptacle at 80% of rated current, number of phases and line voltage. HP ratings listed above are AC only. ^Package of 10 feet and 10 screws.

See page B-73 for technical information on Mechanical Interlock Enclosures.



**HBLMITL** 



**HBL2620SW** 



HBLAC2





HBL30RNB



**HBLRFT1** 

#### ADD-A-SHROUD® and Adapters



#### Safety-Shroud® Twist-Lock® – 20 and 30 Amp

The Add-A-Shroud<sup>®</sup> devices allow conversion of existing 20A and 30A 3 to 5 wire Hubbell Insulgrip<sup>®</sup> Twist-Lock devices to a Safety-Shroud Twist-Lock plug. These devices provide a convenient and cost-effective way to convert existing Hubbell Insulgrip Twist-Lock plugs to Safety-Shroud Twist-Lock plugs. The Safety-Shroud Twist-Lock plug permits engagement with the Hubbell Mechanical Interlock Enclosure which virtually prevents make and break under load.

#### Add-A-Shroud® Catalog Number HBLSS3

For conversion of all 3 wire Hubbell Insulgrip Twist-Lock Devices.



Rating	Voltage AC	NEMA Config. Reference Number	Plug Catalog Number	Add-A-Shroud Catalog Number
20A, 2 Pole 3 Wire Grounding	125V	L5-20	HBL2311	HBLSS3
	250V	L6-20	HBL2321	HBLSS3
	277V AC	L7-20	HBL2331	HBLSS3
	480V AC	L8-20	HBL2341	HBLSS3
	600V AC	L9-20	HBL2351	HBLSS3
30A, 2 Pole 3 Wire Grounding	125V	L5-30	HBL2611	HBLSS3
	250V	L6-30	HBL2621	HBLSS3
	277V AC	L7-30	HBL2631	HBLSS3
	480V AC	L8-30	HBL2641	HBLSS3
	600V AC	L9-30	HBL2651	HBLSS3

#### Add For

#### Add-A-Shroud® Catalog Number HBLSS45

For conversion of all 4 and 5 wire Hubbell Insulgrip Twist-Lock Devices.



Rating	Voltage AC	NEMA Config. Reference Number	Plug Catalog Number	Add-A-Shroud Catalog Number
20A, 3 Pole 4 Wire Grounding	125/250V AC	L14-20	HBL2411	HBLSS45
	3Ø250V AC	L15-20	HBL2421	HBLSS45
	3Ø480V AC	L16-20	HBL2431	HBLSS45
30A, 3 Pole 4 Wire Grounding	125/250V AC	L14-30	HBL2711	HBLSS45
	3Ø250V AC	L15-30	HBL2721	HBLSS45
	3Ø480V AC	L16-30	HBL2731	HBLSS45
	3Ø600V AC	L17-30	HBL2741	HBLSS45
20A, 4 Pole 5 Wire Grounding	3ØY 120/208V AC	L21-20	HBL2511	HBLSS45
	3ØY 277/480V AC	L22-20	HBL2521	HBLSS45
	3ØY 347/600V AC	L23-20	HBL2531	HBLSS45
30A, 4 Pole 5 Wire Grounding	3ØY 120/208V AC	L21-30	HBL2811	HBLSS45
	3ØY 277/480V AC	L22-30	HBL2821	HBLSS45
	3ØY 347/600V AC	L23-30	HBL2831	HBLSS45



WTSS234

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**WTSS234SS** 



WTSS310



**WTSS310SS** 

## Watertight Safety Shroud - Deluxe Cord Grip and Metallic Liquidtight Conduit Fitting Adapters

Adapter for Use with ¾" NPT Fittings		
Description	Cord Dia.	Catalog Number
3 Wire, Anodized Aluminum	.250"750"	WTSS234
3 Wire, Stainless Steel	.250"750"	WTSS234SS
4 and 5 Wire, Anodized Aluminum	.250"750"	WTSS334
4 and 5 Wire, Stainless Steel	.250"750"	WTSS334SS

#### Adapter for Use with 1" NPT Fittings

Description	Cord Dia.	Catalog Number
4 and 5 Wire, Anodized Aluminum	.375" - 1.00"	WTSS310
4 and 5 Wire, Stainless Steel	.375" - 1.00"	WTSS310SS

#### Non-NEMA 10 Amp, 250 Volts, 15 Amp 125 Volts 3 Pole, 3 Wire, Non-Grounding and 2 Pole, 3 Wire, Grounding

For Replacement Use Only

**Plugs** 

**IP20** 





1.53

**HBL7567C** 

Description Cord Dia. Catalog Number Black and white nylon. 230"-.720" **HBL7567C** Multiple drive screws. (5.8-18.3)230"-.720" HBL7567CY Yellow and white nylon. (5.8-18.3)Multiple drive screws.

Note: See page B-51 for accessories.

Flanged Inlets

Description	Catalog Number	
Stainless steel casing.	HBL7556	HBL7556G



HBL7556

For Replacement Use Only







Grounded Not UL listed

**HBL7565C** 

**Connector Bodies** 

Description	Cord Dia.	Catalog Number	
Insulgrip connector, black and white nylon. Multiple drive screws.	230"720" (5.8-18.3)	HBL7565C	-
Insulgrip connector, yellow and white nylon. Multiple drive screws.	230"720" (5.8-18.3)	HBL7565CY	-
Black phenolic.	.296"625" (7.5-15.9)	HBL7555	HBL7555G

Note: See page B-51 for accessories.

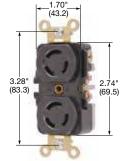


(43.2)

## Receptacles

Description	Catalog Number	
Duplex, black RTP*, back and side wired.	HBL7580	HBL7580G
Single, black phenolic, back and side wired.	HBL7582	HBL7582G

Note: See page B-50 for accessories.



**HBL7580** 

#### **Flanged Receptacles**

Description	Catalog Number	
Stainless steel casing.	HBL7557	HBL7557G

Note: \*RTP is an abbreviation for reinforced thermoplastic.

The devices shown on this page are not listed by Underwriters Laboratories Inc. and are for replacement use only in existing installations.



HBL7557

CAUTION: To avoid electrical shock, review premises carefully and do not use if slot or blade configuration (design) is already in a circuit having a rating differing from the rating of this device.

# Non-NEMA 20 Amp, 250, 125/250 Volts and 3ØY 120/208 Volts AC 2 Pole, 3 Wire, Grounding and 3 Pole, 3 Wire, Non-Grounding



HBL9965C



For I	Repl	acement	Use	Only
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**IP20** 

2P 3W

20A 125/250V Non-NEMA

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i lugo		140t GE Elsted	140t OE Eisted
Description	Cord Dia.	Catalog Number	
Black and white nylon.	.360"930" (9-24)	HBL9965GCB	HBL9965C
Corrosion resistant, yellow nylon.	.360"930" (9-24)	-	HBL99CM65C

Note: See page B-52 for accessories.

#### **Flanged Inlets**

Description	Catalog Number	
Nylon casing, back wired.	-	HBL3325C

Note: See page B-52 for accessories.



HBL7411C

**HBL7408C** 









#### **Pluas**

- 10.90			
Description	Cord Dia.	Catalog Number	
Black and white nylon.	.350"-1.150" (9-29)	HBL7411GCB	HBL7411C

Note: See page B-52 for accessories.

## Flanged Inlets

Description	Catalog Number	
Nylon casing, back wired.	-	HBL7408C

Note: See page B-52 for accessories.

The devices shown on this page are not listed by Underwriters Laboratories Inc. and are for replacement use only in existing installations.

Dimensions in Inches (mm)

CAUTION: To avoid electrical shock, review premises carefully and do not use if slot or blade configuration (design) is already in a circuit having a rating differing from the rating of this device.

3.06

R. 1.34

# Non-NEMA 20 Amp, 250, 125/250 Volts and 3ØY 120/208 Volts AC 2 Pole, 3 Wire, Grounding and 3 Pole, 3 Wire, Non-Grounding

For Replacement Use Only







**Connector Bodies** 

Description	Cord Dia.	Catalog Number	
Black and white nylon.	.360"930" (9-24)	HBL7314GCB	HBL7314C
Corrosion resistant, yellow nylon.	.360"930" (9-24)	-	HBL73CM14C

Note: See page B-52 for accessories.

#### **Single Flush Receptacles**

Description	Catalog Number	
Black nylon face, back wired.	HBL7310BG	HBL7310B

Note: See page B-52 for accessories.

#### Flanged Receptacles

Catalog Number
- HBL3326C

Note: See page B-52 for accessories.

For Replacement Use Only







#### **Connector Bodies**

Description	Cord Dia.	Catalog Number	
Black and white nylon.	.350"-1.150" (9-29)	HBL7413GCB	HBL7413C

Note: See page B-52 for accessories.

#### Single Flush Receptacles

Description	Catalog Number	
Black thermoset, back wired.	HBL7410BG	HBL7410B
Mounted on a 4" (101.6) round metal cover.	-	HBL7417B

Note: See page B-52 for accessories.

#### **Flanged Receptacles**

Description	Catalog Number
Nylon casing, back wired.	- HBL7409C

Note: See page B-52 for accessories.

The devices shown on this page are not listed by Underwriters Laboratories Inc. and are for replacement use only in existing installations.



**HBL7314C** 

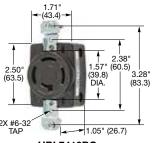


HBL7310B





HBL7413GCB



**HBL7410BG** 



Dimensions in Inches (mm)

CAUTION: To avoid electrical shock, review premises carefully and do not use if slot or blade configuration (design) is already in a circuit having a rating differing from the rating of this device.



#### Non-NEMA 20 Amp, 250 Volts, 10 Amp, 600 Volts AC 4 Pole, 5 Wire, Grounding



**HBL3521C** 

For Replacement Use Only

**IP20** 



Catalog Number

**HBL3524C** 

Plugs	
Description	

Description	Cord Dia.	Catalog Number
Black and white nylon.	.350"-1.150" (9-29)	HBL3521C

Note: See page B-52 for accessories.

Flanged Inlets	
Description	
Insularin pulop easing back wired	

Note: See page B-52 for accessories.

3X .19"(4.8) DIA. 3.06" (77.7) DIA. R. 1.34' (34.0) **HBL3524C** 



**HBL3523C** 





Dimensions in Inches (mm)

#### **Connector Bodies**

Description	Cord Dia.	Catalog Number
Black and white nylon.	.350"-1.150" (9-29)	HBL3523C

Note: See page B-52 for accessories.

Single Flush Receptacles

Description	Catalog Number
Black thermoset, back wired.	HBL3520

Note: See page B-52 for accessories.

Flanged Receptacles

Description	Catalog Number
Insulgrip nylon casing, back wired.	HBL3525C

Note: See page B-52 for accessories.

CAUTION: To avoid electrical shock, review premises carefully and do not use if slot or blade configuration (design) is already in a circuit having a rating differing from the rating of this device.

#### Non-NEMA 30 Amp, 250, 125/250 Volts and 3ØY 120/208 Volts AC 2 Pole, 3 Wire, Grounding and

3 Pole, 3 Wire, Non-Grounding

For Replacement Use Only



Insulgrip® Plugs

Description	Cord Dia.	Catalog Number
Black and white nylon.	.360"930" (9-24)	HBL3331GC HBL3331C

Note: See page B-52 for accessories.



**HBL3331GC** 

## Insulgrip® Flanged Inlets

Description	Catalog Number	
Nylon casing, back wired.	- HBL3334C	

Note: See page B-52 for accessories.



For Replacement Use Only







Insularip® Pluas

Description	Cord Dia.	Catalog Number	
Black and white nylon.	.350"-1.150" (9-29)	HBL3431GCB HBL3431C	

Note: See page B-52 for accessories.

The devices shown on this page are not listed by Underwriters Laboratories Inc. and are for replacement use only in existing installations.



**HBL3431C** 

Non-NEMA 30 Amp, 250, 125/250 Volts and 3ØY 120/208 Volts AC 2 Pole, 3 Wire, Grounding and 3 Pole, 3 Wire, Non-Grounding



HBL3333GC







**HBL3433C** 



For Replacement Use Only







Insulgrip® Connector Bodies

Description	Cord Dia.	Catalog Number	
Black and white nylon.	.360"930" (9-24)	HBL3333GC	HBL3333C

Note: See page B-52 for accessories.

#### Single Flush Receptacles

Description	Catalog Number	
Black thermoset, back wired.	HBL3330G	HBL3330

Note: See page B-52 for accessories.

## Insulgrip® Flanged Receptacles

Description	Catalog Number	
Nylon casing, back wired.	-	HBL3335C

Note: See page B-52 for accessories.

For Replacement Use Only







Insulgrip® Connector Bodies

Description	Cord Dia.	Catalog Number	
Black and white nylon.	.350"-1.150" (9-29)	HBL3433GCB	HBL3433C

Note: See page B-52 for accessories.

#### Single Flush Receptacles

Description	Catalog Number	
Black thermoset, back wired.	HBL3430G	HBL3430

Note: See page B-52 for accessories.

## Insulgrip® Flanged Receptacles

Description	Catalog Number
Nylon casing, back wired.	HBL3435CM2 -

Note: See page B-52 for accessories.

The devices shown on this page are not listed by Underwriters Laboratories Inc. and are for replacement use only in existing installations.

CAUTION: To avoid electrical shock, review premises carefully and do not use if slot or blade configuration (design) is already in a circuit having a rating differing from the rating of this device.



#### Non-NEMA 30 Amp, 250 Volts DC Max. and 600 Volts AC Max. 50 - 400Hz Non-NEMA 20 Amp, 3ØY 120/208 Volts AC 400Hz

#### Variload® Twist-Lock® Devices

In many large plants and laboratories the number of circuits of different ratings and frequency is greater than the number of blade configurations available in conventional wiring devices.

Prior to NEMA configuration standardization the solution was "Variload® Twist-Lock®" devices with four non-interchangeable center pin and slot configurations that can be assigned within the same premises to circuits of same voltage, frequency and supply (AC or DC), in accordance with NEC® 406.4(F) and 406.8 and with CE Code, Part I, Rule 26-700(3).

Flanged Inlets



HBL45315



HBL45335



## Receptacles HBL45105 HBL45205 HBL45305

#### 20A 3ØY, 120/208V AC Only, 400Hz

Plugs

HBL45115

HBL45215

HBL45315

30A, 250V DC Max. and 600V AC Max. 50 - 400Hz

<u> </u>	HBL45915 <sup>†</sup>	HBL45985CL <sup>†</sup>	HBL45935 <sup>†</sup>	HBL45905 <sup>†</sup>	
Center Pin Configuration	Plugs	Flanged Inlets	Connector Bodies	Receptacles	

Note: †ULL isted only.

Center Pin Configuration



#### **Receptacle Wallplates**

Description	Single Receptacle with Face Dia. 1.74" (44.2) Catalog Number
Stainless steel 302/304, .035 in. (0.9), horizontal brushed finish.	SS725



Connector Bodies

HBL45135

HBL45235

HBL45335

**SS725** 

#### Weatherproof Boots

Description	Catalog Number
Seal-Tite® black elastomer for Variload® plugs.	HBL6027**
Seal-Tite® black elastomer for Variload® connector bodies.	HBL6028**

Note: \*When installed and used properly with plug and connector body combinations.

\*\* Weatherproof boots not UL Listed, nor CSA Certified.



HBL6027



**HBL6028** 

CAUTION: To avoid electrical shock, review premises carefully and do not use if slot or blade configuration (design) is already in a circuit having a rating differing from the rating of this device.



#### **Accessories for 15 Amp** 2 and 3 Wire Devices







SS8 SS7



**HBL5206WO** 



HBL5221



**HBL7423WO** 



#### Wallplates, 1-Gang

Description	Color	Duplex Receptacles	Single Receptacles with Face Dia. 1.40" (35.6)
Nylon, smooth.	Brown Ivory	NP8 NP8I	NP7 NP7I
Stainless steel 302/304, .035 in. (0.9), horizontal brushed finish.		SS8	SS7
Stainless steel 430, .035 in. (0.9), horizontal brushed finish.		SS8L	SS7L
Brass .04 in. (1.0), horizontal brushed finish.		SB8	SB7
Aluminum .05 in. (1.3), horizontal brushed finish.		SA8	SA7

## **IP44**

#### **Weatherproof Covers**

Description	Duplex Receptacles	Single Receptacles with Face Dia. 1.40" (35.6)
Cast aluminum, for standard horizontal box mount.	HBL5205WO	-
Same as above except FS/FD box mount.	HBL5206WO	-
Cast aluminum vertical FS/FD box mount.	-	HBL7420
Gray thermoplastic, vertical standard box mount, corrosion resistant.	HBL5222	-
Same as above except yellow.	HBL52CM22	-
Gray thermoplastic, vertical FS/FD box mount, corrosion resistant.	HBL5221	HBL7423WO
Yellow thermoplastic, vertical FS/FD box mount, corrosion resistant.	HBL52CM21	HBL74CM23WO
White thermoplastic, vertical FS/FD box mount, corrosion resistant.	HBL52CM21W	-

## **IP44**

#### **Weatherproof Covers for** 15A Nylon Flanged Receptacles and Inlets

Description	Duplex Receptacles	Single Receptacles with Face Dia. 1.40" (35.6)
Gray thermoplastic, corrosion resistant.	-	WP1

Note: All weatherproof covers listed above are UL Listed for wet and damp locations with cover closed. Those with suffix WO are UL Listed with cover open. See page N-23 for additional information on covers.

## Accessories for 15 Amp 2 and 3 Wire Devices

Tinted lid is aesthetically pleasing in any location.
 High-impact, polycarbonate while-in-use cover will not rust or corrode; cover is NEMA 3R rated



#### **Pool Kit Contains:**

- Heavy duty, industrial grade locking receptacle NEMA L5-20, 20A 125V
- Single-pole switch (20A, 120-277V AC)
- Two gang, 2 inch deep die-cast aluminum weatherproof box with (4) ¾ inch threaded outlets
- Two gang, weatherproof while-in-use cover
- Includes mounting hardware, gasket, wire connector and (3) closure plugs
- Complete assembly instructions



**Closure Cover** 

Pool pump receptacle kit.

Description









**HBL6023** 

HBL6024

# for 15A Insulgrip® Devices Description Catalog Number Black elastomer boot for plugs when used in a cord set and connector bodies when used with a flange inlet. Same as above except yellow elastomer. HBL60CM23 Black elastomer boot for connector bodies when used in cord sets. HBL6024

Note: \*When installed and used properly with plug and connector body combinations.

Weatherproof, Seal-Tite®, Triple Seal Boots

**HBL7529A** 

Description	Catalog Number
For use with 3 wire 15A Twist-Lock flush or flanged receptacles.	HBL7529A

Description	Catalog Number
Lockout device for 15A and 20A straight blade plugs.	HLDMP
Lockout device for attachable 20 and 30A plugs, straight body or angle types, with or without weatherproof covers.	HLD

Note: See section Z for additional information on PLUGOUT Lockout devices.

-	_ 3.14" (79.8)	-	
AND PERSON		100 E	4.22" (107.2)
	HLDMP		

Dimensions in Inches (mm)

HBL60CM24

Same as above except yellow elastomer.

PLUGOUT® Lockout Devices



## Accessories for 20 and 30 Amp 3, 4 and 5 Wire Devices





NP720BK

SS720



HBL7425WOA





Description	Color	Single Receptacles with Face Dia. 1.60" (40.6)
Nylon, smooth.	Black	NP720BK
Stainless steel 302/304, .035 in. (0.9), horizontal brushed finish.		SS720
Brass .04 in. (1.0), horizontal brushed finish.		SB720

	IP44
Weatherproof Covers	SUITABILITY

Description	Single Receptacles with Face Dia. 1.60" (40.6)
Cast aluminum, for FS/FD box mounting.	HBL7420
Gray thermoplastic, for FS/FD box mounting, corrosion resistant.	HBL7425WOA
Same as above except yellow.	HBL74CM25WOA

## Weatherproof Covers for Flanged Inlets and Flanged Receptacles

ΙP	44	ŀ
SUITA	ABILIT	Υ

Description	Single Receptacles with Face Dia. 1.60" (40.6)
Gray thermoplastic, corrosion resistant.	WP2

Note: Weatherproof covers are UL Listed for wet and damp location with cover closed. Those with suffix WOA are UL Listed with cover open. See page N-23 for additional information on covers.

#### **Closure Cover for 3 Wire Flanged Inlets**

Description	Catalog Number
Rubber closure plug.	HBL2899

Note: Closure cover not UL Listed, CSA Certified.



#### Twist-Lock® Circuit Testers

		20	Amp		30 Amp
Description	Rating	Configuration	Catalog Number	Configuration	Catalog Number
3-Phase Circuit Tester	3Ø 120/208V AC Min. Volt.: 90V AC	NEMA L21-20P	HBL3PT2511	NEMA L21-30P	HBL3PT2811
Circuit Tester	125V	NEMA L5-20P	HBLT2311	NEMA L5-30P	HBLT2611 HBLT26CM11 (Marine)
	250V	NEMA L6-20P	HBLT2321	NEMA L6-30P	HBLT2621
	277V	NEMA L7-20P	HBLT2331		
	125/250V	NEMA L14-20P	HBLT2411	NEMA L14-30P	HBLT2711
	347V	NEMA L24-20P	HBLT3721		

HBLT26CM11

**HBL3PT2511** 

Note: Testers in other NEMA configurations can be developed upon request.



## Accessories for 20 and 30 Amp 3, 4 and 5 Wire Devices

#### Insulgrip® Plug and Connector Body Latching Kit

The Hubbell latching kit provides both improved safety and security through a double locking feature that makes unintentional disconnection virtually impossible – even under high vibration situations. The plug and connector body lock once when first connected, then again when you push the special position locking slide into place.

Insulgrip® Latching Kit

Description	For 3 Wire Devices	For 4 & 5 Wire Devices
For all 20A and 30A Twist-Lock Insulgrip plugs and connectors.	SK2	SK3



Weatherproof, Seal-Tite®, Triple Seal Boots			
Description	For 3 Wire Devices	For 4 & 5 Wire Devices	
Yellow Seal-Tite <sup>®</sup> elastomer triple seal cover for use with Valise plugs when used in cord set and Valise connector bodies when used with flanged inlet.	HBL60CM31V	-	
Yellow Seal-Tite <sup>®</sup> elastomer triple seal cover for use with Valise connector bodies.	HBL60CM32V	-	

Note: \*When installed and used properly with plug and connector body combinations.

Insulgrip®
Weatherproof Seal Tite® Triple Seal Boots

weatherproof, Seal-lite®, Triple Seal Boots				
	For 3 Wire	For 4 & 5 Wire		
Description	Devices	Devices		
Black elastomer boot for plugs when used in a cord set and connector bodies when used in flanged inlets.	HBL6031	HBL6035		
Same as above except yellow.	HBL60CM31	HBL60CM35		
Black elastomer boot for connector bodies when used in a cord set.	HBL6032	HBL6036		
Same as above except yellow.	HBL60CM32	HBL60CM36		

#### **Angle Adapter**

Description	For 3 Wire Devices	For 4 & 5 Wire Devices
Nylon, angle adapter for Insulgrip plugs and connector bodies,	<b>HBL3WAA</b>	HBL45WAA
cord grip range .325"930" (8.3-24).		

#### PLUGOUT® Lockout Devices

Loudo: Loukout Dovicco		
Description	For 3 Wire Devices	For 4 & 5 Wire Devices
Lockout device for attachable 20 and 30A locking plugs, straight body or angle types, with or without weatherproof covers.	HLD	HLD
Lockout device for 20 and 30A 3 wire angle plugs and watertight Safety-Shroud® Twist-Lock® plugs.	HLD2	HLD2

Note: See section Z for additional information on PLUGOUT Lockout devices.

For quick visual identification of circuits or configurations.

#### Colored Cord Clamps\*

Description	Color	For 3 Wire Devices	For 4 & 5 Wire Devices
For use with 20A and 30A Insulgrip® Twist-Lock®	Black	HBLTL2CCBK	HBLTL3CCBK
Plugs and Connectors. Cord diameter: 3 wire	Blue	HBLTL2CCBL	HBLTL3CCBL
.350"930" (9-24), 4 & 5 wire .350" - 1.150" (9-29)	Brown	HBLTL2CCBR	HBLTL3CCBR
	Dark Blue	HBLTL2CCDB	HBLTL3CCDB
	Green	HBLTL2CCGR	HBLTL3CCGR
	Orange	HBLTL2CCOR	HBLTL3CCOR
	Red	HBLTL2CCRD	HBLTL3CCRD
	Teal	HBLTL2CCTL	HBLTL3CCTL
	White	HBLTL2CCWH	HBLTL3CCWH
	Yellow	HBLTL2CCYL	HBLTL3CCYL

Note: \*Clamp only. Contains no screws. Order in increments of 10. Not UL Listed or CSA Certified.





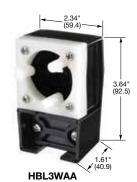




HBL60CM31V



HBL6032



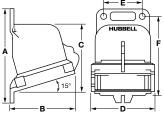


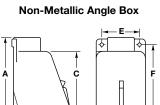
HLD



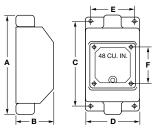
<sup>\*</sup>When installed and used properly with plug and connector body combinations.

## Safety-Shroud® Twist-Lock® Accessories

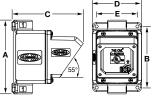




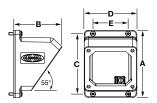
Metallic Angle Box



**Metallic Feed Thru Box** 



AB203055



AA203055



HBL2030AP



**AA2030PS** 

Dimensions in Inches (mm)

#### 15° Angle Non-Metallic Back Box

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock Receptacles and Inlets.	1"	5.67" (144.0)	4.44" (112.8)	4.05" (102.9)		2.35" (59.7)	4.92" (125.0)	30.00"	BB2030N

Note: Hub is not included; order Raco part number 1704. This box meets IP67 requirement and Type 4X requirements when installed with a watertight conduit hub.

#### 15° Angle Metallic Back Boxes

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock	3/4"	5.13" (130.2)	4.00" (101.6)	4.19" (106.4)	3.75" (95.3)	3.00" (76.2)	4.00" (101.6)	30.00"	BB201W
Receptacles and Inlets.	1"	5.13" (130.2)	4.00" (101.6)	4.19" (106.4)	3.75" (95.3)	3.00" (76.2)	4.00" (101.6)	30.00"	BB301W

#### **Metallic Feed Thru Back Boxes**

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock	3/4"	8.25" (209.6)	3.06" (77.8)	7.14" (181.4)	4.50" (114.3)	3.75" (95.3)	3.13" (79.5)	48.00"	FT202W
Receptacles and Inlets.	1"	8.25" (209.6)	3.06" (77.8)	7.14" (181.4)	4.50" (114.3)	3.75" (95.3)	3.13" (79.5)	48.00"	FT302W

Note: These boxes are cast aluminum and are finished with enamel paint. These boxes withstand a 500-hour salt spray test as well as UL raintight and external icing tests. NPT (metric designator).

#### 55° Angle Metallic Adapter and Back Box

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock Receptacles and Inlets.	1"	6.80" (172.4)	5.63" (142.9)	6.60" (167.0)	4.50" (114.3)	3.74" (95.0)	-	45.27"	AB203055

#### 55° Angle Metallic Adapter with Grounding Lug

Description	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock Receptacles and Inlets.	4.89" (172.4)	3.33" (167.0)		3.75" (114.3)	2.50" (95.0)	-	25.00"	AA203055

#### **Straight Watertight Wall Box Adapter**

Description	Catalog Number
Adapts 20A and 30A Watertight Safety-Shroud Twist-Lock receptacles and inlets to 2-gang, device mount, FD boxes.	HBL2030AP

#### Non-Watertight Angle Wall Box Adapter

Description	Catalog Number
Adapts 20A and 30A Watertight Safety-Shroud Twist-Lock receptacles to 1- or 2-gang standard wall boxes (4" or 411/6" square).	AA2030PS

#### **Features and Benefits**

#### 50 Amp Plugs and Connector Bodies

Hubbell's 50 amp Twist-Lock® devices feature a heavy duty design built for heavy duty applications. These Hubbell 50 amp Twist-Lock plugs and connector bodies are built to go where you need power, even in some of the harshest environments.

On the outside, 50 amp plugs and connectors are made of super tough nylon for better impact resistance. On the plug, the stainless steel shroud not only provides protection and durability, but safety as well. That's because the rigid construction restricts distortion, thus minimizing the possibility of mating incorrect devices.

On the inside are the kinds of features that separate Hubbell from all the rest. The cord grip has been designed with offset gripping jaws to securely hold the conductors – not just the cord jacket. Hubbell's box terminals speed wiring and provide a superior termination. The plug's thermoplastic polyester interior provides excellent heat resistance without compromising strength.

In all, it's the combination of function and performance that Hubbell demands of all its products. That is why we will never add a feature that compromises performance.

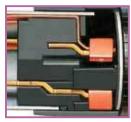


CS6360C



#### **Housing Design**

- Housing assembly latch slotted to fit standard flat-blade screwdriver providing secure assembly and fast disassembly for wiring
- Super tough nylon housing offers better impact qualities



#### Internal Design

- Thermoplastic polyester interior provides heat resistance and impact strength
- 6/6 nylon nose thermoplastic polyester terminal cover provides heat resistance in terminal area and impact strength of nose piece



#### Safety

- Stainless steel shroud restricts mismating with the wrong device
- Padlock capable shroud allows compliance to OSHA lockout tagout regulation 29 CFR 1910.147



#### Terminals

 Box terminal with hex socket threaded slug is superior because it permits high clamping pressure on conductors without damaging strands



#### Installation

 Three-piece thermoplastic cord clamp assembly with stainless steel fast lead screws provides a more consistent, durable grip. Sealed cable entry keeps out moisture and dust



#### Contacts

 One-piece grounding contact on 4-wire devices provides a more reliable grounding system for a safer device



#### 50 Amp, 125, 250 Volts and 480 Volts AC











**Plugs** 

	1 1490					
-	Description	Cord Dia.	Catalog Number			
	Nylon housing, thermoplastic polyester interior.	.830"-1.250" (21.08-31.75)	CS6361C	CS8265C	CS8465C	

Note: See page B-60 for accessories.



#### **Flanged Inlets**

Description	Catalog Number			
Zinc plated steel casing, thermoset interior.	CS6377 <sup>†</sup>	CS8275	CS8475 <sup>†</sup>	



## <u>IP20</u>







#### **Connector Bodies**

Description	Cord Dia.	Catalog Number			
Nylon housing, thermoplastic polyester interior.	.830"-1.250" (21.08-31.75)	CS6360C	CS8264C	CS8464C	

Note: See page B-60 for accessories.

#### 2.13" (4.8) (68.3) (68.3) (2.69" (68.3) (83.3) (83.3) (83.3) (83.3) (83.3)

#### **Receptacles**

Description	Catalog Number		
Black phenolic.	CS6370	CS8269	CS8469 <sup>†</sup>

Note: See page B-60 for accessories. 
†Not CSA Certified.



#### 50 Amp, 125/250, 3Ø 250 Volts and 3Ø 480 Volts AC











#### **Plugs**

Description	Cord Dia.	Catalog Numbe	er	
Nylon cover, thermoplastic	.830"-1.250"	CS6365C	CS8365C	CS8165C
polyester interior.	(21.08-31.75)			

Note: See page B-60 for accessories.

Flanged Inlets

Description	Catalog Number	•	
Zinc plated steel casing, thermoset interior.	CS6375	CS8375	CS8175
Zinc plated steel casing, thermoset interior with lift cover.	CS6375M2	-	-
Gray Valox® housing and flange.	HBL6375S*	_	_

Note: \*Type 3R, (Not shown).











4X .19" (4.8) DIA. 2.19" (55.6) DIA. R. 1.50 (38.0)

CS6375M2

#### **Connector Bodies**

Connector Bodies		0D03A	UL/C5A	0D/03A
Description	Cord Dia.	Catalog Number		
Nylon cover, thermoplastic polyester interior.	.830"-1.250" (21.08-31.75)	CS6364C	CS8364C	CS8164C
Insulgrip® Connector with conduit adapter. Capable of accepting metallic or non-metallic conduit fittings.	½" NPT Size ¾" NPT Size 1" NPT Size	- - -	CS8364CA05 CS8364CA34 CS8364CA10	- - -

Note: See page B-60 for accessories.

#### Receptacles

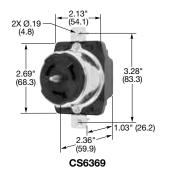
11000 110100				
Description	Catalog Number			
Black phenolic.	CS6369	CS8369	CS8169	

Note: See page B-60 for accessories.









Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



#### 50 Amp, 250 Volts DC and 600 Volts AC



#### IP20 SUITABILITY



#### **Plugs**

Description	Cord Dia.	
Nylon housing, thermoplastic polyester interior.	.830"-1.250" (21.08-31.75)	HBL3763C

Note: See page B-60 for accessories.



#### **Flanged Inlets**

Description	
Zinc plated steel casing, thermoset interior.	HBL3777
Zinc plated steel casing, thermoset interior with lift cover.	HBL3767



#### **Connector Bodies**

(×1) -
50A 250V DC

GOTHIOGIOL BOULOG		30A 000¥ AC
Description	Cord Dia.	
Nylon housing, thermoplastic polyester interior.	.830"-1.250" (21.08-31.75)	HBL3762C

**IP20** 

Note: See page B-60 for accessories.

## Receptacles

Description	
Black phenolic.	HBL3771

Note: See page B-60 for accessories.







#### 50 Amp, 250 Volts DC and 600 Volts AC







**Plugs** 

Description	Cord Dia.	Catalog Number	
Nylon cover, thermoplastic	.830"-1.250"	HBL3765C	HBL7765C
polyester interior.	(21.08-31.75)		

Note: See page B-60 for accessories.



#### Flanged Inlets

Description	Catalog Number	
Zinc plated steel casing, thermoset interior.	HBL3775	HBL7958
Zinc plated steel casing, thermoset interior with lift cover.	HBL3768	HBL7968







**Connector Bodies** 

Description	Cord Dia.	Catalog Number		
Nylon cover, thermoplastic	.830"-1.250"	HBL3764C HBL7	764C	
polyester interior	(21.08-31.75)			

Note: See page B-60 for accessories.

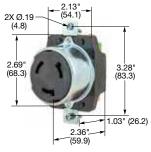


#### **Receptacles**

Description	Catalog Number	
Black phenolic.	HBL3769	HBL7379

Note: See page B-60 for accessories.





HBL3769

Dimensions in Inches (mm)

Important Note: Catalog numbers HBL7765C, HBL7958, HBL7968, HBL7764C, HBL7379 are for replacement use only. See other singly rated 50A Twist-Lock® devices in this section. HBL3700 series Twist-Lock devices do not interchange with any other devices in this section.



#### 50 Amp Twist-Lock® Accessories





HBL7770

Ö





HBL50SC





**HBL7716C** 



**HBL7717C** 

Weatherproof Receptacle I	Lift Cover Plates	for FS/FD Box Mounting

Description	Catalog Number
Corrosion resistant, gray thermoplastic.	HBL7774WO
Same as above except yellow.	HBL77CM74WO
Cast aluminum.	HBL7770

Note: See section N for additional information on weatherproof plates.

Receptacle Plates for FS/FD Box Mounting

Description	Catalog Number
Cast aluminum with lift cover.	HBL7382•*
Same as above less lift cover.	HBL7383•
Stainless steel, single gang, wallplate.	SS750 <sup>4</sup>

Receptacle 1/2" Raised Cover

Description	Catalog Number
Galvanized Steel fits 4" square or 2-gang box.	HBL50SC <sup>▲</sup>

Conduit Adapters for 50A Twist-Lock® Plugs and Connectors

Description	NPT Thread Size	Catalog Number
Thermoplastic housing, conduit adapters	1/2"	CS50CA05
for use with CS style 50A Twist-Lock® devices.	3/4"	CS50CA34
Available in ½", ¾" and 1" NPT thread sizes.	1"	CS50CA10

## IP55\*\*

**Weatherproof Boots** 

Description	Catalog Number
Seal-Tite® triple seal black elastomeric cover for plugs when used in a cord set and connector bodies when used with flanged inlets.	HBL7716C <sup>†</sup>
Seal-Tite triple seal black elastomeric cover for connector bodies when used with cord sets.	HBL7717C <sup>†</sup>

**Inlet Closure Plug** 

Description	Catalog Number
Black closure plug.	HBL4892 <sup>†</sup>

**Replacement Parts** 

Description	Catalog Number
Cord clamp Kit.	HBLCSCK

Note: •Will only fit non-"CS" type 50A Twist-Lock receptacles.

- \*Not UL Listed "WDL Closed".
- \*\*When installed and used properly with plug and connector body combinations.
- ▲IP20 SUITABILITY.
- †Not UL Listed.





**HBLCSCK** HBL4892

#### **Features and Benefits**

#### **Hubbellock® Plugs and Connector Bodies**

The Hubbellock devices feature an exclusive design unlike any other in the industry. The unique design is built to provide the safest heavy duty device even in some of the harshest environments. These Hubbellock plugs and connector bodies are built with a super tough nylon housing for high impact resistance and a one of kind interior design for superior safety that Hubbell is known for.

The male contacts are molded into the nose for damage resistance and completely eliminate the chance of deformity. Additionally, the plug as well as the connector retains power mechanical cord grips that not only secure the cable but also clamp down on the conductors in order to provide unrivaled strain relief.

Inside the connector is Hubbell's unique safety design. With unparalleled box terminations the connector interior holds a spring-loaded safety shutter to provide the ultimate arc protection. Furthermore the exceptional heat and impact resistance is maintained by the thermoplastic interior contributing to a longer lasting device.

In all, the one of a kind function of the Hubbellock devices provide a safe and dependable performance in the most demanding applications.





Note: The cut-away views below are construction elements pertaining specifically to the 30A Hubbellock series. While the Hubbellock contact interface design applies to all, there are construction elements that are different, depending on the amperage.



#### Housing Design

- Insulated non-metallic housing enhances safety and abuse resistance
- Impact resistance in the interior of the female device comes from a strong thermoplastic material



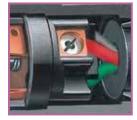
#### Internal Design

- No "lazy" connections because a springloaded safety shutter automatically ejects the plug if it hasn't been properly locked into the female device. This eliminates teasing of the contacts, a major cause of contact burn-up
- Arcs are snuffed out, when devices are mated or unmated under load, by springloaded safety shutter



#### Safety

 Enhanced safety because access to live female contacts is restricted by the spring-loaded safety shutter



#### Terminals

 Superior wire terminations are assured with box terminals and screws with pressure pads. This design captures stray wire strands and permits more clamping pressure on the wire without damaging it. Loosening of terminations and resulting heat build-up are greatly reduced



#### installation

 Three-piece thermoplastic clamp assembly with fast-lead stainless screws provides a more consistent durable grip. Grommets provide a sealed cable entry that protects against the entry of moisture and dust



#### Contacts

- Positive locking is ensured by the nose of the plug being keyed into a detent in female device. This lock is independent of the contacts or a separate mechanical lock
- Longer contact life is assured by supplementary springs. Other devices rely just on contacts themselves to provide proper contact pressure



#### 20 Amp, 125 Volts





Plug	20A 125V	
Description	Cord Dia.	Catalog Number
Nylon housing, thermoset interior.	.320"660" (8.12-16.5)	HBL23035B

3.56" (90.4)

**Connector Body** 



Description	Cord Dia.	Catalog Number
Nylon housing, thermoset interior.	.320"660" (8.12-16.5)	HBL23032B

HBL23032B



Receptacle



Description	Catalog Number
Black phenolic, back wired.	HBL23030

Note: Devices listed above are not interchangeable with any other Hubbellock device listed in this catalog.



**HBL7423WO** 

#### **Accessories**

Weatherproof Covers	
Description	Catalog Number
Gray polycarbonate for FS/FD box mounting, corrosion resistant. IP44 suitability.	HBL7423WO
Same as above except yellow.	HBL74CM23WO
Cast aluminum, lift cover for indoor use only.	HBL23007
Stainless steel 302/304, single receptacle wallplate.	SS7
Stainless steel 430, single receptacle wallplate.	SS7L



HBL23007

## 20 Amp, 125 Volts AC or DC, 10 Amp, 250 Volts DC, 480 Volts AC

Plug	IP30 SUITABILITY	20A 125V
Description	Cord Dia.	Catalog Number
Nylon housing, thermoset interior.	.320"660" (8.12-16.5)	HBL23005GB



HBL23005GB

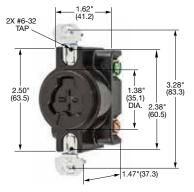
Connector Body

Description	Cord Dia.	Catalog Number
Nylon housing, thermoset interior.	.320"660" (8.12-16.5)	HBL23002GB



HBL23002GB

Receptacle	20A 125V
Description	Catalog Number
Black phenolic, back wired.	HBL23000G



HBL23000G

#### **Accessories**

Weatherproof Covers	
Description	Catalog Number
Gray polycarbonate for FS/FD box mounting, corrosion resistant. IP44 suitability.	HBL7423WO
Same as above except yellow.	HBL74CM23WO
Cast aluminum, lift cover for indoor use only.	HBL23007
Stainless steel 302/304, single receptacle wallplate.	SS7
Stainless steel 430, single receptacle wallplate.	SS7L



**HBL7423WO** 



HBL23007



#### 30 Amp, 600 and 480 Volts AC, 20 Amp, 250 Volts DC



HBL21415B



HBL20445B

	IP30 SUITABILITY	GR Y	GR Y	GR I
Plugs		30A 600V AC 20A 250V DC	30A 480V AC	30A 600V AC 20A 250V DC
Description	Cord Dia.	Catalog Number		
Black nylon housing, thermoplastic interior.	.700"-1.200" (17.78-30.5)	HBL21415B	-	-
Same as above except corrosion resistant.	.700"-1.200" (17.78-30.5)	HBL21CM415B	-	-
Red nylon housing, thermoset interior.	.700"-1.200" (17.78-30.5)	-	HBL20445B <sup>†</sup>	-
Black nylon housing, thermoset interior, steel shroud.	.700"-1.200" (17.78-30.5)	-	-	HBL25415B

Note: See page B-68 for accessories.

†Not CSA Certified.



## **Flanged Inlets**

Description	Catalog Number		
Weathertight, corrosion resistant, nickel plated brass plate, for FS/FD box mounting.	HBL22CM428	-	-
Black phenolic interior, aluminum housing, for FS/FD box mounting (not shown).	HBL20418	-	-
Aluminum angle housing, with ¾" NPT hub for surface mounting.	HBL21447	-	-





**SEHBL3** - Switched enclosure for use with 3 pole 4 wire 30A Hubbellock receptacle. Receptacle not included. See page B-37 for additional information.



#### 30 Amp, 600 and 480 Volts AC, 20 Amp, 250 Volts DC











#### **Connector Bodies**

Description	Cord Dia.	Catalog Number	
Black nylon housing, thermoplastic interior.	.700"-1.200" (17.78-30.5)	HBL21414B –	-
Same as above except corrosion resistant.	.700"-1.200" (17.78-30.5)	HBL21CM414B -	-
Red nylon housing, thermoset interior.	.700"-1.200" (17.78-30.5)	- HBL20444B	-
Black nylon housing, thermoplastic interior.	.700"-1.200" (17.78-30.5)		HBL25414B

Note: See page B-68 for accessories.

## 2.44" (62.0) DIA.

#### **Receptacles**

Description	Catalog Number		
Black phenolic.	HBL20403		
Weathertight, corrosion resistant, nickel plated brass plate, for FS/FD box mounting. IP44 SUITABILITY.	HBL22CM427	-	-
Aluminum angle housing, with ¾" NPT hub for surface mounting. IP44 SUITABILITY.	HBL21420		
Black phenolic, red center insert.	-	HBL20443	-
Black phenolic interior, aluminum housing, blue finish, for FS/FD box mounting.	-	-	HBL25403
Black phenolic interior, aluminum weatherproof housing, blue finish for FS/FD box mounting. IP44 surtability.	-	-	HBL25250

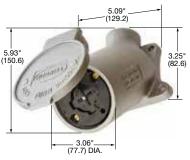
Note: See page B-68 for accessories.



## **Receptacle Accessories**

Description	Catalog Number
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7428WOG*
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL7428WOY*
Thermoplastic, wet and damp locations with cover "open", red.	HBL7428WOR*
Cast aluminum, wet locations only when cover "closed" and damp locations, lift cover plate.	HBL20405
Cast aluminum, wet locations only when cover "closed" and damp locations, red finish.	HBL20446
302/304 stainless, single gang, smooth. NOT weatherproof.	SS737

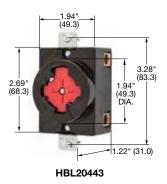
Note: \*Features two #6-32 threaded inserts to back mount device to cover.



HBL21420









#### 60 Amp, 600 Volts AC



HBL26419



HBL26519





IP30 SUITABILITY

Plugs		60A 600V	60A 600V AC
Description	Cord Dia.	Catalog Number	
Black phenolic interior with yellow thermoplastic sleeve over steel housing.	.920"-1.450" (23.36-36.83)	HBL26419	-
Black phenolic interior with blue thermoplastic sleeve and steel housing.	1.00"-1.50" (25.40-38.10)	-	HBL26519

## IP30

#### **Flanged Inlets**

Description	Catalog Number
Black phenolic interior with steel housing and flange.	HBL26422 -
Black phenolic interior with steel housing and flange with blue finish.	- HBL26522



#### 60 Amp, 600 Volts AC

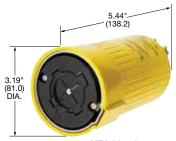






Connector Bodies

Description	Cord Dia.	Catalog Number	
Black phenolic interior with yellow thermoplastic sleeve over steel cover.	.920"-1.450" (23.36-36.83)	HBL26418	-
Black phenolic interior with blue thermoplastic sleeve over steel cover.	1.00"-1.50" (25.40-38.10)	-	HBL26516

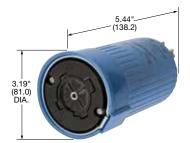


HBL26418

#### IP44 SUITABILITY

#### **Receptacles**

Description	Catalog Number	
Black phenolic interior with short aluminum housing and lift cover.	HBL26410	-
Black phenolic interior with long aluminum housing and lift cover.	HBL26420	-
Black phenolic interior with long aluminum housing with lift cover and blue finish.	-	HBL26520

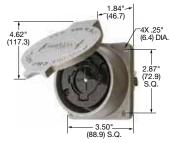


HBL26516

#### IP30 SUITABILITY

#### **Flanged Receptacles**

Description	Catalog Number
Black phenolic interior with steel housing and flange.	HBL26421 –
Black phenolic interior with steel housing and flange with blue finish.	- HBL26521



HBL26410

## Receptacle Box and Adapter Plates (Box requires one adapter)

Description	Catalog Number
Box, cast aluminum, only for 60A Hubbellock receptacles.	HBL26401
Straight adapter plate.	HBL26402
45° adapter plate.	HBL26404

4.96" (126.0) 4X.25" (109.7) 4X.25" (6.4) DIA 7(72.9) S.Q.

HBL26420

Note: Straight or angle adapter plate must be used when mounting a 60A receptacle to HBL26401 box. Cannot be used with round flanged receptacles and inlets.

See page B-68 for additional information.









#### Hubbellock® Accessories



HBL20405



**SEHBL3** 





HBL20424B



HBL20425B



Dimensions in Inches (mm)

#### 30 Amp Hubbellock® Accessories

Receptacle Plates for FS/FD Box Mounting	
Description	Catalog Number
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7428WOG*
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL7428WOY*
Thermoplastic, wet and damp locations with cover "open", red.	HBL7428WOR*
Cast aluminum, wet location only when cover "closed" and damp locations, lift cover plate.	HBL20405
Cast aluminum, wet location only when cover "closed" and damp locations, red finish.	HBL20446
302/304 stainless, single gang, smooth. NOT weatherproof.	SS737

Note: \*Features two #6-32 threaded inserts to back mount device to cover.

#### **Switched Enclosure**

<b>IP54</b>
SUITABILITY

Description	Catalog Number
Switched enclosure for use with 30A 3 pole 4 wire Hubbellock receptacle. Receptacle not included.	SEHBL3

Note: For more information on switched enclosures see page B-37.

#### **Liquidtight Metallic Conduit Adapters**

Description	Catalog Number
Adapter for use with ½" NPT conduit fittings.	SAB12
Adapter for use with ¾" NPT conduit fittings.	SAB34

#### **Boots**

Description	Catalog Number
"Mini" boot for 4 wire Hubbellock connector body.	HBL20424B <sup>†</sup>
"Mini" boot for 4 wire Hubbellock plug.	HBL20425B <sup>†</sup>

Note: †Not UL Listed or CSA Certified.

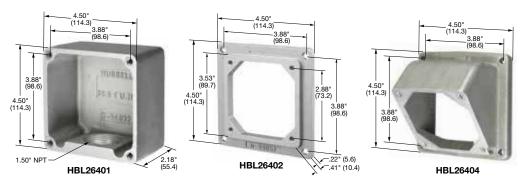
#### 60 Amp Hubbellock® Accessories

Receptacle Box and Adapter Plates (Box requires one adapter)	
Description	Catalog Number
Box, cast aluminum, only for 60A Hubbellock receptacles.	HBL26401
Straight adapter plate.	HBL26402
45° adapter plate.	HBL26404

Note: Straight or angle adapter plate must be used when mounting a 60A receptacle to HBL26401 box. Cannot be used with round flanged receptacles and inlets.

#### Kellems® Cable Grip

Description	Cord Diameter	Catalog Number
Cable grip.	.830"-1.000" (21.1-25.4)	H660A
Cable grip (not shown).	1.000"-1.140" (25.4-28.9)	H661A
Cable grip (not shown).	1.125"-1.328 (28.6-33.7)	H662A



#### **Technical Information**

15-30 Amp Twist-Lock and Safety-Shroud® Devices

#### **Specifications**

Listed to UL Standard 498 (Attachment Plugs and Receptacles).

Fed. Spec. W-C-596 (Insulgrip® and Safety-Shroud®).
Certified to CSA Standard C22.2 No.42 (General Use Receptacles, Attachment Plugs and Similar Wiring Devices).

Plugs and Connector Bodies (Insulgrip®)	15-30A
Blade/Contact Carrier	Natural (white) nylon
Terminal Retainer	Clear polycarbonate
Cover (Housing)	Black nylon (yellow in "CM" devices)
Cord Clamp	Natural (white) nylon
Dust Shield	EPDM
Blades/Contacts	Brass
Terminal Clamp	Cold rolled steel – nickel plated
Terminal Screws	15A (8-32), 20-30A (10-32) Brass (white finish on neutral screw when used)
Grounding Screw	Brass (green finish)
Cord Clamp Screws	Steel, zinc plated
Body Holding Screws	Steel, zinc plated

15-30A
Natural (white) nylon
Natural (white) nylon
Clear polycarbonate
Brass
Steel, zinc plated
Cold rolled steel, nickel plated
15A (8-32), 20-30A (10-32) Brass (white finish on neutral screw when used)
Brass (green finish)
Nickel plated brass round head screws 15A: 6-32, %" long 20A and 30A: 8-32, 7/16" long

Receptacle, Single	15A	20A and 30A
Cover (Top)	Nylon (Black)	Nylon (Black)
Base	RTP (Black)	RTP (Natural)
Contact Springs	.031" Brass	.040" Brass
Clamp	.031" Brass	.040" Brass
Ground Contact	.031" Brass	.040" Brass
Ground Shunt	_	.015" Brass
Bridge (Mounting Strap)	.050" Steel, zinc plated	_
End Plates (Mounting)	_	.050" Brass
Back Plate	_	.040" Brass
Terminal Screws	Brass (8-32)	Brass (10-32) (white finish on neutral screw when used)
Grounding Screw	Brass (Green)	Bronze (Green)
Flat Head Mounting Screws	Steel, zinc plated	Steel, zinc plated
Auto Ground Clip	Stainless steel	Stainless steel (Used only on IG receptacle)

Safety-Shroud <sup>®</sup> Receptacles Angle, Surface Semi-Flush	20-30A
Housing and Mounting Flange	Gray Valox <sup>®</sup>
Mounting Plate (Angle Housing Only)	Galvanized steel
Body Contact Carrier	Natural (white) nylon
Terminal Retainer	Clear polycarbonate
Body Holding Screws	Steel, zinc plated
Contact Springs	Brass
Spring Binding Plate	Brass
Terminal Clamp	Steel, nickel plated .080" curved, scalloped
Terminal Screws	10-32 Brass (white finish on neutral screw when used)
Grounding Screw	Brass (green finish)
Mounting Plate Screws	Steel, zinc plated
Wallplate Mounting Screws	Steel, zinc plated

Safety-Shroud <sup>®</sup> Twist-Lock <sup>®</sup> Plug	20-30A	
Insulgrip Plug with Safe	ty-Shroud installed	
Safety-shroud	White Valox®	
Cord Clamp	White nylon	

Performance (Twist-Lock® and Safety Shroud Devices)			
Electrical			
Dielectric Voltage	Withstands 2,000V minimum.		
Max. Working Voltage	600 Volts RMS.		
Current Interrupting	Certified for current interrupting at full rated current.		
Temperature Rise Fed. Spec.	Max 30°C temperature rise at full rated current after 250 cycles of overload at 200% of rated current at a power factor of 75% (WC 596).		

Mechanical (Twist-Lo	ck <sup>®</sup> and Safety Shroud Devices)
Cord Accommodation (Plugs and connectors only)	Round portable service cords of diameters commensurate with the device rating as defined in UL Standard 62, CSA C22.2 No. 49.
Cord Grip Accommodation (Insulgrip)	15A: .230"720" (5.8-18.3); 20A and 30A 3W: .360"930" (9-24); 20A and 30A 4W-5W: .350"-1.150" (9-29).
Terminal Identification	Terminals identified in accordance with UL 498 (X, Y, Z, White, Green).
Terminal Accommodation	20A and 30A, #16-#8 AWG. 15A, #18-#10 AWG. Solid or stranded copper wire only.
Product Identification	Ratings are a permanent part of the device housing.

Environmental (Twist-	Lock® and Safety Shroud Devices)
Flammability (Enclosure)	HB or better per UL94/CSA 22.2 No. 0.17.
Plugs, Connectors, Flanged Receptacles and Flanged Inlets Receptacles (Box Mount)	V2 or better.
Operating Temperatures	Maximum Continuous 75°C. Minimum -40°C (w/o impact).

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

#### Technical Information

20 and 30 Amp Watertight Safety-Shroud® Twist-Lock® Devices

#### **Specifications**

Listings	nas	i	ti	G.	ī	ı	

Listed to UL Standard 498 (Attachment Plugs and Receptacles).

Certified to CSA Standard No.42 (General Use Receptacles, Attachment Plugs and Similar Wiring Devices).

Fed. Spec. WC-596.

OL Listed, OSA Certilled to Type 4, 4A and Type 12.	
Part	Materials
Watertight Safety-Shroud® Plug (Insulgrip®)	20 and 30A
Blade Holder	Natural (white) nylon
Terminal Retainer	Clear polycarbonate
Cover (Housing)	Black Valox®
Cord Clamp	White Valox®
Blades	Brass
Terminal Clamp	Steel, nickel plated .080" curved scalloped
Terminal Screws	10-32 brass (white finish on neutral screw when used) multiple drive head
Grounding Screw	Brass (green finish) combination head
Cord Clamp Screws	Stainless steel 302/304, combination head
Body Holding Screws	Stainless steel 302/304, combination head
Closure Cap and Strap	Neoprene EPDM Blend
Watertight Safety-Shroud® Connector (Insulgrip	®) 20 and 30A
Body Contact Carrier	Natural (white) nylon
Terminal Retainer	Clear polycarbonate
Contact Spring	Brass
Spring Binding Plate	Brass
Cover (Housing)	Black Valox®

Cord Clamp White Valox® Terminal Clamp Terminal Screws Steel, nickel plated .080" curved scalloped

10-32 brass (white finish on neutral screws when used) multiple drive head

Brass (green finish) combination head Grounding Screw Cord Grip Screws Stainless steel 302/304, combination head Body Holding Screws Stainless steel 302/304, combination head Closure Cap and Strap Polypropylene with Neoprene gasket

#### Watertight Safety-Shroud Receptacle, Single\* 20 and 30A

Housing and Flange Body Contact Carrier Gray Valox Natural (white) nylon Terminal Retainer Clear polycarbonate Drive Screws Steel, zinc plated Contact Spring Brass Spring Binding Plate Brass

Terminal Clamp Steel, nickel plated .080" curved, scalloped

Flange Gasket Closed-cell neoprene foam Lid Ğasket Closed-cell neoprene foam Cover Hinge Pin Cover Spring Stainless steel 302/304 Stainless steel 302/304

Terminal Screws 10-32 brass (white finish on neutral screw when used) multiple drive head Grounding Screw Mounting Screws Brass (green finish) combination head

Stainless steel 302/304 combination head

#### Watertight Safety-Shroud® Flanged Inlet 20 and 30A

Grav Valox Housing and Flange Natural (white) nylon Clear polycarbonate Blade Holder Terminal Retainer Blades Brass Drive Screws Steel, zinc plated

Terminal Clamp Steel, nickel plated .080" curved scalloped

Terminal Screws 10-32 brass (white finish on neutral screw when used) multiple drive head Grounding Screw

Brass (green finish) combination head

Neoprene EPDM blend

Stainless steel 302/304 combination head

#### Mounting Screws <u>Performance</u>

Closure Cap

Lieuticai	
Dielectric Voltage	Withstands 2,000V minimum.
May Working Voltage	600 Valte RMS

Current Interrupting Temperature Rise

Certified for current interrupting at full rated current.

Max 30°C temperature rise at full rated current after 250 cycles of overload at

200% of rated current at a power factor of 75% (WC 596)

#### Mechanical Cord Accommodation (Plugs and connectors only)

Cord Grip Accommodation

Round portable service cords of diameters commensurate with the device rating as defined in UL Standard 62, CSA C22.2 No. 49. 20 and 30A, 3W: .32"-.93" (8.1-24.0mm) #16-3 Type SJ-#8-3 Type S, SO; 20 and 30A, 4W: .35"-1.15" (9.0-29.2mm) #16-4 Type SJ-#8-4 Type S, SO; 20 and 30A, 5W: .35"-1.15" (9.0-29.2mm) #16-5 Type S, SO - #8-5 Type S, SO. Terminals identified in accordance with UL 498 (X, Y, Z, White, Green).

Terminal Identification

#16- #8 AWG solid or stranded copper wire only.

Ratings are a permanent part of the device blade holder, and are also labeled on device color coded by voltage, visible in use. Catalog No. I.D. is on device visible in use.

#### Environmental

Product Identification

Terminal Accommodation

Moisture Resistance Type 4, 4X, 12, IP66 suitability. V0 per UL94 or CSA 22.2 No. 0.17. Flammability (Enclosure)

Maximum Continuous 75°C; Minimum -40°C (w/o impact) Operating Temperatures

Note: \*Suitable for use as a flanged receptacle.

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

# **Technical Information**

50 Amp Twist-Lock® Devices

# **Specifications**

Listings

Listed to UL Standard 498 (Attachment Plugs and Receptacles).

Certified to CSA Standard No. 42 (General Use Receptacles, Attachment Plugs and Similar Wiring Devices).

Part	Materials
Plug (Twist-Lock)	50A
Blade Holder	Thermoplastic polyester (black)
Power Blades	Brass
Terminal Set Screw	Stainless steel
Terminal Retainer	Thermoplastic polyester
Front and Rear (housing)	Supertough nylon
Cord Clamp	Thermoplastic polyester (white)
Seal	Neoprene
Seal Cup	Nylon
Box Terminal	Copper
Latches	Supertough nylon
Ground Contact Spring	One piece copper/nickel
Cord Clamp Screws	302/304 Stainless steel
Shroud	302/304 Stainless steel

Connector (Twist-Lock)	50A
Contact Nose	Nylon (black)
Terminal Retainer	Thermoplastic polyester (black)
Terminal Set Screw	302/304 Stainless steel
Contact Spring	Brass
Assembly Ring	302/304 Stainless steel
Front and Rear (housing)	Supertough nylon (black)
Latches	Supertough nylon (white)
Cord Clamp	Thermoplastic polyester (white)
Box Terminal	Copper
Contact Holder	Thermoplastic polyester (black)
Ground Contact	One piece copper/nickel
Seal Cup	Nylon
Cord Grip screws	302/304 Stainless steel
Seal	Neoprene

Part	Materials
Flanged Inlet	50A
Flanged Casing	.062" Steel, zinc plate
Blade Holder	Phenolic
Pressure Screws	Steel, zinc plate
Blades	.100" Brass
Ground Spring	.025" Bronze
Terminals	.050" Steel, brass finish
Grounding Terminal	.062" Copper, green finish
Round Head Screws	Steel, zinc plate

Receptacle	50A
Body	Phenolic
Face	Phenolic
Contact Springs	.100" Brass alloy
Contact Binding Plates	.100" Brass
Ground Contact	.031" Brass
Insulator	.093" Laminated phenolic
Bridge (Mounting Strap)	.062" Steel, zinc plate
Pressure Screws	Steel, zinc plate
Terminals	.050" Steel
Casing	.062" Steel, zinc plate
Center Pin (CS Devices)	Steel, zinc plate

## **Product Identification**

Ratings	Molded into face for all devices and stamped into stainless steel shroud on plug devices.
Catalog Number	Molded into face for plug and connector bodies and stamped into stainless steel shroud on plug devices.

# **Performance**

Electrical	
Dielectric Voltage Max. Working Voltage Current Interrupting Temperature Rise	Withstands 2,000V minimum. 600 Volts RMS. Certified for current interrupting at full rated current. Max. 30°C temperature rise at full rated current after 50 cycles of overload at 150% rated DC current (UL 498).
Mechanical	
Terminal Accommodation Cord Grip Accommodation	#8 AWG min #4 AWG max. Solid or stranded copper wire only. Round cords types: S, SO, ST .830"-1.250" (21.08-31.75).
Environmental	
Flammability Operating Temperatures	UL 94 V0 for Receptacles and Inlets. HB or better for Plugs and Connectors. Maximum continuous 75°C; minimum -40°C (w/o impact).

Note: Please consult the factory for product dimensions and specifications for other products listed in this catalog.

## **Technical Information**

Switched Twist-Lock® and Hubbellock® Enclosures

# **Specifications**

Typical Specifications	
Manufacturer's Identification	Hubbell SETL3/SEHBL3-SE2730A.
Description	Lockable Switched Enclosure. This unit is a complete enclosure ready to accept any 20 or 30A Twist-Lock or 30A Hubbellock receptacle.
Electrical Type	2 Pole + Earth through 4 Pole and Earth.
Rating	20 or 30A, 125V through 3ØY 347/600V AC.
Configuration	NEMA Locking L5-20R through L23-30R.
Enclosure Type	Outdoor – Type 3R (Rainproof, Sleet, External Ice), IP54 suitability. Indoor – Type 12K (Dust-tight, Falling Dirt, Noncorrosive Liquids, with Knockout).
Enclosure Material	Non-metallic enclosure suitable for metallic conduit.

#### **Materials**

Part	Materials
Base	Valox <sup>®</sup>
Тор	Valox®
Handle	Valox®
Conduit Hub	Zinc ¾" watertight
Enclosure Gasket	Neoprene
Shaft	Valox®
Shaft Seal	Molded neoprene
Frame	Galvanized steel
Lift Cover	Valox®
Enclosure Screws	Stainless steel 300 series
Hinge Spring and Pin	Stainless steel 300 series

#### **Performance**

Electrical	
Dielectric Voltage	Withstands 3,000V minimum.
Max. Working Voltage	600V RMS.
Current Interrupting	Certified for current interrupting at full rated current and voltage.
Short Circuit Withstand	Suitable for use on a circuit capable of delivering not more than 10,000
	RMS symmetrical amperes at the voltage rating of the receptacle.
Operations	Mechanical 10,000 cycles;
	Electrical 6,000 cycles.
Mechanical	
Impact Resistance	In accordance with UL 746C.
Terminal Identification	In accordance with UL, CSA and international conventions.
Product Identification	Identification and ratings are part of external label and receptacle face.
Weight	3.5 pounds.
Mounting	External fully adjustable feet.
Environmental	
Moisture Resistance	Outdoor - Type 3R (Rainproof, Sleet, External Ice), IP54 suitability.
	Indoor – Type 12K (Dust-tight, Falling Dirt, Noncorrosive Liquids, with Knockout).
Flammability	UL94 – 5 VA and V0 classification.
Operating Temperature	Maximum continuous +75°C;
	Minimum continuous -40°C.
UV Resistance	All materials are UV stabilized.

Note: This device provides on/off switched control of a plug connected load and includes lockout provision: ON-OFF control knob (in the OFF position) accepts up to a 5/16" (8.0) diameter shackle of suitable padlock lockout device to isolate energy from the receptacle and cord connected equipment as a method of compliance to OSHA Lockout/Tagout Regulation 29CRF Part 1910.147.

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

# **Technical Information**

Mechanical Interlock Switched Safety Enclosures

# **Specifications**

Typical Specifications		
Manufacturer's Identification	Hubbell HBLMITL.	
Description	Circuit-Lock Mechanical Interlock.	
Electrical Type	2 Pole + Earth through 4 Pole and Earth.	
Rating	Up to 30A, 3Ø 600V AC.	
Enclosure Type	Outdoor – 4X (Watertight, Washdown); Indoor – 12K (Dust-tight, Falling Dirt and noncorrosive liquids with knockout. IP66 suitability.	
Enclosure Material	Non-metallic enclosure suitable for metallic conduit.	

## **Materials**

Part	Material
Base	Valox®
Тор	Valox®
Handle	Valox®
Conduit Hub	Zinc ¾" watertight
Enclosure Gasket	Neoprene
Shaft	Valox®
Shaft Seal	Neoprene
Frame	Galvanized steel
Enclosure Screws	Stainless steel 300 series

## **Performance**

Electrical	
Dielectric Voltage	Withstands 3,000V Min.
Max. Working Voltage	600V RMS.
Current Interrupting	Certified for current interrupting at full rated current voltage.
Short Circuit Withstand Rating	Suitable for use on a circuit capable of delivering not more than 10,000 RMS symmetrical amperes at the voltage rating of the receptacle.
Operations	Mechanical 10,000 cycles;
	Electrical 6,000 cycles.
Mechanical	
Impact Resistance	In accordance with UL 746C.
Terminal Identification	In accordance with UL, CSA.
Product Identification	Identification and ratings are part of the external label and receptacle face.
Weight	3.5 pounds.
Mounting	External full adjustable feet.
Environmental	
Moisture Resistance	Outdoor – 4X (Hose-Directed Water, Corrosion Resistance), IP66 suitability.
Flammability	Meets UL 94V0 material classification.
Operating Temperature	Maximum continuous +75°C;
	Minimum continuous -40°C.
UV Resistance	All exposed materials are UV stabilized.

# **Technical Information**

Valise® Plugs and Connectors

# **Specifications**

Plugs
Typical Specification - Catalog No. HBL4723VY.
Description - Straight Body Plug
Type – 2 Pole, 3 Wire, Grounding
Rating – 15 and 20A 125V, 250V, and 277V AC, 30A 125 and 250V
Certification – UL Listed File E1706, CSA Certified
IP SUITABILITY – IP20

Part	Material
Plug	15, 20 and 30A
Housing	Nylon
Blades	Brass
Ground Blade	Brass
Terminal Screws	Steel multiple drive
Cable Inserts	Polyphenylene Oxide
Terminal Clamps	CR Steel
Body Holding Screws	Steel multiple drive

Connector Bodies
Typical Specification- Catalog No. HBL4729VY
Description – Straight Body Connector
Type – 2 Pole, 3 Wire, Grounding
Rating – 15 and 20A 125V, 250V, and 277V AC, 30A 125 and 250V
Certification – UL Listed File E1706, CSA Certified
P Suitability – <b>IP20</b>

Part	Material
Connector	15, 20 and 30A
Housing	Nylon
Contact and Ground Springs	Brass
Terminal Screws	Steel multiple drive
Cable Inserts	Polyphenylene Oxide
Terminal Clamps	CR Steel
Body Holding Screws	Steel multiple drive

#### **Performance**

Electrical	
Dielectric Voltage Max. Working Voltage Current Interrupting Temperature Rise	Withstands 2,000V minimum. 125V, 250V or 277V AC as rated. Certified for full rated current. Max. 30°C temperature rise at full rated current after 50 cycles of overload at 150% rated DC current.
Mechanical	
Terminal Identification Terminal Accommodation	Screw Color per UL 498 (Brass, White and Green). 15A-18 to 12AWG. Solid or stranded copper wire only. 20A-18 to 10AWG. Solid or stranded copper wire only. 30A-14 to 8AWG. Solid or stranded copper wire only.
Product Identification Torque	Molded rating on device face.  12 in-lb terminal screws, 7 in-lb assembly screws.
Cord Range	12 III ib terminal serews, 7 III ib assembly serews.
15A 20A 30A	.220" to .660" (5.6mm to 16.8mm). .325" to .720" (8.26mm to 18.3mm). .590" to .930" (15.0mm to 23.6mm).
Environmental	
Flammability Operating Temperature	UL 94HB. Maximum continuous 75°C, minimum -40°C (w/o impact).
Standards	
Listed to UL Standard UL498 Certified to CSA Standard C22.2 No. 42	

# SECTION C









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# **Watertight Devices**

#### **Features and Benefits**

# Watertight Safety-Shroud® Twist-Lock® System

- Virtually eliminates bent and broken plug blades, leading to longer eauipment life
- Extends life of mating receptacles by eliminating damage caused by insertion of bent blades
- Extra protection for personnel by significantly reducing chance of inadvertent contact with blades when connecting or disconnecting energized receptacles and connector bodies
- Reduces exposure to arcing when connecting or disconnecting plugs under load
- Compliance with California Code of Regulations, Title 8, Article 51, subsection 2510.7(b), which requires shrouding for devices exceeding 300 volts
- Lockout/tagout hole allows compliance with OSHA regulation 29 CFR 1910.147





**HBL2733SW** 

Note: Works with Mechanical Interlocks, see page B-41 for additional information.



## **Housing Design**

- One-piece, engineered thermoplastic housing is impact-resistant for heavy duty industrial environments
- Blades are recessed for protection against bending and breaking
- Closure cap is included for environmental seal when device is not in use



## Assembly

- Cord grip screw recess minimizes screwdriver slippage
- All screws are #10 multiple drive head



#### Cord Range

- Assorted TPE seal glands can accommodate a wide range of cord sizes from #16-3 Type SJ to #8-5 Type S, SO
- Sealing gland and thermoplastic guard prevents water ingress from entering the device at the cord end



#### Panel or Box Mount Receptacles and Inlets

- High impact, thermoplastic housing for heavy duty industrial environments
- Mounting screw recesses minimize screwdriver slippage
- Accepts all mating NEMA locking plugs and most connector bodies, allowing interchangeability with existing devices



#### Identification

- Catalog number and color-coded voltage rating are easily visible even
- Alignment arrows and lock and unlock symbols provide a visual indication that devices are properly connected



#### Spring-Loaded Cover

• One-step, push-to-close, spring-loaded cover with latch allows for fast opening and closing of lift cover

Result: Environmental sealing is assured





# Watertight Safety-Shroud® Twist-Lock® Devices









					6.55		
	NEMA Rating Color Coded by Voltage	Plug/ Connector	Poles/Wires	Plug	Connector	Flanged Inlet	Receptacle
	NEMA L5-20 20A 125V	(*) (*)	2P/3W	HBL2311SW	HBL2313SW	HBL2315SW	HBL2310SW
	NEMA L6-20 20A 250V	(* 10) (P (%)	2P/3W	HBL2321SW	HBL2323SW	HBL2325SW	HBL2320SW
	NEMA L7-20 20A 277V AC		2P/3W	HBL2331SW	HBL2333SW	HBL2335SW	HBL2330SW
20 Amp	NEMA L14-20 20A 125/250V AC		3P/4W	HBL2411SW	HBL2413SW	HBL2415SW	HBL2410SW
N	NEMA L15-20 20A 3Ø 250V AC		3P/4W	HBL2421SW	HBL2423SW	HBL2425SW	HBL2420SW
	NEMA L16-20 20A 3Ø 480V AC		3P/4W	HBL2431SW	HBL2433SW	HBL2435SW	HBL2430SW
	NEMA L21-20 20A 3ØY 120/208V AC		4P/5W	HBL2511SW	HBL2513SW	HBL2515SW	HBL2510SW
	NEMA L5-30 30A 125V	(*) ((*)	2P/3W	HBL2611SW	HBL2613SW	HBL2615SW	HBL2610SW
	NEMA L6-30 30A 250V	( ) ( ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	2P/3W	HBL2621SW	HBL2623SW	HBL2625SW	HBL2620SW
	NEMA L14-30 30A 125/250V AC		3P/4W	HBL2711SW	HBL2713SW	HBL2715SW	HBL2710SW
30 Amp	NEMA L15-30 30A 3Ø 250V AC		3P/4W	HBL2721SW	HBL2723SW	HBL2725SW	HBL2720SW
	NEMA L16-30 30A 3Ø 480V AC		3P/4W	HBL2731SW	HBL2733SW	HBL2735SW	HBL2730SW
	NEMA L17-30 30A 3Ø 600V AC		3P/4W	HBL2741SW	HBL2743SW	HBL2745SW	HBL2740SW
	NEMA L21-30 30A 3ØY 120/208V AC	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	4P/5W	HBL2811SW	HBL2813SW	HBL2815SW	HBL2810SW

#### Mechanical Interlock Switched Safety Enclosure

Mechanical Interiork Owneried Galety Enclosure	
Description	Catalog Number
Unfused mechanical interlock integrates a watertight safety shroud receptacle with a linked	HBLMITL
disconnect switch. See page B-41 for additional information.	

# **Specifications**

Listed to UL Standard 498 Certified to CSA Standard No.42 Fed. Spec. WC-596

Environmental

Moisture Resistance

Flammability (Enclosure) Operating Temperatures UL Type 4, 4X, 12, IP66 suitability V0 per UL94 or CSA 22.2 No. 0.17

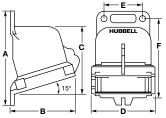
Maximum Continuous 75°C; Minimum -40°C (without impact)



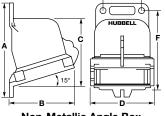
**HBLMITL** 

# Watertight Devices

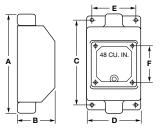
## **Accessories**



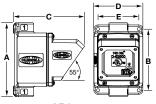
Non-Metallic Angle Box



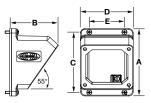
Metallic Angle Box



**Metallic Feed Thru Box** 



AB203055



AA203055



HBL2030AP



15° Angle Non-Metallic Back Box

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock Receptacles and Inlets.	1"	5.67" (144.0)	4.44" (112.8)	4.05" (102.9)		2.35" (59.7)	4.92" (125.0)	30.00"	BB2030N

Note: Hub is not included; order Raco part number 1704. This box meets IP67 requirement and Type 4X requirements when installed with a watertight conduit hub.

# 15° Angle Metallic Back Boxes

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock Receptacles and Inlets.	3/4"	5.13" (130.2)	4.00" (101.6)	4.19" (106.4)	3.75" (95.3)	3.00" (76.2)	4.00" (101.6)	30.00"	BB201W
	1"	5.13" (130.2)	4.00" (101.6)	4.19" (106.4)	3.75" (95.3)	3.00" (76.2)	4.00" (101.6)	30.00"	BB301W

#### **Metallic Feed Thru Back Boxes**

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock Receptacles and Inlets.	3/4"	8.25" (209.6)	3.06" (77.8)	7.14" (181.4)	4.50" (114.3)	3.75" (95.3)	3.13" (79.5)	48.00"	FT202W
	1"	8.25" (209.6)	3.06" (77.8)	7.14" (181.4)	4.50" (114.3)	3.75" (95.3)	3.13" (79.5)	48.00"	FT302W

Note: These boxes are cast aluminum and are finished with enamel paint. These boxes withstand a 500-hour salt spray test as well as UL raintight and external icing tests. NPT (metric designator).

# 55° Angle Metallic Adapter and Back Box

	NPT Hub	A Inch	B Inch	C Inch	D Inch	E Inch	F Inch	Cubic Inch	
Description	Size	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock Receptacles and Inlets.	1"	6.80" (172.4)	5.63" (142.9)	6.60" (167.0)	4.50" (114.3)	3.74" (95.0)	-	45.27"	AB203055

# 55° Angle Metallic Adapter with Grounding Lug

Description	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
For 20A and 30A Watertight Safety-Shroud Twist-Lock		3.33" (167.0)		3.75" (114.3)	2.50" (95.0)	-	25.00"	AA203055
Receptacles and Inlets.								

# **Straight Watertight Wall Box Adapter**

Description	Catalog Number
Adapts 20A and 30A Watertight Safety-Shroud Twist-Lock receptacles and inlets to 2-gang, device mount, FD boxes.	HBL2030AP

## Non-Watertight Angle Wall Box Adapter

Description	Catalog Number
Adapts 20A and 30A Watertight Safety-Shroud Twist-Lock receptacles to 1- or 2-gang standard wall boxes (4" or 411/16" square).	AA2030PS

# **Watertight Devices**

#### **Features and Benefits**

## **Watertight Devices**

- The triple bypass seal provides a Watertight UL Type 4X seal where devices are mated
- The cone seal at the cable entrance provides protection from water ingress
- Strongest strain relief for any Watertight device on the market, utilizing the patented Gotcha ring and collapsible bushing combination
- Nickel plated brass contacts and stainless steel screws provide corrosion resistance for metallic components
- Impact resistant, smooth, thermoplastic elastomer body helps collection point and aids in easy debris removal
- Floating cap rings allows for easy removal of dirt and debris





## Housing Design

- Smooth body design minimizes collection points simplifying the wash down process
- Strain relief nut always seals on the body regardless of cable size, eliminating areas of debris collection



#### Assembly

- Keyed interior for easy installation
- All stainless steel hardware and corrosion resistant connection points



#### Cord Range

- Hubbell's patented Gotcha® ring and collapsible bushing yields the industry's best strain relief
- Cone seal adjusts to any cable range
- Unique cone seal prevents dirt and debris from collecting at the cable entrance



#### Contacts

• High conductivity brass termination



#### Protection

- Triple bypass seal keeps water away from electrical connections and works with previously installed devices
- Free-floating cap allows unwanted material to wash away during sanitation



#### Plug Blades

• Corrosion resistant connection points





UL Type 4, 4X, 12

# **Watertight Receptacles with Lift Covers**

Hubbell Watertight receptacles with lift covers provide an impact resistant UL Type 4X seal combined with corrosion resistant metallic components. These universal covers can house any NEMA listed straight blade receptacles as well as any NEMA listed Twist Lock receptacles. The Watertight receptacles can either be mounted to FD/FS boxes (see page C-9) or panel mounted to a flat surface. Combined, this makes a diversified product with the high quality needed in industrial, wet and wash down applications.



HBL60W47D



**HBL60W47** 



## **Housing Design**

- Impact resistant PBT material lid and cover plate
- Thermoplastic elastomer seal
- Lockable cover meets OSHA Lockout/Tagout regulations



#### Assembly

- Stainless steel mounting hardware
- Stainless steel hinge spring and pin





HBL15W47A



#### Also Available:

• Watertight Lift Covers, for use with standard receptacles



**HBL60W47** 



HBL60W47D

#### Straight Blade Devices

Su	aigiil biaue	DEVICES						
	Rating	Plug/ Connector	Poles/ Wires	Color	Plug	Connector	Receptacle with Lift Cover	Duplex Recept. with Lift Cover
Amp	NEMA 5-15 15A 125V		2P/3W	Yellow Black	HBL14W47A HBL14W47BK	HBL15W47A HBL15W47BK	HBL60W47 HBL60W47BK	HBL60W47D —
15/	NEMA 6-15 15A 250V		2P/3W	Yellow	HBL14W49	HBL15W49	HBL60W49	HBL60W49D
Amp	NEMA 5-20 20A 125V		2P/3W	Yellow	HBL14W33A	HBL15W33A	HBL60W33	HBL60W33D
20 A	NEMA 6-20 20A 250V		2P/3W	Yellow	HBL14W48	HBL15W48	HBL60W48	HBL60W48D







	ist-Lock <sup>®</sup> Devices	Plug/	Poles/				Receptacle	Duplex Recept.
	Rating	Connector	Wires	Color	Plug	Connector	with Lift Cover	with Lift Cover
۵	NEMA L5-15 15A 125V		2P/3W	Yellow Black	HBL24W47A HBL24W47BK	HBL25W47A HBL25W47BK	HBL65W47 —	HBL65W47D —
5 Amp	NEMA L6-15 15A 250V		2P/3W	Yellow	HBL24W49	HBL25W49	HBL65W49	HBL65W49D
-	NEMA L7-15 15A 277V AC		2P/3W	Yellow Black	HBL24W34 HBL24W34BK	HBL25W34 HBL25W34BK	HBL65W34 —	HBL65W34D —
	NEMA L5-20 20A 125V		2P/3W	Yellow Black	HBL26W47 HBL26W47BK	HBL27W47 HBL27W47BK	HBL67W47 —	=
	NEMA L6-20 20A 250V	( ) ( ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	2P/3W	Yellow Black	HBL26W48 HBL26W48BK	HBL27W48 HBL27W48BK	HBL67W48 HBL67W48BK	_
	NEMA L7-20 20A 277V AC		2P/3W	Yellow	HBL26W49	HBL27W49	HBL67W49	_
	NEMA L14-20 20A 125/250V AC		3P/4W	Yellow	HBL26W74	HBL27W74	HBL67W74	_
	NEMA L15-20 20A 3Ø 250V AC		3P/4W	Yellow Black	HBL26W75 HBL26W75BK	HBL27W75 HBL27W75BK	HBL67W75 HBL67W75BK	_
Amb (	NEMA L16-20 20A 3Ø 480V AC		3P/4W	Yellow Black	HBL26W76 HBL26W76BK	HBL27W76 HBL27W76BK	HBL67W76 HBL67W76BK	_
20	NEMA L21-20 20A 3ØY 120/208V AC	Y I GO IW W OG IY	4P/5W	Yellow Black	HBL26W81 HBL26W81BK	HBL27W81 HBL27W81BK	HBL67W81 —	_
	NEMA L22-20 20A 3ØY 277/480V AC		4P/5W	Yellow	HBL26W82	HBL27W82	HBL67W82	_
	NEMA L23-20 20A 3ØY 347/600V		4P/5W	Yellow	HBL26W83	HBL27W83	HBL67W83	_
	20A 125/250V Non-NEMA		3P/3W	Yellow	HBL26W08	HBL27W08	HBL67W08	_
	20A 3ØY 120/208V AC Non-NEMA		4P/4W	Yellow	HBL26W09	HBL27W09	HBL67W09	_
	NEMA L5-30 30A 125V		2P/3W	Yellow Black	HBL28W47 HBL28W47BK	HBL29W47 HBL29W47BK	HBL69W47 —	_
	NEMA L6-30 30A 250V		2P/3W	Yellow Black	HBL28W48 -	HBL29W48 -	HBL69W48 HBL69W48BK	_
	NEMA L7-30 30A 277V AC	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	2P/3W	Yellow	HBL28W49	HBL29W49	HBL69W49	_
	NEMA L14-30 30A 125/250V AC		3P/4W	Yellow	HBL28W74	HBL29W74	HBL69W74	_
	NEMA L15-30 30A 3Ø 250V AC		3P/4W	Yellow Black	HBL28W75 HBL28W75BK	HBL29W75 HBL29W75BK	HBL69W75 HBL69W75BK	_
	NEMA L16-30 30A 3Ø 480V AC		3P/4W	Yellow Black	HBL28W76 HBL28W76BK	HBL29W76 HBL29W76BK	HBL69W76 HBL69W76BK	=
Amb	NEMA L17-30 30A 3Ø 600V AC		3P/4W	Yellow	HBL28W77	HBL29W77	HBL69W77	_
30	NEMA L18-30 30A 3ØY 120/208V AC	( ) W ( ) Y	4P/4W	Yellow	HBL28W78	HBL29W78	_	_
	NEMA L21-30 30A 3ØY 120/208V AC		4P/5W	Yellow Black	HBL28W81 HBL28W81BK	HBL29W81 HBL29W81BK	HBL69W81 —	=
	NEMA L22-30 30A 3ØY 277/480V AC	(X) (W) (W) (S) (V)	4P/5W	Yellow	HBL28W82	HBL29W82	HBL69W82	_
	NEMA L23-30 30A 3ØY 347/600V AC		4P/5W	Yellow	HBL28W83	HBL29W83	HBL69W83	_
	30A 125/250V Non-NEMA		3P/3W	Yellow	HBL28W08	HBL29W08	HBL69W08	_
	30A 3ØY 120/208V AC Non-NEMA		4P/4W	Yellow	HBL28W09	HBL29W09	_	_



IP65, 66, 67



HBL24W47A



HBL25W47A







HBL27W47



HBL27W47BK



**HBL67W48** 



HBL65W47D







# Accessories

UL Type 4X

IP65, 66, 67





HBL6500





9-9

**HBLWTB1** 

# **UL Type 4X Watertight Lift Covers**

	Description	Color	Lift Cover
nbly	For use with 15A or 20A straight blade receptacles and 15A Twist-Lock® receptacles; receptacle not included.	Yellow Black	HBL6500 HBL6500BK
Assembly	For use with 20A Twist-Lock® receptacles; receptacle not included.	Yellow Black	HBL6700 HBL6700BK
over	Note: When mating with <b>HBL26W09</b> , 20A Non-NEMA plug, use HBL6800 cover.		
Lift Co	For use with 30A Twist-Lock® receptacles; receptacle not included.	Yellow Black	HBL6800 HBL6800BK

## **Interiors**

		125V		3Ø 25	50V AC	3Ø 480V AC	
	Device	Plug	Receptacle	Plug	Receptacle	Plug	Receptacle
15A	Straight Blade Locking	HBL14W47IN HBL24W47IN	HBL15W47IN —	=	_	=	_
20A	Locking	_	HBL27W47IN	HBL26W75IN	_	HBL26W76IN	HBL27W76IN
30A	Locking	_	_	HBL28W75IN	HBL29W75IN	HBL28W76IN	HBL29W76IN

# **Bushings, Cone Seals and Closure Caps**

				Closure Caps	
	Device	Bushings	Cone Seals	Yellow	Black
15A	Straight Blade Locking	HBLWTB1 HBLWTB1	HBLWTCS1 HBLWTCS1	HBL50W50 HBL50W50	HBL50W50BK HBL50W50BK
20A	Straight Blade Locking	HBLWTB1 HBLWTB2	HBLWTCS1 HBLWTCS2	HBL50W50 HBL50W52	HBL50W50BK HBL50W52BK
30A	Locking	HBLWTB3	HBLWTCS3	HBL50W54	HBL50W54BK



**UL Type 4X** 

IP65, 66

## **FD Boxes and Angled Adapters**

Hubbell FD boxes and angled adapters are made of high impact resistant material. They are the only NEC compliant box system that has enough wiring room for a 50A Twist Lock device. The stainless steel mounting and grounding bracket provides corrosion resistance, necessary in direct wash down applications. The FD Boxes are UL Type 4X rated when used with Watertight Lift Covers, i.e. HBL6500 or HBL6700 as well as with a blank plate such as HBL60CM88. The box and angled adapter can either be purchase separately or as a kit. The FD box and Adapter can be used with any single or duplex receptacle up to 50A Twist Lock.





HBL60CM83A



#### **Housing Design**

- 30 cu. in. FD box made of high impact thermoplastic material
- ¾" NPT and 1" NPT threaded hub options
- Stainless steel mounting/grounding bracket
- External mounting feet, accepts #10 screw



#### Adapter

- 55° angle adapter (15 cu. in.)
- External mounting feet, accepts #8 screw
- Accepts duplex and single receptacles up to 50A Twist-Lock®

## **FD Boxes and Angled Adapters**

	Description	Catalog Number
	(2) ¾" NPT Hubs, FD Box, Yellow	HBL60CM83A
	(2) ¾" NPT Hubs, FD Box, White	HBL60CM83WA
ses	(2) ¾" NPT Hubs, FD Box, Gray	HBL6083
Boxes	(2) 1" NPT Hubs, FD Box, Yellow	HBL60CM84A
	(2) 1" NPT Hubs, FD Box, White	HBL60CM84WA
	(2) 1" NPT Hubs, FD Box, Gray	HBL6084
SIS	55° Angle Adapter, Yellow	HBL60CM55
Adapters	55° Angle Adapter, White	HBL60CM55W
Ad	55° Angle Adapter, Gray	HBL6055
	(2) ¾" NPT Hubs, Box/Adapter Kit, Yellow	HBL60CM83AK
	(2) ¾" NPT Hubs, Box/Adapter Kit, White	HBL60CM83WAK
छ	(2) ¾" NPT Hubs, Box/Adapter Kit, Gray	HBL6083AK
Kits	(2) 1" NPT Hubs, Box/Adapter Kit, Yellow	HBL60CM84AK
	(2) 1" NPT Hubs, Box/Adapter Kit, White	HBL60CM84WAK
	(2) 1" NPT Hubs, Box/Adapter Kit, Gray	HBL6084AK
Ś	Blank Cover Plate, Yellow	HBL60CM88
Covers	Blank Cover Plate, White	HBL60CM88W
ŭ	Blank Cover Plate, Gray	HBLP14FS



HBL60CM83A



HBL60CM55



HBL60CM88W



#### **GFCI Protected FD Box**

The GFCI protected FD box provides a UL Type 4X GFCI enclosure made for wet and damp locations for 30A 120V and 240V Watertight receptacles. The GFCI response time does not exceed .025 seconds ensuring a safe circuit shut down if the current were to deviate from its path. Auto resetting GFCI box, when connected to an FD box by utilizing a PolyTuff® liquid tight conduit provides advanced safety features for Watertight devices.





#### **GFCI Housing Design**

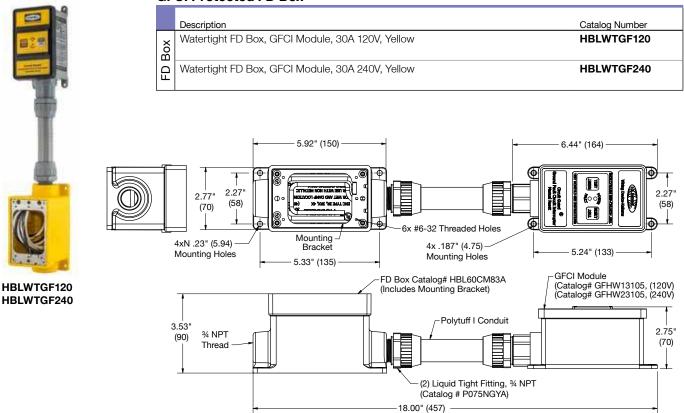
- UL enclosure Type 4X, for wet and damp locations. Components are UL and CSA listed
- 30A, 120V and 240V with auto reset
- GFCI response time is .025 sec. Max.
- Grounded neutral protection trips if ground and neutral touch at load side



- Utilizes PolyTuff® liquidtight conduit and fittings
- UL enclosure Type 4X, for wet and damp locations. Components are UL and CSA listed
- For use with single and duplex watertight receptacles (single phase only)

Note: Watertight receptacles purchased separately.

#### **GFCI Protected FD Box**





**Box Suitable for Wet** and Damp Locations

**IP44** 

## Portable Outlet Boxes and Covers for Boxes and Panels

The thermoplastic elastomer material of the Portable Outlet Box provides a strong housing with enough capacity for multiple devices to fit, with cord feed through options available. The impact resistant PBT covers add to the durability of the box and the devices inside. There are several cord connectors available ranging from standard to deluxe, providing unmatched strain relief. The covers provide a UL Type 3R weather resistant seal suitable for wet and damp locations. Portable Outlet Boxes are available as pre-assembled or can be configured as needed.





HBL3056



#### **Housing Design**

- Fully thermoplastic elastomer housing exceeds UL crush requirements
- Wiring room large enough to accommodate the broadest range of device requirements in one size box
- Extended wall protects lift covers from impact damage
- Brass inserts for maximum strength

# Covers

- Impact resistant PBT material
- UL Type 3R seal on a panel or on a portable outlet box
- Stainless steel hinge and spring

# Pre-Assembled Portable Outlet Boxes (with Cord Connector Installed)

	Description	Cord Range Inches (mm)	Catalog Number
S	Portable Outlet Box, Deep, Yellow	.38"50" (9.7-12.7)	HBL3099
oxes	Portable Outlet Box, Deep, Feed Thru, Yellow	.38"50" (9.7-12.7)	HBL3090F
ā	Portable Outlet Box, Deep, Yellow with (2) duplex plates	.38"50" (9.7-12.7)	HBL3000





**HBL3090F** 



Gray Nylon

SHC1039CR

SHC1040CR



Black Nylon

SHC2040CR

Cord Connector Options



Deluxe Cord

Connectors

CG810NM

**HBL3000** 

HBL3080BK

**UL Type 1** 

xes	Feed Thru Box, Yellow Feed Thru Box, Black	HBL3080FBK	.63"75" (15.9-19.0)	SHC1041CR	SHC204
Bo			.75"88" (19.0-22.2)	SHC1042CR	SHC204

Cord Range

Inches (mm)

.38"-.50" (9.7-12.7)

.50"-.63" (12.7-15.9)

41CR 074011341 .75"-.88" (19.0-22.2) SHC1042CR SHC2042CR 074011342 .88"-1.00" (22.2-25.4) SHC1043CR SHC2043CR 074011343 Note: Includes Locknut. .59"-1.00" (15.0-25.4) SEC100GA SEC100BA

**Covers for Portable Outlet Boxes and Panels** 

Catalog Number

HBL3080BK

**HBL3080** 

**Configurable Portable Outlet Boxes** 

**Empty Box Options** 

Outlet Box, Yellow

Outlet Box, Black

	Description	UL Type 3R	UL Type 1
ω.	Outlet box cover, duplex receptacle	HBL3056	HBL3051
Covers	Outlet box cover, 1.39" diameter receptacle	HBL3057	HBL3052
	Outlet box cover, 1.572" diameter receptacle	HBL3058	HBL3055
šox	Outlet box cover; GFCI	HBL3061	HBL3060
Ф	Outlet box coverplate, blank	HBL3054	_

**UL Type 3R** 



HBL3057

HBL3051

**HBL3080F** 

HBL3052

**HUBBELL®** Wiring Device-Kellems





HBLPOB1



**Cover Plates** 



**Deluxe Cord Grips** (purchased separately)



**Grav Nylon Cord Connector** 

## **Heavy Duty Portable Outlet Boxes and Cover Plates**

Description	Catalog Number
Box with cord strain relief, with one blank cover plate.	HBLPOB1
Box with cord strain relief, with one blank cover plate, black.	HBLPOB1BK
Box with cord strain relief, with two duplex (indoor) cover plates.	HBLPOB1D
Box with cord strain relief, with two duplex (indoor), yellow cover plates.	HBLPOB1DY
Blank, non-metallic FS cover plate with foam gasket, gray.	HBLP14FS
Duplex, non-metallic FS cover plate, gray.	HBLP8FS
Duplex, non-metallic FS cover plate, yellow.	HBLP8FSY
Single receptacle (1.39"), non-metallic FS cover plate, gray.	HBLP7FS
Single receptacle (1.56"), non-metallic FS cover plate, gray.	HBLP720FS
Rectangular opening, non-metallic FS cover plate, grav.	HBLP26FS

# Other Cover Plates and Devices

which may be used with Heavy Duty Portable Outlet Boxes

Description	Catalog Number
Duplex cover plate, weatherproof.	HBL5221, HBL52CM21
Single receptacle (1.39") cover plate, weatherproof.	HBL7423WO, HBL74CM23WO
Single receptacle (1.56") cover plate, weatherproof.	HBL7425WOA, HBL74CM25WOA
Safety-Shroud Twist-Lock® surface receptacles.	HBL2310SR, HBL2320SR, HBL2330SR, HBL2610SR, HBL2620SR

Note: Standard product gray, CM yellow.

#### **Deluxe Cord Grips Straight Male Thread**

Nylon Fittings, Stainless Steel Mesh, Liquidtight, for Insulated Cables

_	<u> </u>	· · · · · · · · · · · · · · · · · · ·		
Grip Diameter	Range	Thread Size	Form	
Inches	(cm.)	NPT (inches)	Size	Catalog Number
.375"500"	(.97-1.27)	3/4 "	F3	074011335
.500"625"	(1.27-1.59)	3/4"	F3	074011336
.625"750"	(1.59-1.90)	3/4"	F3	074011337

#### **Nylon Cord Connector Straight Male Thread**

Grip Diameter Range	Thread Size	Form	
Inches (cm.)	NPT (inches)	Size	Catalog Number
.375"500" (.97-1.27)	3/4"	F3	SHC1035CR
.500"625" (1.27-1.59)	3/4 "	F3	SHC1036CR
.625"750" (1.59-1.90)	3/4"	F3	SHC1037CR

## Specifications for Heavy Duty Portable Outlet Boxes and Cover Plates

**UL Listed** UL 514C, UL467 and UL50 Enclosures Types 1, 3R. C22.2 No. 18 and C22.2 No. 94 Enclosures Types 1, 3R and **CSA** Certified C22.2 No. 0.4 (Impedance).

Box Specifications:

Wet and damp locations, Enclosure Type 3R when used with weatherproof Moisture Resistance

cover plates. Dry, indoors locations, Enclosure Type 1 with all other cover plates. Flammability UL 94V-0, 94-5VA classification.

Operating Temperature 80°C maximum; -35°C minimum. UV Resistance All materials are UV stabilized.

Impact and Crush Resistance in accordance with UL 514C, UL50, C22.2 No. 18 and C22.2 No. 94. Material

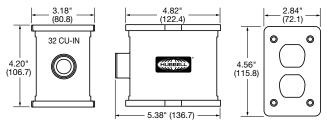
Cord Connector Materials Nylon nut; Nylon Gotcha® ring; Neoprene grommet.

Cord Diameter Range .38" to .75" diameter. Bonding Strap Material Brass. Threaded Inserts Brass. Grounding Screw Material Brass.

Indoor Cover Plate Screws Material Zinc Plated Steel. Outdoor Cover Plate Screws Material Stainless Steel.

Cover Plate Gasket Material UL recognized closed-cell foam (aging and oil resistant).

#### **Dimensions**



**HBLPOB1** 

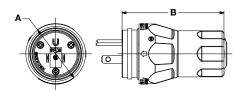
Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

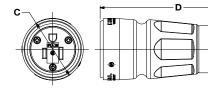
# Watertight Devices

# Plugs and Connectors Inches (mm)

		15A & 20A Straight Blade	15A Non-NEMA Straight Blade	15A Twist-Lock®	20A Twist-Lock®	30A Twist-Lock®
Plugs	Α	1.85" (47.07)	1.63" (41.40)	1.85" (47.07)	2.51" (63.70)	2.77" (70.41)
	В	3.16" (80.27)	2.68" (68.00)	3.21" (81.46)	3.96" (100.69)	3.94" (99.98)
Connectors	С	1.85" (47.07)	1.80" (46.00)	1.85" (47.07)	2.51" (63.70)	2.77" (70.41)
	D	4.42" (112.14)	4.00" (102.00)	4.62" (117.22)	5.69" (144.55)	5.67" (144.00)

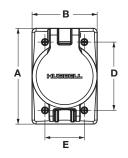
Note: For HBL26W09 and HBL27W09 use 30A Twist-Lock® dimensions.

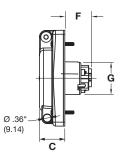


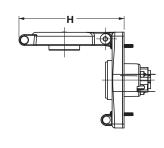


# Receptacles with Lift Covers Inches (mm)

	ooptaoloo With En	t OOVCIO monos (min)				
	15A & 20A Straight Blade	15A Twist-Lock®	20A Twist-Lock®	20A Non-NEMA	30A Twist-Lock®	30A Non-NEMA
Α	4.56" (115.9)	4.56" (115.9)	4.56" (115.9)	4.56" (115.9)	4.56" (115.9)	4.56" (115.9)
В	3.10" (78.7)	3.10" (78.7)	3.10" (78.7)	3.10" (78.7)	3.10" (78.7)	3.10" (78.7)
С	1.20" (30.6)	1.20" (30.6)	1.20" (30.6)	1.20" (30.6)	1.20" (30.6)	1.20" (30.6)
D	3.25" (82.6)	3.25" (82.6)	3.25" (82.6)	3.25" (82.6)	3.25" (82.6)	3.25" (82.6)
E	1.88" (47.6)	1.88" (47.6)	1.88" (47.6)	1.88" (47.6)	1.88" (47.6)	1.88" (47.6)
F	1.26" (32.0)	1.46" (37.1)	1.72" (43.7)	2.26" (57.4)	1.72" (43.7)	1.97" (50.0)
G	1.63" (41.4)	1.63" (41.4)	2.25" (57.2)	2.25" (57.2)	2.25" (57.2)	2.25" (57.2)
Н	5.00" (127.0)	5.00" (127.0)	5.00" (127.0)	5.00" (127.0)	5.00" (127.0)	5.00" (127.0)

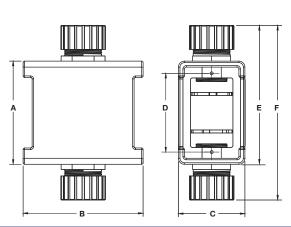






# Portable Outlet Boxes Inches (mm)

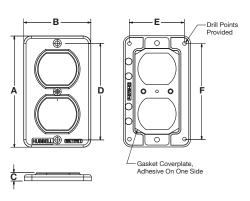
	Pre-Assembled	Configurable
Α	4.30" (109.2)	4.30" (109.2)
В	5.00" (127.0)	5.00" (127.0)
С	2.77" (70.4)	2.77" (70.4)
D	3.28" (83.3)	3.28" (83.3)
Е	5.79" (147.0)	<u> </u>
F	7.28" (184.9)	_



# Box Covers Inches (mm)

	Covers
Α	3.78" (96.0)
В	2.28" (57.9)
С	0.27" (6.9)
D	3.28" (83.3)
E	1.87" (47.5)
F	3.25" (82.6)

Note: Style shown is representative of all oppenings.



# **Watertight Devices**

#### **Materials**

water also			
Plug/Connector			
Part	Materials		
Blade/Contact Carrier	Nylon, white		
Terminal Retainer	Polycarbonate, clear		
Housing	Thermoplastic elastomer		
Housing Insert	Nylon, white		
Strain Relief Nut	PBT thermoplastic, gray		
Blades/Contacts	Brass, nickel plated		
Terminal Screws	Brass		
Terminal Screw Size	#8-32 15A/20A Straight Blade and 15A Twist-Lock;		
	#10-32 20A and 30A Twist-Lock		

## Closure Cap **Receptacle Assembly**

Assembly Screws

Mounting Screws Spring and Hinge Pin

Bushings

Gotcha Ring

Cone Seal

Part	Materials
Base, Flip Lid and Backplate	PBT
Seal Collar	Thermoplastic elastomer
Mounting Screws	Stainless Steel

Stainless Steel

Stainless Steel

Nvlon

Thermoplastic elastomer, black

Thermoplastic elastomer, black

Thermoplastic elastomer

#### Portable Outlet Box and Accessories

Part	Materials
Box Enclosure	Thermoplastic elastomer
Strain Relief Nut	PBT
Grommet	Thermoplastic elastomer
Gotcha Ring	Nylon
Locknut	Steel, zinc plate
Threaded Inserts	Brass
Receptacle Screw	Stainless steel
Cover Plate	PBT
Cover Plate Seal	Neoprene
Cover Plate Spring	Stainless steel
Hinge Pin	Stainless steel
Hinge Bracket	Zinc plated steel
Rivets	Zinc plated steel

#### **Specifications**

Listings (Plug/Connector and Flip Lid Assembly)
Listed to UL498
Certified to CSA C22.2 No. 42
Meets NEMA WD-1, WD-6, and ANSI standards
IP66 Suitability
NSF Certified (Plugs, Connectors and Receptacles)

## FD Box/Adapter

Part	Materials	
Box Enclosure	PBT	
Ground Bracket	316 Stainless Steel	
Ground Screw	Brass	
Angle Adapter	PBT	

#### **Environmental**

30X	UL Type 4X
	(with UL Type 4X receptacle assembly)
	UL Type 3R
	(with weatherproof cover plate)

#### **Performance**

Electrical	
Dielectric Voltage	

2000V AC if rated 300V or less; 3000V AC if rated above 300V Connectors: Plugs: 2500V AC if rated 300V or less; 3500V AC if rated above 300V

Max Working Voltage As marked

Rated for current interruption per UL498 Current Interrupting Temperature Rise 30°C max per UL498 at rated current

#### Mechanical

#### Cord and terminal accommodations:

Plugs and Connectors	;
----------------------	---

15 and 20A Straight Blade 16/3 SJ to 10/3 SJ, 18/3 S to 12/3 S, (Ø.325" to Ø625") (Ø8.3mm to Ø15.9 mm)

and 15A Locking

20A Locking Except Min. Cord: 16/3 SJ, 18/3 S, 18/4 SJ, 18/4 S, 18/5 S, (Ø.325") (Ø8.3 mm)

HBL26W09 & HBL27W09 Max. Cord: 10/3 S, 10/4 S, 10/5 S (.875") (22.2 mm)

30A Locking Including Min Cords: 12/3 SJ, 16/3 S, 14/4 SJ, 18/4 S, 18/5 S, (Ø.375") (Ø9.5 mm)

HBL26W09 & HBL27W09 Max Cord: 8/3 S, 8/4 S, 10/5 S (1.125") (28.6 mm)

## Receptacles – use solid or stranded building wire or flexible cord only as outlined below:

All Straight Blade 18 AWG to 10 AWG 18 AWG to 10 AWG 15A Locking 20A and 30A Locking 18 AWG to 8 AWG

Portable Outlet Boxes

.38" to .68" (HBL3099, HBL3090F, HBL3000) and .38" to 1.00" with user-specified cord connector Cord Range

Wiring Volume

# Environmental

Flammability

Moisture Resistance UL Listed to 3R, 3RX, 4, 4X, 6, 6P, 12 (Plugs and connectors); 3R, 3RX, 4, 4X (Receptacles); Wet and Damp Locations

(Portable outlet boxes); Covers (POB) UL Type 3R and Wet Locations cover closed

UL94V0 (boxes, covers, and plates); UL94V2 (Plugs, connectors, and interiors); UL94HB (Caps, bushings, and cone seals)

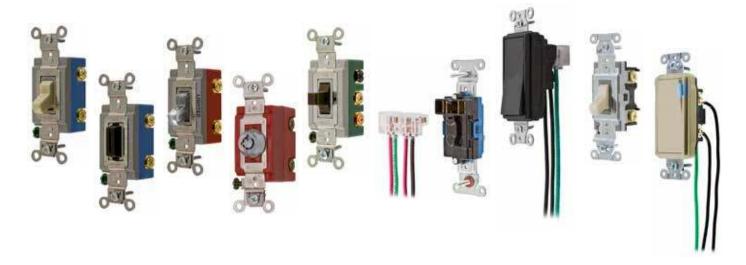
-40°C (without impact) to +60°C continuous All exposed materials are UV stabilized

Operating Temperatures

**UV** Resistance

# **SECTION D**

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# **HBL®** Extra Heavy Duty Industrial Grade

The HBL® Switch provides the safest and most reliable design for heavy-duty Industrial environments.

- 15, 20 and 30 Amp 120/277V AC
- Single Pole, Double Pole, 3-Way and 4-Way
- Illuminated and Pilot with LED
- Locking Both Standard and Rotary
- 3 Position Momentary and Maintained
- Abuse Resistant Nylon Toggle



HBL1221I



## **Housing Design**

- One-piece design engineered thermoset base for superior heat dissipation
- One-piece design high impact-resistant thermoplastic front for heavy-duty industrial environments
- Stainless steel automatic grounding clip assures grounding continuity between mounting strap and metal wall box



## Wiring Design

- Back wire entrance points for terminations accept two wires for feed through capability avoiding pigtailing
- Large brass binding head screws with deep slots secure wire connections
- Strip gauge for accurate wiring



#### **Bridge Design**

- One-piece bridge with integral grounding terminal with #8 brass screw allows compliance to NEC®
- Steel nickel plated mounting strap provides a superior corrosion resistant finish
- Thread cleaning captive mounting screw



#### Toggle

- Heavy duty nylon toggle resists abuse and chemical attack making it suitable for use in the toughest environments
- Elastomer rocker assures quiet operation and precise timing
- Permanently lubricated assembly provides long life and trouble free operation



#### Identification

- Color coded base identifies amperage when terminating connections, 15A (Blue), 20A (Red) and 30A (Green)
- Prominent amperage marking allows easy identification of rating



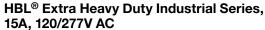
#### Contacts

- One-piece rivetless copper alloy spring contact arm and terminal plate assures proper contact alignment reducing heat rise
- Large silver alloy contacts reduce contact erosion and prevent welding, providing long life

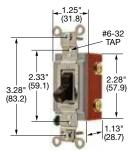
 $\ensuremath{\mathsf{NEC}}^{\otimes}$  is a registered trademark of the National Fire Protection Association (NFPA).







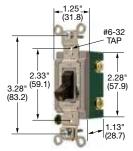
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle, back and side wired.	Black Brown Gray Ivory	HBL1201BK HBL1201 HBL1201GY HBL1201I	_ HBL1202 _ HBL1202I	HBL1203BK HBL1203 HBL1203GY HBL1203I	HBL1204BK HBL1204 HBL1204GY HBL1204I
	Light Almond Red White	HBL1201LA HBL1201R HBL1201W	- - -	– – HBL1203W	– – HBL1204W



HBL1221

#### 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle, back and side wired.	Black Brown Gray Ivory Light Almond Office White Red White	HBL1221BK HBL1221 HBL1221GY HBL1221I HBL1221LA HBL1221OW HBL1221R HBL1221W	HBL1222BK HBL1222 HBL1222GY HBL1222I HBL1222LA HBL1222OW HBL1222R HBL1222W	HBL1223BK HBL1223 HBL1223GY HBL1223I HBL1223LA HBL1223OW HBL1223R HBL1223W	HBL1224BK HBL1224 HBL1224GY HBL1224I HBL1224LA HBL1224OW HBL1224R HBL1224W



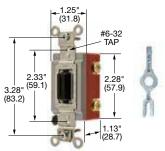
# 30A, 120/277V AC

Description	Key Guide Color	Single Pole	Double Pole	Three Way	Four Way
Nylon toggle.	Brown	HBL3031	HBL3032	HBL3033	_
	lvory White	HBL3031I	HBL3032I	HBL3033I	_

HBL3031

# HBL® Extra Heavy Duty Industrial Locking Series, 15A, 120/277V AC

Description	Key Guide Color	Single Pole	Double Pole	Three Way	Four Way
Key Guide, back and side wired.	Black Gray Ivory White	HBL1201L HBL1201LG HBL1201LI HBL1201LW	HBL1202L HBL1202LG HBL1202LI HBL1202LW	HBL1203L HBL1203LG HBL1203LI HBL1203LW	HBL1204L HBL1204LG HBL1204LI HBL1204LW
Kev for Locking	switch.	HBL1209			



HBL1221L and Key

## 20A, 120/277V AC

Description	Key Guide Color	Single Pole	Double Pole	Three Way	Four Way
Key Guide, back and side wired.	Black Gray Ivory White	HBL1221L HBL1221LG HBL1221LI HBL1221LW	HBL1222L HBL1222LG HBL1222LI HBL1222LW	HBL1223L HBL1223LG HBL1223LI HBL1223LW	HBL1224L HBL1224LG HBL1224LI HBL1224LW
Key for Locking switch		HBI 1209			



# ${\sf HBL}^{\it @}$ Extra Heavy Duty Industrial AC Barrel Key Locking Switch<sup>†</sup>, 20A, 120/277V AC

Description	Key Guide Color	Single Pole	Double Pole	Three Way	Four Way
Chrome operator, back and side wired	Chrome I.	HBL1221RKL*	HBL1222RKL*	HBL1223RKL*	HBL1224RKL*
Replacement Barre	l Key.	HBL1209RKL			

Note: Keys are supplied with each locking switch. For extra keys order HBL1209.

\*Not Fed. Spec.
TSee Wallplate section, page O-17 for locking switch wallplates.

See page D-15 for accessories and page D-16 for wallplates.

See page D-22 for technical information.

<u>HP</u>	Conversion	Chart

	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP
30A	2HP	2HP	2HP	2HP

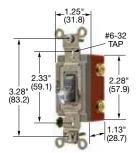


HBL1222RKL and Key

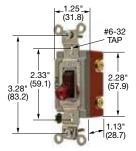




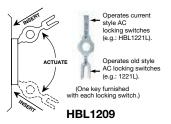


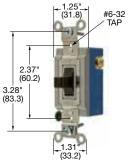


HBL1221ILC

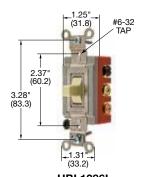


HBL1221PL





HBL1381



HBL1386I

Dimensions in Inches (mm)

## HBL® Extra Heavy Duty Industrial Series, Illuminated Toggle Switches, Light ON with Load OFF

Description	Toggle Color	Rating	Single Pole	Double Pole	Three Way
Nylon toggle,	lvory	15A 120/277V AC	HBL1201IL	-	HBL1203IL
back and side wired.	lvory Clear Red	20A 120/277V AC	HBL1221IL HBL1221ILC HBL1221ILR	=	HBL1223IL HBL1223ILC –

## HBL® Extra Heavy Duty Industrial Series, Pilot Light Switches, Light ON with Load ON

Description	Toggle Color	Rating	Single Pole	Double Pole	Three Way
Nylon toggle, back and side wired.	Red	15A 120/277V AC	HBL1201PL	-	HBL1203PL
	Red Clear Green	20A 120/277V AC	HBL1221PL HBL1221PLC HBL1221PLG	HBL1222PL - -	HBL1223PL HBL1223PLC –
	Red	30A 120/277V AC	HBL3031PL	HBL3032PL	_

## HBL® Extra Heavy Duty Industrial Series, Momentary Contact, Specification Grade, Three Position, Two Circuit, Center OFF

Description	Toggle Color	15A, 120/277V AC	20A, 120/277V AC
Nylon toggle, back and side wired.	Brown Gray Ivory Red White	HBL1556 HBL1556GY HBL1556I HBL1556R HBL1556W	HBL1557 HBL1557GY HBL1557I — HBL1557W
Key guide, back and side wired.	Black Gray Ivory White	HBL1556L HBL1556LG HBL1556LI HBL1556LW	HBL1557L HBL1557LG HBL1557LI HBL1557LW
Key for Locking s	witch.	HBL1209	

# HBL® Extra Heavy Duty Industrial Series, Maintained Contact, Specification Grade, Three Position, Two Circuit, Center OFF, Single Pole, Double Throw

Description	Toggle Color	15A 120/277V AC	20A 120/277V AC	30A 120/277V AC
Nylon toggle, back	Brown	HBL1381	HBL1385	-
and side wired.	Ivory White	HBL1381I —	HBL1385I HBL1385W	_

# Three Position, Two Circuit, Center OFF, Double Pole, Double Throw

Description	Toggle Color	15A 120/277V AC	20A 120/277V AC	30A 120/277V AC
Nylon toggle, back and side wired.	Brown Ivory	HBL1382 HBL1382I	HBL1386 HBL1386I	HBL1388 HBL1388I
Locking.		-	HBL1386L	-
Key for Locking switch	ch.	_	HBL1209	_

Note: Keys are supplied with each locking switch. For extra keys order HBL1209. See page D-15 for accessories and page D-16 for wallplates. See page D-22 for technical information.

HP Conversion Chart							
	120V	208V	240V	277V AC			
15A	.5HP	1.5HP	2HP	2HP			
20A	1HP	2HP	2HP	2HP			
30A	2HP	2HP	2HP	2HP			

# HBL® Extra Heavy Duty Industrial Series, 15A, 347V AC



Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Nylon toggle, back and side wired.	Brown Ivory	HBL18201CN HBL18201ICN	_	HBL18203CN HBL18203ICN	HBL18204ICN
Locking.		HBL18201LCN	_	HBL18203LCN	_
Key for Locking switch.		HBL1209*			

# \_1.30"\_ (33.1) #6-32 - TAP 4.06" (103.1) 3.53" (89.7) 2.27" (57.7) 1.19" (30.2)

#### **HBL18221CN**

## HBL® Extra Heavy Duty Industrial Series, 20A, 347V AC

- , -						
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way	
Nylon toggle,	Brown	HBL18221CN	_	HBL18223CN	_	
back and side wired.	Ivory	HBL18221ICN	_	HBL18223ICN	_	

# PresSwitch® Specification Grade Push Button, Standard Type 20A, 120/277V AC





Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Nylon actuator, side wired only.	Brown	HBL1281	HBL1282	HBL1283*	HBL1284*
	Ivory	HBL1281I	HBL1282I	HBL1283I*	HBL1284I*



**HBL1281** 

## **Momentary Type\*\*** 20A, 120/277V AC

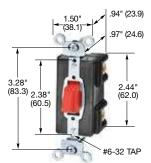
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Circuit normally closed, side wired only.	Brown	HBL1281MC*	-	_	-
Circuit normally open, side wired only.	Brown	HBL1281MO*	_	_	-

# Illuminated and Pilot Light PresSwitch®, 120V AC Lighted Actuator, Light ON with Load OFF\*\*





		<del>J</del> -			
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
15A, nylon actuator.	lvory	_	_	_	HBL1259I*
20A, nylon actuator.	lvory	HBL1287I	_	HBL1288I*	_



**HBL1297** 

## Pilot Light Actuator, Light ON with Load ON, 20A, 120V AC

,						
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way	
Nylon actuator.	Red	HBL1297	_	HBL1298*	_	

Note: Keys are supplied with each locking switch. For extra keys order HBL1209.

\*Not UL Listed, CSA Certified.

\*\*Not HP rated.

See page D-15 for accessories and page D-16 for wallplates.

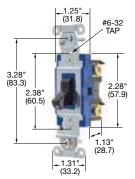
See page D-22 for technical information.

**HP Conversion Chart** 

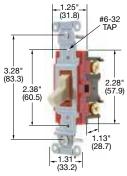
	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP
30A	2HP	2HP	2HP	2HP



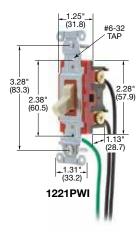


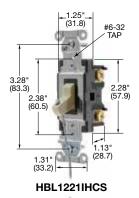


#### 1201BK



12211





#### Dimensions in Inches (mm)

# **Hubbell-PRO Heavy Duty Industrial Series,** 15A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle,	Almond	1201AL	_	1203AL	_
back and	Black	1201BK	_	1203BK	-
side wired.	Brown	1201B	_	1203B	-
	Gray	1201GY	_	1203GY	_
	lvory	1201I	_	12031	_
	Light Almond	1201LA	_	1203LA	_
	White	1201W	_	1203W	_

# Hubbell-PRO Heavy Duty Industrial Series, 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle,	Almond	1221AL	1222AL	1223AL	1224AL
back and	Black	1221BK	1222BK	1223BK	1224BK
side wired.	Brown	1221B	1222B	1223B	1224B
	Gray	1221GY	1222GY	1223GY	1224GY
	lvory	12211	1222I	12231	12241
	Light Almond	1221LA	1222LA	1223LA	1224LA
	Red	1221R	1222R	1223R	1224R
	White	1221W	1222W	1223W	1224W

# Hubbell-PRO Pre-Wired/Leaded Heavy Duty Industrial Series, 20A, 120/277V AC - 8 Inch #12 AWG THHN

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle, Pre-wired leads.	Almond Black Brown Gray Ivory Light Almond Red White	1221PWAL 1221PWBK 1221PWB 1221PWGY 1221PWI 1221PWLA 1221PWR 1221PWW	1222PWAL 1222PWBK 1222PWB 1222PWGY 1222PWI 1222PWLA 1222PWR 1222PWW	1223PWAL 1223PWBK 1223PWB 1223PWGY 1223PWI 1223PWLA 1223PWR 1223PWW	1224PWAL 1224PWBK 1224PWB 1224PWGY 1224PWI 1224PWLA 1224PWR 1224PWW

# Hubbell-PRO Hospital Call Switch with Lanyard, 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way	
Toggle,	Gray	HBL1221GHCS	_	_	_	
back and side wired.	lvory White	HBL1221IHCS HBL1221WHCS	_	_	_	

Note: See page D-15 for accessories and page D-16 for wallplates. See page D-22 for technical information.

HP	Conversion	Chart	
			•

	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP

# SNAPConnect® Heavy Duty Toggle and Decorator Series

SNAPConnect® Devices offer superior installation efficiency for new construction and renovations, while delivering safe, reliable connections. Instead of conventional wiring methods, SNAPConnect's modular connector is installed during rough-in in leu of pigtails. Once the walls are up, the protective covering is removed and the terminal is simply snapped into the SNAPConnect device for a consistent connection every time. Once installed, SNAPConnect's modular design enables simple device change-out by maintenance personnel.

- SNAPConnect® Eliminates Exposed Live Terminals on the Device
- Complete Trim-Out in Less Than One Minute
- Abuse Resistant Nylon Toggle for Heavy Use Applications
- Stainless Steel Autoground
- Large Silver Alloy Contacts Reduce Contact Erosion Providing Long Life
- Many of these Products are Assembled in USA, Please Contact Hubbell with any Certification Requirements



SNAP2101LANA



## Housing Design

- Thermoplastic top and base material
- Steel, zinc plated bridge is corrosion resistant
- Thread cleaning captive mounting screw



#### Assembly

- SNAPConnect® eliminates exposed live terminals on the device
- Termination method uses a SNAP-In Connector. Wiring the connector into the wall box can be done prior to trim out; changing or replacing switches is also a "SNAP"



#### **LED Technology**

 Pilot and Illuminated versions use LEDs for longer life

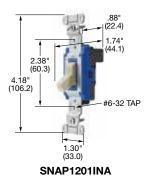


## **Pigtailed Connectors**

- Clear right angle terminal, 6 inch leads, solid or stranded wire
  - 3 wire connector for single pole and single pole illuminated
  - 4 wire connector for single pole pilot light switch
  - 4 wire connector for three way and three way illuminated



Four Way



# .88" (22.4) 1.74" (44.1) (60.3) 4.18" (106.2) 1.30" (33.0)

SNAP1221BKNA



**SNAPSWJUMP** 



SINAPSWINA

<u>HP</u>	Conversion	Chart

	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP

Dimensions in Inches (mm)

# SNAPConnect® Specification Grade Toggle Series, 15A, 120/277V AC

Description	roggie Color	Sirigle Fole	Double Fole	Tillee way	rour way
SNAPConnect®	Black	SNAP1201BKNA	_	SNAP1203BKNA	_
Toggle.	Brown	SNAP1201BRNA	_	SNAP1203BRNA	_
	Gray	SNAP1201GYNA	_	SNAP1203GYNA	_
	Ivory	SNAP1201INA	_	SNAP1203INA	_
	Lt. Almond	SNAP1201LANA	_	SNAP1203LANA	_
	Red	SNAP1201RNA	_	SNAP1203RNA	_
	White	SNAP1201WNA	_	SNAP1203WNA	_
20A, 120/277V	AC				
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
SNAPConnect®	Black	SNAP1221BKNA	_	SNAP1223BKNA	_
Toggle.	Brown	SNAP1221BRNA	_	SNAP1223BRNA	_
	Gray	SNAP1221GYNA	_	SNAP1223GYNA	_
	Ivory	SNAP1221INA	_	SNAP1223INA	_
	Lt. Almond	SNAP1221LANA	_	SNAP1223LANA	_
	Red	SNAP1221RNA	_	SNAP1223RNA	_

Double Pole

Three Way

SNAP1223WNA

# Illuminated, Light ON with Load OFF, 15A, 120/277V AC

White

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Illuminated, Light ON	Black	SNAP1201ILBKNA	_	SNAP1203ILBKNA	· –
with Load OFF,	lvory	SNAP1201ILINA	_	SNAP1203ILINA	_
Toggle, Blue LED.	Red	SNAP1201ILRNA	_	SNAP1203ILRNA	_
	White	SNAP1201ILWNA	_	SNAP1203ILWNA	_

SNAP1221WNA

#### 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Illuminated, Light ON	Black	SNAP1221ILBKNA	۰ –	SNAP1223ILBKNA	۰ –
with Load OFF,	Ivory	SNAP1221ILINA	_	SNAP1223ILINA	_
Toggle, Blue LED.	Red	SNAP1221ILRNA	_	SNAP1223ILRNA	_
	White	SNAP1221ILWNA	_	SNAP1223ILWNA	_

# Pilot, Light ON with Load ON, 15A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Pilot, Light ON	Black	SNAP1201PLB	KNA –	_	_
with Load ON,	Ivory	SNAP1201PLIN	NA –	_	_
Toggle, Red LED.	Red	SNAP1201PLR	NA –	_	_
	White	SNAP1201PLW	/NA —	_	_

# 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Pilot, Light ON	Black	SNAP1221PLBKI	NA —	_	_
with Load ON,	Ivory	SNAP1221PLINA	_	_	_
Toggle, Red LED.	Red	SNAP1221PLRN	A –	_	_
	White	SNAP1221PLWN	A –	_	_

## Jumper/Tester

Description	Catalog Number
Jumper/Tester for Single Pole Circuits, Black Toggle, Blue LED Indicator.	SNAPSWJUMP
Jumper/Tester for Three Way Circuits, Black Toggle, Blue LED Indicator.	SNAP3WJUMP

## SNAPConnect® Switch Pigtailed Connector

Description	3 Wire Connector for Single Pole and Single Pole Illuminated	4 Wire Connector for Single Pole with Pilot Light	4 Wire Connector for 3 Way and 3 Way Illuminated
Clear right angle terminal, 6 inch leads, solid wire.	SNAPSP1NA	SNAPSPP1NA	SNAP3W1NA
Clear right angle terminal, 6 inch leads, stranded wire.	SNAPSP2NA	SNAPSPP2NA	SNAP3W2NA

Note: See page D-15 for accessories and page D-16 for wallplates.

See page D-22 for technical information.

Many of these products are Assembled in USA, as indicated, and many are Buy American Compliant. Please contact Hubbell with any certification requirements.



# SNAPConnect® Specification Grade Style Line® Decorator Series, 15A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
SNAPConnect®	Black	SNAP2101BKNA	_	SNAP2103BKNA	_
Rocker.	Brown	SNAP2101BRNA	_	SNAP2103BRNA	_
	Gray	SNAP2101GYNA	_	SNAP2103GYNA	_
	Ivory	SNAP2101INA	_	SNAP2103INA	_
	Lt. Almond	SNAP2101LANA	_	SNAP2103LANA	_
	Red	SNAP2101RNA	_	SNAP2103RNA	_
	White	SNAP2101WNA	_	SNAP2103WNA	_

# 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
SNAPConnect®	Black	SNAP2121BKNA	_	SNAP2123BKNA	_
Rocker.	Brown	SNAP2121BRNA	_	SNAP2123BRNA	_
	Gray	SNAP2121GYNA	_	SNAP2123GYNA	_
	Ivory	SNAP2121INA	_	SNAP2123INA	_
	Lt. Almond	SNAP2121LANA	_	SNAP2123LANA	_
	Red	SNAP2121RNA	_	SNAP2123RNA	_
	White	SNAP2121WNA	_	SNAP2123WNA	_

# Illuminated, Light ON with Load OFF, 15A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Illuminated, Light ON	Black	SNAP2101ILBKNA	_	SNAP2103ILBKNA	٠ –
with Load OFF,	lvory	SNAP2101ILINA	_	SNAP2103ILINA	_
Rocker, Blue LED.	Red	SNAP2101ILRNA	_	SNAP2103ILRNA	_
	White	SNAP2101ILWNA		SNAP2103ILWNA	

#### 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Illuminated, Light ON	Black	SNAP2121ILBKNA	۰ –	SNAP2123ILBKN	A —
with Load OFF,	lvory	SNAP2121ILINA	_	SNAP2123ILINA	_
Rocker, Blue LED.	Red	SNAP2121ILRNA	_	SNAP2123ILRNA	_
	White	SNAP2121ILWNA		SNAP2123ILWNA	

# Pilot, Light ON with Load ON, 15A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Pilot, Light ON	Black	SNAP2101PLBK	AV —	_	_
with Load ON,	lvory	SNAP2101PLINA	_	_	_
Rocker, Red LED.	Red	SNAP2101PLRNA	4 –	_	_
	White	SNAP2101PLWN	Α		

#### 20A. 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Pilot, Light ON	Black	SNAP2121PLBKN	A —	_	_
with Load ON,	Ivory	SNAP2121PLINA	_	_	_
Rocker, Red LED.	Red	SNAP2121PLRNA	<u> </u>	_	_
	White	SNAP2121PLWNA	1		

## Jumper/Tester

Description	Catalog Number
Jumper/Tester for Single Pole Circuits, Black Toggle, Blue LED Indicator.	SNAPSWJUMP
Jumper/Tester for Three Way Circuits, Black Toggle, Blue LED Indicator.	SNAP3WJUMP

#### SNAPConnect® Switch Pigtailed Connector

Description	3 Wire Connector for Single Pole and Single Pole Illuminated	4 Wire Connector for Single Pole with Pilot Light	4 Wire Connector for 3 Way and 3 Way Illuminated
Clear right angle terminal, 6 inch leads, solid wire.	SNAPSP1NA	SNAPSPP1NA	SNAP3W1NA
Clear right angle terminal, 6 inch leads, stranded wire.	SNAPSP2NA	SNAPSPP2NA	SNAP3W2NA

Note: See page D-15 for accessories and page D-16 for wallplates.

See page D-22 for technical information.

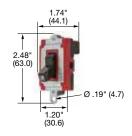
Many of these products are Assembled in USA, as indicated, and many are Buy American Compliant. Please contact Hubbell with any certification requirements.



SNAP2101INA



SNAP2121ILINA



**SNAPSWJUMP** 



SNAP3W1NA

**HP Conversion Chart** 

	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP

## **Specification Grade Commercial Series**

Toggle, rocker and specialty switches - Hubbell designs and manufactures these switches in a wide variety of styles and colors.

- 15 and 20 Amp 120/277V AC
- Single Pole, Double Pole, 3-Way and 4-Way
- Illuminated and Pilot with LED
- Night Light
- Style Line<sup>®</sup> Decorator
- Low voltage DC offering



DS120LA



## **Housing Design**

- Engineered thermoplastic housing is impact-resistant for heavy-duty commercial environments
- Stainless steel automatic grounding staple assures grounding continuity between mounting strap and metal wall box



#### Wiring Design

- Back wire entrance points for terminations accept two wires for feed through capability avoiding pigtailing
- Large brass binding head screws with deep slots secure wire connections
- Strip gauge for accurate wiring



#### **Bridge Design**

- One-piece bridge with integral grounding terminal with #8 brass screw allows compliance to NEC®
- Steel zinc plated mounting strap provides protection against corrosion
- Thread cleaning captive mounting screw



#### Toggle

- Heavy duty nylon toggle resists abuse and chemical attack making it suitable for use in the toughest environments
- Elastomer rocker assures quiet operation and precise timing
- Permanently lubricated assembly provides long life and trouble free operation



#### Identification

 Prominent amperage marking on mounting strap allows easy identification of rating



#### Contacts

- Copper alloy spring contact arm and terminal plate assures proper contact alignment reducing heat rise
- Silver alloy contacts reduce contact erosion and prevent welding, providing long life

NEC® is a registered trademark of the National Fire Protection Association (NFPA).



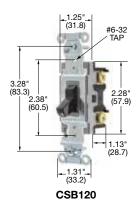




Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle, back and side wired.	Almond Black Brown Gray Ivory Light Almond White	CSB115AL CSB115BK CSB115 CSB115GY CSB115I CSB115LA CSB115W	CSB215AL CSB215BK CSB215 CSB215GY CSB215I CSB215LA CSB215W	CSB315AL CSB315BK CSB315 CSB315GY CSB315I CSB315LA CSB315W	CSB415AL CSB415BK CSB415 CSB415GY CSB415I CSB415LA CSB415W

## 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle, back and side wired.	Almond Black Brown Gray Ivory Light Almond Red White	CSB120AL CSB120BK CSB120 CSB120GY CSB120I CSB120LA CSB120R CSB120W	CSB220AL CSB220BK CSB220 CSB220GY CSB220I CSB220LA CSB220R CSB220W	CSB320AL CSB320BK CSB320 CSB320GY CSB320I CSB320LA CSB320R CSB320W	CSB420AL CSB420BK CSB420 CSB420GY CSB420I CSB420LA CSB420R CSB420W

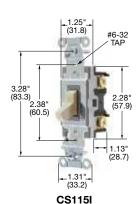


Toggle Specification Grade Commercial Series, 15A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle,	Almond	CS115AL	_	CS315AL	_
side wired only.	Black	CS115BK	_	CS315BK	_
	Brown	CS115	_	CS315	_
	Gray	CS115GY	_	CS315GY	_
	lvory	CS115I	_	CS315I	_
	Light Almond	CS115LA	_	CS315LA	_
	White	CS115W	_	CS315W	_

# 20A, 120/277V AC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle,	Almond	CS120AL	_	CS320AL	_
side wired only.	Black	CS120BK	_	CS320BK	_
	Brown	CS120	_	CS320	_
	Gray	CS120GY	_	CS320GY	_
	lvory	CS120I	_	CS320I	_
	Light Almond	CS120LA	_	CS320LA	_
	White	CS120W	_	CS320W	_



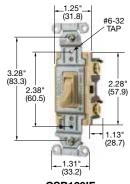
# Framed Toggle Specification Grade Commercial Series, 20A, 120V AC

ZUA, IZUVA	<u> </u>					
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way	
Nylon toggle, back and	Almond	CSB120ALF	_	CSB320ALF	_	
side wired.	Ivory Light Almond	CSB120IF CSB120LAF	<u> </u>	CSB320IF CSB320LAF	_	
	White	CSB120WF	_	CSB320WF	_	

Note: See page D-13 for pre-wired/leaded devices.

See page D-15 for accessories and page D-16 for wallplates.

See page D-22 for technical information.



CSB120IF

**HP Conversion Chart** 

	J114 C1 3101	Onare		
	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP





# Style Line® Decorator Specification Grade Commercial Series, 15A, 120/277V AC

Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way
Rocker,	Almond	DS115AL	_	DS315AL	_
back and	Black	DS115BK	_	DS315BK	_
side wired.	Brown	DS115	_	DS315	_
	Gray	DS115GY	_	DS315GY	_
	lvory	DS115I	_	DS315I	_
	Light Almond	DS115LA	_	DS315LA	_
	Office White	DS1150W	_	DS3150W	_
	White	DS115W	_	DS315W	_

# Style Line® Decorator Specification Grade Commercial Series, 20A, 120/277V AC

Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way
Rocker, back and side wired.	Almond Black Brown Gray Ivory Light Almond Office White Red White	DS120AL DS120BK DS120 DS120GY DS120I DS120LA DS120OW DS120R DS120W	DS220AL DS220BK DS220B DS220GY DS220I DS220LA DS220OW DS220R DS220W	DS320AL DS320BK DS320 DS320GY DS320I DS320LA DS320OW DS320R DS320W	DS420AL DS420BK DS420 DS420GY DS420I DS420LA DS420OW DS420R DS420W



# Style Line® Decorator Specification Grade Commercial Series, Illuminated, Light ON with Load OFF 20A, 120/277V AC

Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way
Rocker, with Blue LED.	Black	DS120ILBK DS120IL	-	DS320ILBK DS320IL	_
back and side wired.	Ivory White	DS120ILW	_	DS320ILW	<del>-</del> -

# Style Line® Decorator Specification Grade Commercial Series, Pilot, Light ON with Load ON 20A, 120/277V AC

Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way
Rocker,	Black	DS120PLBK	_	_	_
with Red LED,	lvory	DS120PLI	_	_	_
back and side wired.	White	DS120PLW	_	_	_

Note: See page D-13 for pre-wired/leaded devices.

See page D-15 for accessories and page D-16 for wallplates.

See page D-22 for technical information.

# #6-32 TAP Self Grounding Clip 2.78" (96.7) 3.28" (70.6) 1.16" (29.4) DS120NLWH

# Style Line®Decorator Spec. Grade Commercial Series with Nightlight, 20A, 120/277V AC

Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way
Rocker,	Almond	DS120NLAL	_	_	_
with Nightlight,	Black	DS120NLBK	_	_	_
self-grounding,	Brown	DS120NLBR	_	_	_
push, back and	Gray	DS120NLGY	_	_	_
side wired.	lvory	DS120NLIV	_	_	_
	Light Almond	DS120NLLA	_	_	-
	Office White	DS120NLOW	_	_	_
	Red	DS120NLRD	_	_	-
	White	DS120NLWH	_	_	_

Note: Light glows through the top portion of the rocker when switch is in the OFF position. Does not require a neutral wire.

HP Conversion Chart							
	120V	208V	240V	277V AC			
15A	.5HP	1.5HP	2HP	2HP			
20A	1HP	2HP	2HP	2HP			

# Pre-Wired/Leaded Toggle Spec. Grade Commercial Series, 15A, 120/277V AC - 8" #12 AWG THHN



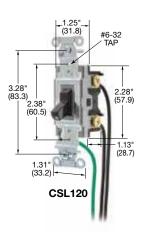




Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Toggle, Nylon, Pre-wired leads.	Almond Black Brown Gray Ivory Light Almond Office White White	CSL115AL CSL115BK CSL115 CSL115GY CSL115I CSL115LA CSL115OW CSL115W	CSL215AL CSL215BK CSL215 CSL215GY CSL215I CSL215LA CSL215OW CSL215W	CSL315AL CSL315BK CSL315 CSL315GY CSL315I CSL315LA CSL315OW CSL315W	CSL415AL CSL415BK CSL415 CSL415GY CSL415I CSL415LA CSL415OW CSL415W

#### 20A. 120/277V AC

20A, 120/2114 AO								
Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way			
Toggle, Nylon, Pre-wired leads.	Almond Black Brown Gray Ivory Light Almond Office White Red White	CSL120AL CSL120BK CSL120 CSL120GY CSL120I CSL120LA CSL120OW CSL120OW CSL120W	CSL220AL CSL220BK CSL220 CSL220GY CSL220I CSL220LA CSL220OW CSL220R CSL220W	CSL320AL CSL320BK CSL320 CSL320GY CSL320I CSL320LA CSL320OW CSL320R CSL320W	CSL420AL CSL420BK CSL420 CSL420GY CSL420I CSL420LA CSL420OW CSL420R CSL420W			



# Pre-Wired/Leaded Decorator Spec. Grade Commercial Series, 15A, 120/277V AC - 8" #12 AWG THHN

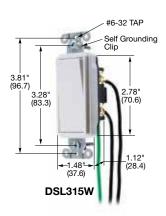




Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way
Rocker,	Almond	DSL115AL	_	DSL315AL	_
Polycarbonate,	Black	DSL115BK	_	DSL315BK	_
Pre-wired leads.	Brown	DSL115	_	DSL315	_
	Gray	DSL115GY	_	DSL315GY	_
	lvory	DSL115I	_	DSL315I	_
	Light Almond	DSL115LA	_	DSL315LA	_
	Office White	DSL115OW	_	DSL315OW	_
	White	DSL115W	_	DSL315W	_

#### 20A. 120/277V AC

20A, 120/211 V AC								
Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way			
Rocker, Polycarbonate, Pre-wired leads.	Almond Black Brown Gray Ivory Light Almond Office White White	DSL120AL DSL120BK DSL120 DSL120GY DSL120I DSL120LA DSL120OW DSL120W	DSL220AL DSL220BK DSL220 DSL220GY DSL220I DSL220LA DSL220OW DSL220W	DSL320AL DSL320BK DSL320 DSL320GY DSL320I DSL320LA DSL320OW DSL320W	DSL420AL DSL420BK DSL420 DSL420GY DSL420I DSL420LA DSL420OW DSL420W			



# Illuminated, Light ON with Load OFF 20A. 120/277V AC

Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way
Rocker, Polycarbonate, Pre-wired leads, Blue LED.	lvory White	DSL120IL DSL120ILW	_	DSL320IL DSL320ILW	

# Pilot, Light ON with Load ON 20A, 120/277V AC

20A, 120/211 V AO							
Description	Rocker Color	Single Pole	Double Pole	Three Way	Four Way		
Rocker, Polycarbonate, Pre-wired leads, Red LED.	Red	DSL120PL	-	_	_		

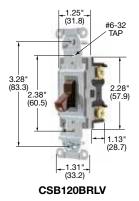
Note: See page D-15 for accessories and page D-16 for wallplates.

See page D-22 for technical information.

#### **HP Conversion Chart**

111 00	71146131011	Onart		
	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP

# **Switches**



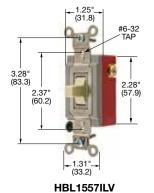
# Maintained Contact Toggle, Specification Grade, 5A, 24V DC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Nylon toggle,	Almond	CSB120ALLV	_	CSB320ALLV	_
back and	Black	CSB120BKLV	_	CSB320BKLV	_
side wired.	Brown	CSB120BRLV	_	CSB320BRLV	_
	Gray	CSB120GYLV	_	CSB320GYLV	_
	lvory	CSB120ILV	_	CSB320ILV	_
	Light Almond	CSB120LALV	_	CSB320LALV	_
	Red	CSB120RLV	_	CSB320RLV	_
	White	CSB120WHLV	_	CSB320WHLV	_



# Maintained Contact Decorator, Specification Grade, 5A, 24V DC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way
Nylon decorator,	Almond	DS120ALLV	_	DS320ALLV	_
back and	Black	DS120BKLV	_	DS320BKLV	_
side wired.	Brown	DS120LV	_	DS320LV	_
	Gray	DS120GYLV	_	DS320GYLV	_
	lvory	DS120ILV	_	DS320ILV	_
	Light Almond	DS120LALV	_	DS320LALV	_
	Red	DS120RLV	_	DS320RLV	_
	White	DS120WLV	_	DS320WLV	_



# Momentary Contact, Specification Grade, Single Pole, Double Throw, Center OFF 5A, 24V DC

Description	Toggle Color	Single Pole	Double Pole	Three Way	Four Way	
Nylon toggle,	Brown	HBL1557LV	_	_	_	
back and	Gray	HBL1557GYLV	_	_	_	
side wired.	lvory	HBL1557ILV	_	_	_	
	Red	HBL1557RLV	_	_	_	
	White	HBL1557WLV	_	_	_	

Note: See page D-13 for pre-wired/leaded devices.

See page D-15 for accessories and page D-16 for wallplates.

See page D-22 for technical information.

Dimoneione	in	Inchas	(mm

HP C	OHVEL SION	Cilait		
	120V	208V	240V	277V AC
15A	.5HP	1.5HP	2HP	2HP
20A	1HP	2HP	2HP	2HP

#### **Accessories**

# Pilot Light, 120/277V AC

IP44 SUITABILITY





Description	Catalog Number
Red neon pilot light, back and side wired, fits standard switch plate.	HBL1220RJ



HBL1220RJ

# Brass Locking Attachment for Switches Available in Master Keying and Straight Keying Systems

Description	Catalog Number
Straight keying (all locks alike). Appropriate for most applications. Straight cylinder type lock, each HBL96061 ordered operates on the same key. All locks are keyed alike.	HBL96061*
Same as above except in dull chrome finish to match stainless steel plates.	HBL96061DCH*
Straight keying (individual). Straight cylinder type lock, each HBL96062 ordered operates on a different key. All locks are keyed differently and individually. This type cannot be master keyed.	HBL96062*



HBL96061 shown with wallplate and switch (sold separately)

# **SWITCHOUT®** Lockout Device

Description	Catalog Number
Yellow, nylon toggle switch lockout device (Two devices per package).	HSLDPK2*



**(1)** 

# **Weatherproof Plates**

Description	Catalog Number
Clear bubble plate, silicone rubber for use with all general purpose AC toggle and PresSwitch® switches. Fits both FS/FD and standard boxes.	HBL1795
Cast aluminum lift cover plate with fiber shield. For standard toggle and PresSwitch®. Fits only FS/FD boxes.	HBL7420



HSLDPK2

# Weatherproof Plates for PresSwitch®

Weather proof reales for the sowner	
Description	Catalog Number
Gray neoprene PresSwitch® plate. Fits FS/FD and standard boxes.	HBL1750
Same as above except yellow.	HBL17CM50
Gray neoprene PresSwitch® plate with 125V red pilot light. Fits only FS/FD boxes.	HBL1785
Same as above except yellow.	HBL17CM85

Note: \*Not UL Listed or CSA Certified.

Each locking wallplate is supplied with two keys.

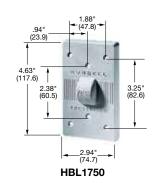
See section BB for additional information on safety lockout devices.

See section O for additional wallplates.



HBL1795







Dimensions in Inches (mm)



## **Accessories**









# **Toggle Switch Plates**

		1-Gang			2-Gang	
Description	Color	Standard	Snap-On	Standard	Snap-On	
Nylon toggle,	Gray	NP1GY	_	NP2GY	_	
standard size,	lvory	NP1I	NPS1I	NP2I	NPS2I	
smooth nylon.	Light Almond	NP1LA	NPS1LA	NP2LA	NPS2LA	
	White	NP1W	NPS1W	NP2W	NPS2W	







# **Toggle Switch Plates**

Description	Color	1-Gang	2-Gang	3-Gang	
Nylon toggle, standard size, smooth metal.	Aluminum Brass Stainless Steel, 302/304 Stainless Steel, 430	SA1 SB1 SS1 SS1L	SA2 SB2 SS2 SS2L	① SBP3* SS3 SS3L	







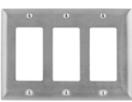


# Style Line® Decorator Switch Plates

		1-Gang		2-Gang	
Description	Color	Standard	Snap-On	Standard	Snap-On
Nylon decorator,	Gray	NP26GY	_	NP262GY	_
standard size,	lvory	NP26I	NPS26I	NP262I	NPS262I
smooth metal.	Light Almond	NP26LA	NPS26LA	NP262LA	NPS262LA
	White	NP26W	NPS26W	NP262W	NPS262W







# Style Line® Decorator Switch Plates

Description	Color	1-Gang	2-Gang	3-Gang	
Nylon decorator,	Aluminum	①	0	①	
standard size,	Brass	SB26	SB262	①	
smooth metal.	Stainless Steel, 302/304	SS26	SS262	SS263	
	Stainless Steel, 430	SS26L	SS262L	_	

Note: See section O for additional wallplates.

\*Brass plated.

①Available as a custom metal wallplate. See wallplate section for additional information.

# Switches

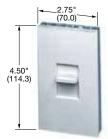
# **Certification Chart**

UL, CSA, and Fed. Spec. Listing Data

Catalog Number	WS896 Listed	UL Listed UL20	CSA Certified	Catalog Number	WS896 Listed	UL Listed UL20	CSA Certified	
1201	Yes	Yes	Yes	HBL1224	Yes	Yes	Yes	
1203	Yes	Yes	Yes	HBL1221L	Yes	Yes	Yes	
1221	Yes	Yes	Yes	HBL1222L	Yes	Yes	Yes	
1222	Yes	Yes	Yes	HBL1223L	Yes	Yes	Yes	
1223	Yes	Yes	Yes	HBL1224L	Yes	Yes	Yes	
1224	Yes	Yes	Yes	HBL1221IL	Yes	Yes	Yes	
1221PW	Yes	Yes	Yes	HBL1223IL	Yes	Yes	Yes	
1222PW	Yes	Yes	Yes	HBL1221PL	Yes	Yes	Yes	
1223PW	Yes	Yes	Yes	HBL1222PL	Yes	Yes	Yes	
1224PW	Yes	Yes	Yes	HBL1223PL	Yes	Yes	Yes	
CS115	Yes	Yes	Yes	HBL1221RKL	No	Yes	Yes	
CS315	Yes	Yes	Yes	HBL1222RKL	No	Yes	Yes	
CS120	Yes	Yes	Yes	HBL1223RKL	No	Yes	Yes	
CS320	Yes	Yes	Yes	HBL1224RKL	No	Yes	Yes	
CSB115	Yes	Yes	Yes	HBL1259I	No	No	No	
CSB215	Yes	Yes	Yes	HBL1281	No	Yes	Yes	
CSB315	Yes	Yes	Yes	HBL1282	No	Yes	Yes	
CSB415	Yes	Yes	Yes	HBL1283	No	No	No	
CSB120	Yes	Yes	Yes	HBL1284	No	No	No	
SB120 SB220	Yes	Yes	Yes	HBL1287I	No	Yes	Yes	
SSB320	Yes	Yes	Yes	HBL1288I	No	No	No	
SB420	Yes	Yes	Yes	HBL1281MO	No	No	No	
CSL115	Yes	Yes	Yes	HBL1281MC	No	No	No	
OSL215	Yes	Yes	Yes	HBL1297	No	Yes	Yes	
OSL315	Yes	Yes	Yes	HBL1298	No	No	No V	
CSL415	Yes	Yes	Yes	HBL1381	No	Yes	Yes	
CSL120	Yes	Yes	Yes	HBL1382	No	Yes	Yes	
CSL220	Yes	Yes	Yes	HBL1385	No	Yes	Yes	
CSL320	Yes	Yes	Yes	HBL1386	No	Yes	Yes	
CSL420	Yes	Yes	Yes	HBL1386L	No	Yes	Yes	
DS115	No	Yes	Yes	HBL1388	No	Yes	Yes	
DS315	No	Yes	Yes	HBL1556	No	Yes	Yes	
DS120	No	Yes	Yes	HBL1557	No	Yes	Yes	
DS220	No	Yes	Yes	HBL1556L	No	Yes	Yes	
DS320	No	Yes	Yes	HBL1557L	No	Yes	Yes	
DS420	No	Yes	Yes	HBL3031	Yes	Yes	Yes	
DS120IL	No	Yes	Yes	HBL3032	Yes	Yes	Yes	
DS320IL	No	Yes	Yes	HBL3033	Yes	Yes	Yes	
DS120PL	No	Yes	Yes	HBL3031PL	Yes	Yes	Yes	
DSL115	No	Yes	Yes	HBL3031PL	Yes	Yes	Yes	
DSL215	No	Yes	Yes	HBL3032PL	Yes	Yes	Yes	
OSL315	No	Yes	Yes	SNAP1201	No	Yes	Yes	
OSL415	No	Yes	Yes	SNAP1201IL	No	Yes	Yes	
OSL120	No	Yes	Yes	SNAP1201PL	No	Yes	Yes	
)SL220	No	Yes	Yes	SNAP1203	No	Yes	Yes	
DSL320	No	Yes	Yes	SNAP1203IL	No	Yes	Yes	
DSL420	No	Yes	Yes	SNAP1221	No	Yes	Yes	
HBL1201	Yes	Yes	Yes	SNAP1221IL	No	Yes	Yes	
HBL1202	Yes	Yes	Yes	SNAP1221PL	No	Yes	Yes	
HBL1203	Yes	Yes	Yes	SNAP1223	No	Yes	Yes	
1BL1203 1BL1204	Yes	Yes	Yes	SNAP1223 SNAP1223	No	Yes	Yes	
1BL1204 1BL12011L	Yes	Yes	Yes	SNAP 1223 SNAP 1223 IL	No	Yes	Yes	
HBL1203IL HBL1201PL	Yes	Yes	Yes	SNAP2101	No No	Yes	Yes	
	Yes	Yes	Yes	SNAP2101IL	No	Yes	Yes	
BL1203PL	Yes	Yes	Yes	SNAP2101PL	No	Yes	Yes	
HBL1201L	Yes	Yes	Yes	SNAP2103	No	Yes	Yes	
IBL1202L	Yes	Yes	Yes	SNAP2103IL	No	Yes	Yes	
HBL1203L	Yes	Yes	Yes	SNAP2121	No	Yes	Yes	
1BL1204L	Yes	Yes	Yes	SNAP2121IL	No	Yes	Yes	
HBL1221	Yes	Yes	Yes	SNAP2121PL	No	Yes	Yes	
HBL1222	Yes	Yes	Yes	SNAP2123	No	Yes	Yes	
HBL1223	Yes	Yes	Yes	SNAP2123IL	No	Yes	Yes	

Note: Catalog numbers above represent all colors and variations.

# **Slide and Rotary Control Dimmers**



AS103 1000W Dimmer Fits Single-Gang Wall Boxes



**AS203** 2000W Dimmer Fits Single-Gang Wall Boxes

# **Architectural Grade, Incandescent Preset Slide Control Dimmers**

Description	Color	Rating	Catalog Number
Single pole/three way - preset.	White	1000W, 120V AC, 60Hz	AS103
Single pole/three way - preset.	White	2000W, 120V AC, 60Hz	AS203

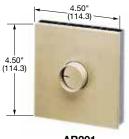
#### **Accessories**

Description	Color	Catalog Number
Small plate kit for 600W and 1000W models.	lvory	AS1I
Includes non-metallic trimplate and slide.	White	AS1W
Large plate kit for 1500W and 2000W models.	lvory	AS2I
Includes non-metallic trimplate and slide.	White	AS2W

Note: The dimmers listed above can be wired for single pole or three way applications. See page D-19 for ganging and derating.



AR101 1000W Dimmer Fits Single-Gang Wall Boxes



**AR201**2000W Dimmer
Fits Single-Gang Wall Boxes

# **Architectural Grade, Incandescent Rotary Control Dimmers**

Description	Color	Rating	Catalog Number
Single pole - push ON/OFF.	Beige	1000W, 120V AC, 60Hz	AR101
Three way - push ON/OFF.	Beige		AR103
Single pole, rotary ON/OFF.	Beige	2000W, 120V AC, 60Hz	AR201

#### **Accessories**

Description	Color	Catalog Number
Small plate kit for 600W and 1000W models.	Beige	AR1BE
Includes non-metallic trimplate and knob.	White	AR1W
Large plate kit for 1500W and 2000W models.	Beige	AR2BE
Includes non-metallic trimplate and knob.	White	AR2W

Note: See page D-19 for ganging and derating.

# **Dimmer Ganging and Derating**

# Architectural Grade Slide and Rotary Series Number of Switchboxes Required with Dimmer Side Sections Intact

			Numb	er of Small	Controls (	600W and	1000W)	
		0	1	2	3	4	5	6
Number of	0	0	1	1+1	4	1+4	7	1+7
Large Controls (1500W and 2000W)	1	1	3	5	6	8	9	11
(1500W and 2000W)	2	4	6	7	9	10	12	13
	3	6	8	10	11	13	14	16
	4	9	11	12	14	15	17	18
				Number	of Gangs	Required		

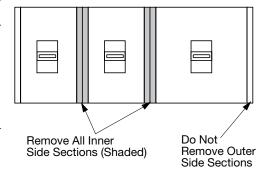
Note: When ganging an even number of small controls with no side sections removed (plus numbers in chart), use gangable switchboxes with tapped ears as shown below. Do not use plaster rings or gangbox covers. Space an additional switchbox 4 in. apart from the other switchbox(es). A 4 in. close nipple is recommended as a spacer between the switchboxes.

# Three small dimmers in this box. 4-Gang Gangable Switchbox 3/4 Space (Use Close Nipple)

# Number of Switchboxes Required with Side Sections Removed

			Numbe	er of Small	Controls (6	600W and	1000W)	
		0	1	2	3	4	5	6
Number of	0	0	1	2	3	4	5	6
Large Controls (1500W and 2000W)	1	1	3	4	5	6	7	8
	2	3	5	6	7	8	9	10
	3	5	7	8	9	10	11	12
	4	7	9	10	11	12	13	14
				Number	of Gangs	Required	l	

Note: When removing side sections, remove only inner side sections. Do not remove side sections on outer ends of gang. The same installation rules apply to rotary dimmers (not shown).



## **Derating Chart**

No Side Sections Removed	One Side Section Removed	Both Side Sections Removed
600W	600W	500W
1000W	900W	700W
1500W	1250W	1000W
2000W	1800W	1500W

Note: When ganging any combination of small and large controls, place a small control on one extreme end of the gang, and a large control at the other end of the gang. When ganging with side sections intact, use offset mounting holes. When ganging with side sections removed, use center mounting holes. Allow a 1/2 in. gap (space) between controls for ease in attaching the faceplate.

# Specification Grade Slide and Rotary Series Switchboxes Required: Side Sections Removed

# **Derating Chart**

1 Dimmer In Wall Box	2 Dimmers In Wall Box	3 Or More Dimmers In Wall Box	
600W	500W	400W	
1000W	W008	650W	
5A fan speed	4A fan speed	3A fan speed	



# **Heavy Duty Panel Mount**



HBL11



HBL123SP

# 10A 250V AC 20A 125V AC Horsepower Rated ¾ HP, 125-250V AC

Description		Terminal	Catalog Number
Single pole/ single throw.	.56° (14.2) Screw Terr	Screw    1,13"   Spade     (28.7)	HBL11 HBL11SP
Single pole/ single throw momentary.	.56° (14.2) Screw Terr	Screw Spade (28.7)	HBL11M HBL11SPM
Single pole/ double throw.	.56° (14.2) Screw Ten	Screw    1.13" Spade	HBL12 HBL12SP
Single pole/ double throw 3-position center OFF.	O <sub>N</sub> .61" (15.5) OFF OFF ON Screw Ten	Screw Spade (28.7)	HBL123 HBL123SP
Single pole/ double throw 3-position center OFF momentary.	OFF (14.2) Screw Ten	Screw 1.13" Spade 28.7)	HBL123MM HBL123SPMM

Note: All threaded stems 15/32 in.-32 thread.

# 10A 240V AC 15A 120V AC

Description		Terminal	Catalog Number
Single pole/ single throw.	0.62" (15.7) 0.48" (12.2) 1.78" 0.31" (7.9) 0.37" (9.4)	Screw	HBL118
	0.56" (14.2)		

Note: 15/32 in.-32 thread.

# 4A 250V 8A 125V 10A 120V AC 1/3 HP 120V AC

Description		Terminal	Catalog Number
Single pole/ single throw.	0FF 0.56" (14.2) 15/32-32 THRD	#18 Std. AWG Copper Wire Leads 105° C Black.	HBL11WL

Note:  $^{15}$ %2 in.-32 thread, keyway .080 x .035.

# **Specifications**

Impact Resistant Thermoplastic Body.

Fine Silver Contacts.

Knurled Nut, Hex Nut And Strap All Nickel Plated.

Keyed Brass Bushing Nickel Plated.

Brass Toggle Nickel Plated.

Choice of Terminal Design: .250 in. (6.3) Male Tab Spade Type or 6/32 Screw Type.

UL Recognized.

Dimensions in Inches (mm)



# **Heavy Duty Panel Mount**

# 10A 250V AC 20A 125V AC Horsepower Rated 11/2 HP, 125-250V AC

Description		Terminal	Catalog Number
Double pole/ single throw.	.75" (19.1)   Spade Terminal Shown	Screw Spade	HBL21 HBL21SP
Double pole/ single throw.	.75" (19.1)	Screw Spade	HBL22 HBL22SP
Double pole/ double throw 3-position center OFF.	OFF	Screw Spade	HBL223 HBL223SP
Double pole/ double throw 3-position center OFF momentary.	.75" (19.1)  .80" (20.3)  .80" (30.0)  .30" (33.0)  Screw Terminal Shown	Screw Spade	HBL223MM HBL223SPMM
Silicone rubber boot.		Screw Spade	SSB1



See AA-33 for additional information on 12V DC tapered handle switches.

HBL21



**HBL223** 



SSB<sub>1</sub>

# 4A 250V 8A 125V 10A 120V AC 1/3 HP 120V AC

Description		Terminal	Catalog Number
Single pole/ single throw.	0.41" (10.4) Black Nylon Plunger 1.58" (40.1) (4.8) (12.5) (13.5) (13.5) (15.4) (152.4) (152.4) (152.4) (152.4)	#18 Std. AWG Copper Wire Leads 105° C Black.	HBL11PBWL

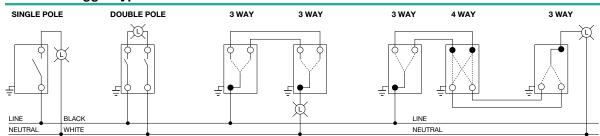
Note:  $^{15}$ %2 in.-32 thread, keyway .080 x .035.



HBL11PBWL

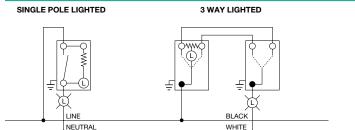
# **Switches**

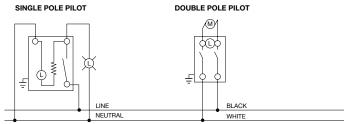
# **Standard Toggle Type Switches**



# Illuminated Switches (light ON with load OFF)

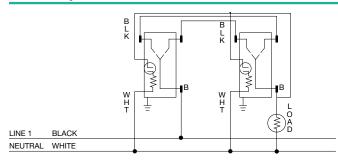
# Pilot Light Switches (light ON with load ON)

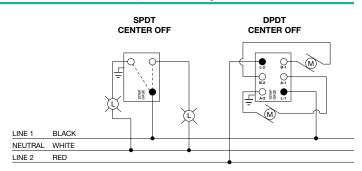




# **Three Way Pilot Switches**

# Three Position Switches, Momentary and Maintained





# Specifications - HBL® Extra Heavy Duty Industrial Grade Switches (SP, DP, 3-Way, 4-Way)

Listings	Component	Material
UL Listed	Base	Thermoset, Color Coded by Amperage
CSA Certified	Тор	Thermoset, Gray
Verified to Fed. Spec. W-S-896,	Toggle	Nylon
SP, DP, 3-way and 4-way	Terminals	Brass
	Terminal Screws	Brass
	Mounting Bridge	Nickel Plated Steel
	Contacts	Silver Alloy
	Moveable Contact Arm	Brass
	Rocker	Elastomer
	Ground Terminal	Nickel-Plated Steel
	Ground Screw	Brass
	Automatic Grounding Clip	Stainless Steel

# **Performance Data**

Dielectric Voltage	Withstands 1500V AC minimum for 1 minute
Max. Working Voltage	277V AC
Overload	Minimum 4.8 times rated current for 100 cycles
Temperature Rise	30°C maximum at rated current
Max. Continuous Current	15A, 20A, 30A
Endurance	50,000 cycles min., tungsten filament lamp load Fed. Spec. #WS896,
	SP, DP, 3-way and 4-way
Mechanical	
Terminal Accommodations	#14 AWG min #10 AWG max. solid and stranded copper wire only
Environmental	
Flammability	UL 94V-2
Operating Temperature	Max. continuous: 75°C; Min. continuous: -40°C without impact

# SECTION E

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# **Energy Consumption and Standards Compliance**

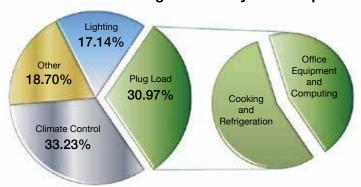
Electricity consumption in commercial buildings has changed dramatically over the past decade. Energy efficient lighting sources like LEDs have reduced their contribution on a commercial building's total electricity consumption from 40% to approximately 17%. Today plug and process loads consume up to 30% of a typical commercial building's energy costs. Energy Efficiency Codes & Standards are becoming more stringent in an effort to reduce energy consumption in all areas of commercial buildings.

Hubbell Load:Logic<sup>®</sup> series of control devices offers a broad range of space, centralized and distributed controls that meet the latest codes and standards and qualify for LEED certification points. Hubbell devices feature ease of installation, setup, operation and commissioning process. The result is an "install-and-forget" experience.

## Additional features include:

- Occupancy or time-based controls
- Integration with third party energy management or climate control systems
- Manual ON mode requires user operation to turn lights ON but automatically turns lights OFF when a space is unoccupied after a specified period of time
- Daylight Harvesting sensors for dimming or to keep the lights OFF when natural light is sensed
- Automatic receptacle control

# **Commercial Buildings Electricity Consumption**



Electrical bill impact for a typical office building



# Adaptive Technology Provides Better Control

Hubbell's patented breakthrough in advanced control feature smart microprocessors constantly monitoring the controlled area and adjust the sensitivity and timer based on environmental history.

- Lower energy costs and utility bills
- No need to manually adjust for occupancy changes

# **Backed by Hubbell Service and Support**

Hubbell Energy Efficiency Solutions focuses on environmental stewardship, innovative products and efficient building operations. Hubbell also offers superior service and support with:

- Online worksheets for calculating energy savings and ROI
- Detailed online e-learning courses
- Product selection guide to assist in choosing the right technology
- Online specification assistance
- Comprehensive layout and take-off services
- Highly knowledgeable network of trained professionals and staff
- BIM models and 3D coverage patterns



# The Right Technology for the Right Application

# Passive Infrared (PIR)



Requires a clear, unobstructed line of sight for detection, because it senses occupancy as movement of heat emitted from the body against the background space. A segmented Fresnel lens divides the coverage area into zones. Movement across zones is interpreted as occupancy.

# Ultrasonic (US)



Senses occupancy by emitting an ultrasonic high-frequency sound wave (32 kHz to 45 kHz), sensing the frequency of the reflected signal, and then determining occupancy based on a change in frequency. While this has a limited range, it detects small motions and does not require a clear line of sight.

# **Dual Technology**



Combines PIR and US technology, minimizing the risk of lights turning ON when the space is unoccupied. Once occupancy is detected by both technologies within the space lights are turned ON, only one technology is necessary to keep the lights ON.



# Wired or Wireless Sensors:

# What is the right choice?

Both choices offer advantages and selecting the most suitable one is key to a successful energy control strategy.

New construction, retrofit applications, construction materials, type of space to be controlled, etc. play a role in the selection process.



# Wired

Wired technology has been available for over 50 years and is traditionally used when there is no restriction for running wires. It also offers more choices of sensing technologies.

Wired technology:

- The preferred choice for new construction, as wiring can be run easily while construction is underway.
- Offers more technologies; adaptive, ultrasonic and dual.
- Easily interfaces with other technologies and control systems like wireless, building automation and HVAC.

# Wired Controls' New Companion

Hubbell's WL Series wireless controls can be installed to work with Hubbell's traditional wired technology to provide an optimal solution when running extra wiring is difficult or impractical.

# Wireless

The WL Series sensors are designed for ultra-low power consumption which translates into a ten year battery life. They also combine advanced Digital Signal Processing (DSP) with Passive Infrared (PIR) technology to maximize sensitivity to the movement of heat emitted from people occupying a space.

Control signals are transmitted up to 60 feet over the low interference 434MHz band to associated Clear Connect® enabled devices that automatically turn lights OFF and other non-essential loads.

Wireless technology:

- Flexible, making moves, additions and changes easy because there is no need for additional wiring.
- Fast to install and setup, typically involves replacing the existing wall switch and pairing the desired sensor.
- These controls utilize a simplified 6-second press and hold commissioning procedure. No need for remotes, computers, smartphones or any other device to set up the system.



## **Features and Benefits**

# **Adaptive Dual (Ultrasonic and Passive Infrared)**

Combines PIR and US technology, minimizing the risk of lights turning ON when the space is unoccupied. Once occupancy is detected by both technologies within the space lights are turned ON, only one technology is necessary to keep the lights ON.

Adaptive technology provides better control. Hubbell's patented breakthrough in advanced control feature smart microprocessors constantly monitoring the controlled area and adjust the sensitivity and timer based on environmental history.

The optimum choice when performance is paramount.

## **Standard Passive Infrared**

Requires a clear, unobstructed line of sight for detection, because it senses occupancy as movement of heat emitted from the body against the background space. A segmented Fresnel lens divides a coverage area into zones. Movement across zones is interpreted as occupancy.

Excellent for small room control.



WS2000W

# **Adaptive Series**



# **Housing Design**

- Steel mounting strap
- High impact molded plastics
- Color matching tamper resistant lens

# **WS Series**



# **Housing Design**

- Plated steel mounting strap
- High Impact molded plastics
- Recessed tamper resistant lens
- Night light option



## Coverage and Electrical Ratings

- Dual technology 1,000 sq. ft. Ultrasonic only - 400 sq. ft.
- 120/277V AC 50/60 Hz; no neutral required; 24V DC, 33mA
- Zero-arc point switching
- Compatible with CFL/LED and motor loads



## Coverage and Electrical Ratings

- High density PIR 1,200 sq. ft.
- WS1000 series 120V AC 60Hz WS2000 series - 120/277V AC 60Hz; multi-way capable
- No neutral required
- Compatible with CFL/LED and motor loads



# Operation

- Selectable Auto or Manual ON operating modes
- Vacancy only version
- Dual relay version for bi-level switching or lighting/fan control applications
- Photocell for extra energy savings



# Operation

- WS2000 series Selectable Auto or Manual ON operating modes
- Vacancy only version
- Dual relay version for bi-level switching or lighting/fan control applications
- Photocell for extra energy savings



# **Adaptive Technology Wall Switch Sensors**

800W Incandescent/Electronic Ballast, 5A LED, 1/6 HP at 120V AC, 1800W Electronic Ballast, 5A LED , 1/6 HP at 277V AC.

# **Dual (Ultrasonic and Passive Infrared)**

		Single Circuit		Dua	Dual Circuit	
Description	Color	1 button	Auto control with no button	2 buttons	Auto control with no button	
Selectable Manual/ Auto ON.	Black Gray Ivory Light Almond White	AD2000BK1 AD2000GY1 AD2000I1 AD2000LA1 AD2000W1	AD2000BK1N AD2000GY1N AD2000I1N AD2000LA1N AD2000W1N	AD2000BK22 AD2000GY22 AD2000I22 AD2000LA22 AD2000W22	AD2000BK22N AD2000GY22N AD2000I22N AD2000LA22N AD2000W22N	
Manual ON (Vacancy).	Black Gray Ivory Light Almond White	AD2001BK1 AD2001GY1 AD2001I1 AD2001LA1 AD2001W1	- - - - -	AD2001BK22 AD2001GY22 AD2001I22 AD2001LA22 AD2001W22	- - - -	



		Single Circuit	Dual Circuit
Description	Color	1 button	2 buttons
Selectable Manual/ Auto ON.	Black Gray Ivory Light Almond White	AU2000BK1 AU2000GY1 AU2000I1 AU2000LA1 AU2000W1	AU2000BK22 AU2000GY22 AU2000I22 AU2000LA22 AU2000W22
Manual ON (Vacancy).	Black Gray Ivory Light Almond White	AU2001BK1 AU2001GY1 AU2001I1 AU2001LA1 AU2001W1	AU2001BK22 AU2001GY22 AU2001I22 AU2001LA22 AU2001W22

## **Passive Infrared**

		Single Circuit	Dual Circuit
Description	Color	1 button	2 buttons
Selectable Manual/ Auto ON.	Black Gray Ivory Light Almond White	AP2000BK1 AP2000GY1 AP2000I1 AP2000LA1 AP2000W1	AP2000BK22 AP2000GY22 AP2000I22 AP2000LA22 AP2000W22
Manual ON (Vacancy).	Black Gray Ivory Light Almond White	AP2001BK1 AP2001GY1 AP2001I1 AP2001LA1 AP2001W1	AP2001BK22 AP2001GY22 AP2001I22 AP2001LA22 AP2001W22

Note: Neutral wire versions, add N in front of 2000 when ordering, example: (ADN2000, AUN2000, APN2000). Wallplate sold separately. See page E-23 for technical specifications, coverage patterns and wiring schematics. Special order for Assembled in USA units. Add suffix "U" at the end of the catalog number. Consult with your local Territory Manager.



AD2000W1 AD2001W1



AD2000W1N AD2000W22N



AU2000W1 AU2001W1



AP2000W1 AP2001W1



AP2000W22 AP2001W22





AD2240W1 AD2241W1



WS2000W WS1000W



WS1020NW WS1021NW



DT2000W



DT5030W

# **Dual (Ultrasonic and Passive Infrared)**

24V DC, 33mA. Requires a CU300xx series control unit.

		Single Circuit	Dual Circuit
Description	Color	1 button	2 buttons
Selectable Manual/ Auto ON.	Black Gray Ivory Light Almond White	AD2240BK1 AD2240GY1 AD2240I1 AD2240LA1 AD2240W1	AD2240BK2 AD2240GY2 AD2240I2 AD2240LA2 AD2240W2
Manual ON (Vacancy).	Black Gray Ivory Light Almond White	AD2241BK1 AD2241GY1 AD2241I1 AD2241LA1 AD2241W1	AD2241BK2 AD2241GY2 AD2241I2 AD2241LA2 AD2241W2

Note: Wallplate sold separately. See page E-23 for technical specifications, coverage patterns and wiring schematics.

## **Passive Infrared**

Manual time delay adjustment.

Description	Color	Standard	with Nightlight	with Neutral	with Nightlight and Neutral
Manual adjusting; selectable manual/auto ON operation; dual-voltage 120/277V AC; multi-way capable.	Gray	WS2000GY	WS2000NGY	_	
	Ivory	WS2000I	WS2000NI	WS2004I	WS2004NI
	Light Almond	WS2000LA	WS2000NLA	_	
	White	WS2000W	WS2000NW	WS2004W	WS2004NW
Manual adjusting; selectable manual/auto ON operation; 120V AC only.	lvory	WS1000I	WS1000NI	-	-
	Light Almond	WS1000LA	WS1000NLA	-	-
	White	WS1000W	WS1000NW	-	-
Manual adjusting; manual ON operation; 120V AC only.	lvory Light Almond White	WS1001I WS1001LA WS1001W	WS1001NI WS1001NLA WS1001NW	<u>-</u>	
Manual adjusting;	Gray	WS1020GY	WS1020NGY	–	–
auto ON operation;	Ivory	WS1020I	WS1020NI	WS1024I	WS1024NI
dual circuit;	Light Almond	WS1020LA	WS1020NLA	WS1024LA	WS1024NLA
120V AC only.	White	WS1020W	WS1020NW	WS1024W	WS1024NW
Manual adjusting;	Gray	WS1021GY	WS1021NGY	_	–
manual ON operation;	Ivory	WS1021I	WS1021NI	WS1025I	WS1025NI
dual circuit;	Light Almond	WS1021LA	WS1021NLA	WS1025LA	WS1025NLA
120V AC only.	White	WS1021W	WS1021NW	WS1025W	WS1025NW

Note: See page E-24 for technical specifications, coverage patterns and wiring schematics.

# **Digital Timer**

Description	Color	Catalog Number
DIP switch enable preset intervals for 2 and 4 hours. User adjustable up to	White	DT2000W
24 hours. 3-way capable, 960W @ 120V AC and 1200W @ 277V AC.		

# **Count Down Timers**

Description	Color	30 Minutes: OFF, 5, 10, 20, 30	60 Minutes: OFF, 15, 30, 45, 60	12 Hours: OFF, 2, 4, 8, 12
1000W @ 120V AC and 1400W @ 277V AC.	lvory	DT5030I	DT5060I	DT5012I
	Light Almond	DT5030LA	DT5060LA	DT5012LA
	White	DT5030W	DT5060W	DT5012W

# c (jr)

## **Features and Benefits**

# **Dual (Ultrasonic and Passive Infrared)**

Combines PIR and Ultrasonic technology, minimizing the risk of lights turning ON when the space is unoccupied. Once occupancy is detected by both technologies within the space lights are turned ON, only one technology is necessary to keep the lights ON.

Adaptive technology provides better control. Hubbell's patented breakthrough in advanced control feature smart microprocessors constantly monitoring the controlled area and adjust the sensitivity and timer based on environmental history.

The absolute choice for advanced control and precise performance.



Passive infrared sensors are specifically designed for long-range major motion activity sensitivity, making them ideal for large open areas.

Various models are suitable for indoor and outdoor applications where NEMA 4X rating is required. Other units are suitable for extreme temperatures areas providing unsurpassed flexibility for almost every application.



ATD1600W

# **Ceiling Mount**



# **Housing Design**

- High-impact, plastic (UL94, 5VA)
- 12-element segmented Fresnel lens; 32kHz ultrasonic transmitter and receiver
- Mounting base provided

# Wall Mount



# **Housing Design**

- High-impact, plastic (UL94, 5VA)
- 12-element segmented Fresnel lens; 32kHz ultrasonic transmitter and receiver
- Mounting base provided



## Coverage and Ratings

- Up to 2,000 sq. ft. between 8ft and 12ft mounting height. 24V DC active high-logic control signal
- Option of a N/O + N/C contacts; SPDT; 500 mA rated @ 24V DC; three-wire isolated relay for HVAC or energy management systems integration



## **Coverage and Ratings**

- Up to 1,600 sq. ft. between 8ft and 12ft mounting height. (30ft for high bay, aisle model) 24V DC active high-logic control signal
- Option of a N/O + N/C contacts; SPDT; 500 mA rated @ 24V DC; three-wire isolated relay for HVAC or energy management systems integration



# Operation

- Self adjusting sensitivity thresholds and timers; automatic false ON/ false OFF corrections, strong airflow compensation mode
- Compatible with Hubbell's distributed and centralized control systems



# Operation

- Self adjusting sensitivity thresholds and timers. Automatic false ON/false OFF corrections airflow compensation mode
- Compatible with Hubbell's distributed and centralized control systems



Coverage Area



ATD2000C

# **Dual (Ultrasonic and Passive Infrared) Ceiling Sensors**

Combines the excellent minor motion detection of ultrasonic with the outstanding passive infrared (PIR) long-range major motion detection.

Description	Voltage	2000 sq. ft. (360°)	1000 sq. ft. (180°)	
Low voltage sensor with photocell and isolated relay. Low voltage sensor. Line voltage sensor.	24V DC 24V DC 120-277V AC	ATD2000CRP ATD2000C ATD2000CL	ATD1000CRP — ATD1000CL	

Note: Low voltage ATD ceiling sensors must use a CU series control unit. See page E-10 for details. See pages E-25 to E-28 for technical specifications, coverage patterns and wiring schematics. For Assembled in USA units Add suffix "U"



ATD1000C

### Excellent minor motion detection. Coverage Area 2000 sq. ft. 1000 sq. ft. (360°) Description (180°) Voltage 24V DC ATU2000CRP ATU1000CRP Low voltage sensor with photocell and isolated relay. Low voltage sensor. 24V DC ATU2000C ATU2000CL ATU1000CL Line voltage sensor. 120-277V AC

Note: Low voltage ATU ceiling sensors must use a CU series control unit. See page E-10 for details. See pages E-25 to E-28 for technical specifications, coverage patterns and wiring schematics. For Assembled in USA units Add suffix "U"

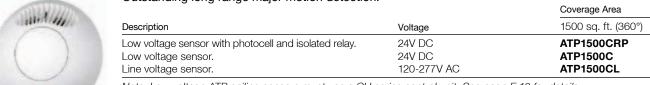


ATU2000C

# Passive Infrared Ceiling Sensors

**Ultrasonic Ceiling Sensors** 

Outstanding long range major motion detection.



Note: Low voltage ATP ceiling sensors must use a CU series control unit. See page E-10 for details. See pages E-25 to E-28 for technical specifications, coverage patterns and wiring schematics. For Assembled in USA units Add suffix "U"



ATU1000C

# Low Profile, Line Voltage Passive Infrared Ceiling Sensors

Outstanding long range major motion detection in a compact low profile housing.

			Coverage Area
Voltage	Color	Load Rating	1500 sq. ft.
120-347V AC with photocell.	White	800W Inc., 1000W FI. @ 120V AC 1800W Fluorescent @ 277V AC 2200W Fluorescent @ 347V AC	LVPR1500R



**ATP1500C** 

Ceiling Sensors Accessories

Catalog Number
ACIPE*
ACMRA
ACMG





**ACMRA** 



LVPR1500R

Note: \*Compatible with low voltage passive infrared sensors only.



**Dual (Ultrasonic and Passive Infrared) Wall Mount Sensors** 

Description	Color	Coverage	Catalog Number
Low voltage sensor 32kHz with photocell and isolated relay.	Office White	1600 sq. ft.	ATD1600WRP



Description	Color	Coverage	Catalog Number
Low voltage sensor with photocell and isolated relay.	Office White	1600 sq. ft.	ATP1600WRP
Low voltage sensor for aisle and high bay applications, with photocell and isolated relay.	Office White	120 linear feet	ATP120HBRP

Note: All wall mount sensors must use a CU series control units. See page E-10 for details. See pages E-25 to E-28 for technical specifications, coverage patterns and wiring schematics. For Assembled in USA units Add suffix "U"



Description	Catalog Number
Wall switch wire guard.	AWSG
Wall mount wire guard.	AWMG



ATD1600W



ATP1600W





**AWMG** 

# OPTIMYZER® High Bay and Low Bay End Mount PIR Sensors

- Single and dual timer operation
- Low-profile design
- No minimum load

- Supports mounting heights up to 45 feet (High Bay)
- Supports mounting heights between 8-16 feet (Low Bay)

Description	Voltage	Catalog Number
Single relay with photocell.	120-347V AC	HMHB219
2 relays with photocell.	120-347V AC	HMHB229
1 double pole relay with photocell.	208/240V AC	HMHB23A9
1 double pole relay with photocell.	480V AC	HMHB23B9
Low voltage with photocell.	24V DC	HMHB2LV9*

Note: 360° high bay lens included. Low bay lens options sold separately, see below for details. \*For use with CU series control units.

See pages E-29 and E-30 for technical specifications and coverage patterns.





**HBRL180** 





**HBRLEA** 



**HMHBSA** 

# **Replacement Lenses and Accessories**

Description	High Bay	Low Bay
180° Lens.	HBRL180	LBRL180
360° Lens.	HBRL360	LBRL360
Aisle lens.	HBRLA	LBRLA
End of aisle lens.	HBRLEA	LBRLEA
Mounting extension adapter.	HMHBSA	HMHBSA





## Low Voltage Switches

Single gang design, momentary or latching operation. Compatible with all Hubbell low voltage sensors and Load:Logic® Centralized and Distributed Control Systems. 100mA @ 30V DC max.

Description	Color	Catalog Number
Low voltage switch, latching, 1 button.	lvory	DSL30I1
	Light Almond	DSL30LA1
	White	DSL30W1
Low voltage switch, momentary, 1 button.	lvory	DSM30I1
	Light Almond	DSM30LA1
	White	DSM30W1

Note: Wallplate sold separately.



# **Emergency Lighting Controls**

20 amps, 120/277V AC, NC isolated contacts UL924 listed for emergency circuits. 0-10V dimming override.

Description	Catalog Number
Emergency lighting control unit.	CU300ELC
Remote test switch with engraved wallplate.	RTPB10W

Note: See page E-26 for technical specifications.



## CU300A(M), CU347A

## **Control Units**

The CU300 series provides 24V DC power supply for sensors or sensor/Add-A-Relay combinations. The control units contain an internal relay for the control of an external load. Control units are plenum rated cULus Listed.



CU300HD

Description	Catalog Number
Auto ON operation, 100-277V AC, 50/60Hz for use with 1 to 4 ATD, ATU, ATP and AD2240 series sensors.	CU300A
Manual ON operation, 100-277V AC, 50/60Hz for use with 1 to 4 ATD, ATU, ATP and AD2240 series sensors.	CU300M
Auto or manual ON operation, 100-277V AC, 50/60Hz for use with 1 to 6 ATD, ATU, ATP, AHP and AD2240 series sensors, heavy duty latching relay for reactive loads and automatic receptacle control.	CU300HD

Note: See page E-26 for technical specifications. For Assembled in USA units Add suffix "U".



## Add-A-Relay

Hubbell AAR Add-A-Relay contains an internal relay for control of an external load. The AAR requires a 24V DC power supply from the Hubbell CU series control unit. AAR units are typically used when multiple zone control is desired or the load exceed the maximum load rating of a single control unit.



Description	Catalog Number
Auto ON operation, 120-277V AC, 50/60Hz. Requires a CU300 series control unit; suitable	AAR
for lighting loads.	
Auto or Manual ON operation, 100-277V AC 50/60Hz. Requires a CU300 series, heavy duty	AAR20P
latching relay; suitable for automatic receptacle control applications.	

Note: See page E-26 for technical specifications.



## **Enclosed 10 Amp SPDT Relays**

Description	Catalog Number
Enclosed relay 10 Amp SPDT with 10-30V AC/DC/120V AC coil.	AAR10C120
Enclosed relay 10 Amp SPDT with 10-30V AC/DC/208-277V AC coil.	AAR10C277



## **Daylight Harvesting**

Low-profile design

Light-sensitivity wide range of options

Description	Voltage	Catalog Number
Single zone continuous automatic dimming control.	0-10V DC	DHADC†
Indoor photocell.	24V DC	DHIP▲
Outdoor photocell.	24V DC	DHOP▲
Atrium photocell.	24V DC	DHAP▲
Skylight photocell.	24V DC	DHSP▲
Control module.	24V DC	DHCM
Daylight tracker with ON/OFF control.	24V DC	DHT*
Daylight tracker with dimming control.	0-10V DC	DHTD <sup>†</sup>
Indoor photocell - selectable foot candle range.	24V DC	RCDP~
Outdoor photocell - selectable foot candle range.	24V DC	RCODP~









**DHCM** 

**DHT** 

Note: †For use with 0-10V DC dimming ballasts. ▲ For use with DHCM and CU series control units.

\*For use with CU series control units.

~For use with Load:Logic Control Panel or Room Controller.

0-10V Adaptive Technology Wall Switch Sensor

Description	Color	Voltage	Catalog Number
Dimming PIR selectable auto ON/auto OFF manual ON/auto OFF, current sinking capacity, 30mA.	Black Gray Ivory Light Almond White	0-10V DC (Dimming) 120/277V AC	APD2000BK1 APD2000GY1 APD2000I1 APD2000LA1 APD2000W1
Dimming PIR manual ON/auto OFF (Vacancy) only, current sinking capacity, 30mA.	Black Gray Ivory Light Almond White	0-10V DC (Dimming) 120/277V AC	APD2001BK1 APD2001GY1 APD2001I1 APD2001LA1 APD2001W1

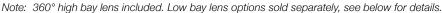


APD2000W1 APD2001W1

# 0-10V Dimming OPTIMYZER® High Bay and Low Bay End Mount PIR Sensors

• Supports mounting heights up to 45 feet (High Bay), between 8-16 feet (Low Bay), current sinking capacity, 30mA.

Description	Voltage	Catalog Number
Single relay with photocell.	120-347V AC	HBS13D
1 double pole relay with photocell.	208, 240V AC	HBS28D
1 double pole relay with photocell.	480V AC	HBS48D
Low voltage with photocell.	24V DC	HBS24D*



\*For use with CU300HD control unit.

See pages E-29 and E-30 for technical specifications and coverage patterns.



HBS13D

# Replacement Lenses and Accessories

Low Voltage Switches with 0-10V Dimming

Description	High Bay	Low Bay
180° lens.	HBRL180	LBRL180
360° lens.	HBRL360	LBRL360
Aisle lens.	HBRLA	LBRLA
End of aisle lens.	HBRLEA	LBRLEA
Mounting extension adapter.	HMHBSA	HMHBSA











**HBRLA** 

### 1 Latching, 1 Momentary, Momentary, Latching, 3 button 3 button 4 button Description Color Voltage Low voltage switch, Black 24V DC DSM010BK DSL010BK DSC010BK DSM010GY DSL010GY DSC010GY 0-10V dimmer, Gray current sinking capacity, Ivory DSM010I DSL010I DSC010I Light Almond DSM010LA DSL010LA DSC010LA 30mA. White **DSM010W** DSL010W DSC010W

Single gang design, momentary, latching or a combination operation. Compatible with Hubbell CU300 series control units and IEC60929 Annex E.2 compliant dimming ballasts/LED drivers. Ideal for single zone dimming applications.

Note: See page E-34 for technical specifications.





## **Features and Benefits**

# MAXX™ Harsh Environment Occupancy Sensors

MAXX™ products are designed to withstand these harsh environments manufactured with cold and heat resistant components. These sensors tolerate extremes of weather and applications. MAXX™ products provide users with methods to reduce energy usage in harsh environments where other commercial grade products can't.



AHP1600WRP with **HAP4** 



# **Pendant Mount**



# **Housing Design**

- IP66, NEMA 4X, outdoor rated
- Housing manufactured from chemical resistant Valox®
- Multiple mounting kits for existing work boxes and hubs; pendant or wall mounting flexibility

# **Fixture Mount**



# **Housing Design**

- IP65, NEMA 3R watertight, and outdoor rated
- Fixture or work box mounting with ½" threaded nipple



- Integrated lens guard protects against accidental damage
- Photocell makes sure lights stay OFF when there is sufficient daylight
- Isolated relay provides signalling to HVAC and ventilation systems



## Coverage and Electrical Ratings

- Digital passive infrared (PIR) sensor
- Two (upward/downward) photocells options for daylight harvesting
- Supplied with 360° lens; aisle, endof-aisle and 180° lenses available separately
- -40°F to 149°F (-40°C to 65°C) operating temperature rangeCompatible with CFL/LED and motor loads



## Access Cover

• Stainless steel hardware and settings access cover

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



## **NEMA 4X Outdoor, Passive Infrared Wall Mount Sensor**

Description	Voltage	Catalog Number
PIR sensor, with isolated relay and photocell.	24V DC	AHP1600WRP
Adaptor plate for single gang FS boxes.	_	HAP1
Adaptor hub and nipple for Killark® NJ series boxes.	_	HAP2
Adaptor plate for Killark® NV series boxes.	_	НАР3
½" NPT threaded hub.	_	HAP4

Note: For use with CU300HD (100-277V AC, 50/60Hz) control unit. See page E-26 for technical specifications and coverage patterns.



AHP1600WRP

# Extreme Temperatures Passive Infrared Ceiling Mounted Sensor

Use ACIPE to make NEMA 4X watertight.

Description	Voltage	Catalog Number
Sensor with isolated relay and photocell.	24V DC	AHP1500CRP
IP66, NEMA 4X enclosure.	_	ACIPE

Note: For use with CU300HD (100-277V AC, 50/60Hz) control unit. See page E-25 for technical specifications and coverage patterns.



AHP1500CRP with ACIPE

# **Heavy Duty Control Unit**

The CU300 series provides 24V DC power supply for sensors or sensor/Add-A-Relay combinations. The control units contain an internal relay for the control of an external load. Control units are plenum rated cULus Listed.

Description Catalog Number

Auto or manual ON operation, 100-277V AC, 50/60Hz for use with 1 to 6 ATD, ATU, ATP,

AHP and AD2240 series sensors, heavy duty latching relay for reactive loads and automatic receptacle control.

Note: See page E-26 for technical specifications. For Assembled in USA units Add suffix "U".



CU300HD

# OPTIMYZER® Watertight High Bay and Low Bay End Mount PIR Sensors

IP65, NEMA 3R, outdoor rated, -40°F to 149°F (-40°C to 65°C) operating temperature range.

Description	Voltage	Standard	0-10V Dimming
Single relay with photocell.	120-347V AC	HBSXT13	HBSXT13D
2 relays with photocell.	120-347V AC	HBSXT23	_
1 double pole relay with photocell.	208, 240V AC	HBSXT28	HBSXT28D
1 double pole relay with photocell.	480V AC	HBSXT48	HBSXT48D
Low voltage with photocell.	24V DC	HBSXT24	HBSXT24D

Note: 360° high bay lens included. Low bay lens options sold separately, see below for details. \*For use with CU300HD (120/277V AC, 50/60Hz) control unit.

See pages E-29 and E-30 for technical specifications and coverage patterns.



HBSXT1

## Replacement Lenses

riopidociniciti Ecrisco		
Description	High Bay	Low Bay
180° lens.	HBRLXT180	LBRLXT180
360° lens.	HBRLXT360	LBRLXT360
Aisle lens.	HBRLXTA	LBRLXTA
End of aisle lens.	HBRLXTEA	LBRLXTEA



HBRLXT180 HBRLXT360





**HUBBELL®** Wiring Device-Kellems





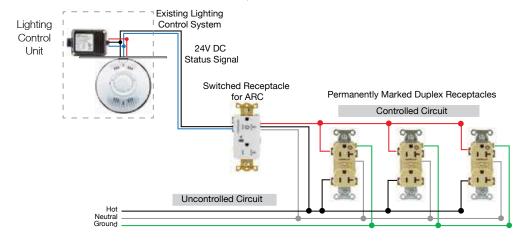




New Codes and Standards mandates that 50% of all receptacles in private offices, open offices and computer classrooms must be automatically controlled by occupancy or time based schedules. This also includes outlets in modular furniture. Hubbell provides solutions for compliance that are cost effective and installer friendly. Find out more design resources at www.hubbell-wiring.com/energy.aspx

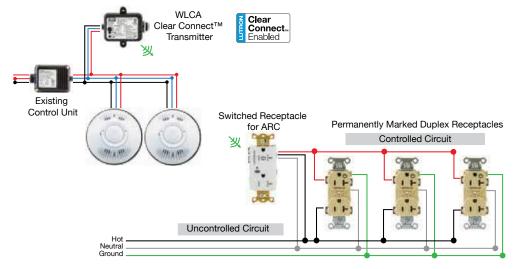
## Wired

Utilizing low voltage wiring provides installers with a familiar method of wiring and installation. Specify Hubbell's new load control receptacle to meet this requirement. Utilize alternating outlet or split receptacle wiring as required to control at least 50% of the outlets in the space.



## Wireless

Wireless communication takes complexity out of retrofit and difficult installations by eliminating low voltage wires running between lighting and receptacle control units. This gives installers flexibility to quickly deploy, add additional devices, and configure and re-configure the system as needed. Hubbell's WL series controls utilize Clear Connect® communication and are compatible with other Clear Connect® devices, such as Hubbell's wireless occupancy sensors.



# **Codes and Standards**



## ASHRAE 90.1

ASHRAE 90.1 is the leading energy building efficiency standard for commercial buildings in North America. Section 8.4.2, ASHRAE 90.1-2010 instituted the requirement that in certain spaces at least 50% of all receptacles are to be controlled by either time of day control device, an occupancy sensor or by an automated signal from another control or alarm system.

## California Energy Commission Title 24

Section 130.5(d) of California Energy Commission Title 24, Part 6 - 2013 code requires receptacles to have automatic shutoff controls in certain spaces in all buildings.

# NEC® 2017

Article 406.3(E) of the NEC® 2017 edition selected the standby (II) symbol as the marking for a receptacle connected to an automatic control system.



# Wired

**Switched Receptacles for Automatic Receptacle Control** 

		15A		20A	
Description	Color	Split Circuit	Fully Controlled	Split Circuit	Fully Controlled
Auto ON/Auto OFF	Black	HBL5262LC1BK	HBL5262LC2BK	HBL5362LC1BK	HBL5362LC2BK
control. Capable of	Brown	HBL5262LC1	HBL5262LC2	HBL5362LC1	HBL5362LC2
controlling additional	Gray	HBL5262LC1GY	HBL5262LC2GY	HBL5362LC1GY	HBL5362LC2GY
receptacles downstream.		HBL5262LC1GN HBL5262LC1I	HBL5262LC2GN HBL5262LC2I	HBL5362LC1GN HBL5362LC1I	HBL5362LC2GN HBL5362LC2I
	Ivory It. Almond	HBL5262LC1LA	HBL5262LC2I	HBL5362LC1LA	HBL5362LC2LA
	White	HBL5262LC1LA	HBL5262LC2LA	HBL5362LC1LA	HBL5362LC2LA



HBL5362LC2W

Note: See page E-31 for technical information. Special order for hospital grade devices.

# **Heavy Duty Control Unit**

The CU300 series provides 24V DC power supply for sensors or sensor/Add-A-Relay combinations. The control units contain an internal relay for the control of an external load. Control units are plenum rated cULus Listed.

Description	Catalog Number
Auto or manual ON operation, 100-277V AC, 50/60Hz for use with 1 to 6 ATD, ATU, ATP, AHP and AD2240 series sensors, heavy duty latching relay for reactive loads and automatic receptacle control.	CU300HD
Auto or Manual ON operation, 100-277V AC 50/60Hz. Requires a CU300 series, heavy duty latching relay; suitable for automatic receptacle control applications.	AAR20P



Note: See page E-26 for technical specifications and wiring schematics.

# **Wireless**

Switched Receptacles for Automatic Receptacle Control

		15A		2	20A
Description	Color	Split Circuit	Fully Controlled	Split Circuit	Fully Controlled
Wireless receiver Auto	Black	HBL5262RFC1BK	HBL5262RFC2BK	HBL5362RFC1BK	HBL5362RFC2BK
ON/Auto OFF. Capable	Brown	HBL5262RFC1	HBL5262RFC2	HBL5362RFC1	HBL5362RFC2
of controlling additional	Gray	HBL5262RFC1GY	HBL5262RFC2GY	HBL5362RFC1GY	HBL5362RFC2GY
receptacles downstream.	Green	HBL5262RFC1GN	HBL5262RFC2GN	HBL5362RFC1GN	HBL5362RFC2GN
	lvory	HBL5262RFC1I	HBL5262RFC2I	HBL5362RFC1I	HBL5362RFC2I
	Lt. Almond	HBL5262RFC1LA	HBL5262RFC2LA	HBL5362RFC1LA	HBL5362RFC2LA
	White	HBL5262RFC1W	HBL5262RFC2W	HBL5362RFC1W	HBL5362RFC2W



Note: See page E-31 for technical information. Special order for hospital grade devices.

## **Heavy Duty Control Unit with Wireless Transmitter**

Transmits an occupancy status to a wireless receiver such as a switched receptacle or a control unit. Auto or Manual ON operation. Powers up to six low voltage sensors.

Description	Voltage	Catalog Number
Heavy duty control unit with Clear Connect®.	100-277V AC	WLCU301



WLCU301

# **Heavy Duty Load Control Units with Wireless Receiver**

Receive an occupancy status from a sensor or a transmitter and energize connected loads such as lighting or receptacles loads.

Description	Voltage	Catalog Number
Single (1) circuit heavy duty control unit with Clear Connect®.	100-277V AC	WLC301
Dual (2) circuit heavy duty control unit with Clear Connect®.	100-277V AC	WLC302



# Furniture Feed Box with Heavy Duty Relays and Wireless Receiver

Receive an occupancy status from a sensor or a transmitter and energize the connected receptacles loads. Mounts on an existing electrical junction box. Dual relay control excellent for office furniture partitions.

Description	Voltage	Catalog Number
Dual (2) circuit heavy duty furniture feed box with Clear Connect®.	100-277V AC	WLC402W

Note: See page E-32 for technical specifications and wiring schematics.



WLC402W



## **Features and Benefits**

# **WL-Series Wireless Sensors and Controls**

Hubbell's WL-Series Wireless Sensors and Controls are the ideal solution for renovation projects aimed at reducing energy consumption. These sensors use DSP Enhanced passive infrared technology to detect movement of heat from people to turn lights ON when a room is occupied and OFF when vacant. The sensors wirelessly transmit Clear Connect® commands to the associated control devices, reducing the need for additional wiring for ease and speed of installation and energy savings.

- Eliminates need to run extra wires
- Supports highly reconfigured spaces
- Helps complete projects quickly
- Helps manage energy consumption





# **Ceiling Mount**



# Housing Design

- High impact, UL 94-5V plastic
- Operating temperature: 32 °F to 104 °F (0°C to 40°C)
- Multiple ceiling-mount methods available

# Wall Switches



# Housing Design

- 8A lighting, 3A fan load capacity
- LED and CFL compatible with supplied load adaptor



## Passive Infrared

- Three operation modes available: Auto ON, Auto ON Low-Light and Manual ON
- Advanced digital signal processing for fine motion detection
- Lens illuminates during test mode to verify coverage



## Technology

- Green LED provides operation and setup feedback
- Digital push button operation provides user control



# Operation

- Auto ON Low-Light feature will only turn lights ON automatically if there is less than approximately 10 Lux (1 foot candle) of ambient light
- Accessible test buttons make setup easy



# Operation

- Service switch prevents lights from turning ON during re-lamping
- No neutral required, no leakage to around



## Wireless Wall Switches

Description	Color	Catalog Number
8A Lighting, 3A Fan (1/10 HP motor, 120V AC only), Spec Grade Electronic Switch 120–277V AC; no neutral wire required.	lvory White	WLS1278I WLS1278W
Accessory Switch for multi location control, 120V AC.	lvory White	WLAS120I WLAS120W
Accessory Switch for multi location control, 277V AC.	lvory White	WLAS277I WLAS277W

Compatible Transmitters: WLP series and WLDH sensors, or any Lutron Clear Connect enabled sensor.



WLS1278I

WLAS277W

# Wireless Ceiling Mount Sensor

Description	Color	Catalog Number
Ceiling mount 360° / 324-676 sq. ft.	White	WLP450C

## Wireless Wall Mount Sensor

- Detection at longer distances is best when motion occurs at right angles to the sensor
- Multiple sensors can be used to extend coverage

Description	Color	Catalog Number
Wall mount 180° / 3000 sq. ft.	White	WLP3000W
Corner mount 90° / 2500 sq. ft.	White	WLP2500W
Hallway up to 150 linear feet.	White	WLP150H

Compatible Controls: WSL1278xx switch, WLC316R control unit, or any Lutron Clear Connect enabled control device.



WLP450C

## Wireless Status Transmitter

Works with dual technology low voltage occupancy sensors or low voltage time based systems to transmit an occupancy signal to a receiver unit such as a wireless switched receptacle. It does not require batteries to operate.

Description	Voltage	Catalog Number
Wireless transmitter with Clear Connect®.	24V DC	WLCA



WLP150H

# **Wireless Control Unit**

THE COST CONTROL CONT	
Description	Catalog Number
Wireless load control unit with isolated relay, 16A, 120V AC or 277V AC.	WLC316R

Compatible Transmitters: WLP series and WLDH sensors, or any Lutron Clear Connect enabled sensor.





WLC316R



**WLDH** 

# Wireless Daylight Sensor

Description	Color	Catalog Number
Daylight sensor 0–107,000 Lux (0-10,000 foot candles).	White	WLDH

Compatible Controls: WSL1278xx switch, WLC316R control unit, or any Lutron Clear Connect enabled control device. Note: See pages E-32 to E-35 for technical specifications, coverage patterns and wiring schematics.



Trends in energy efficiency for commercial buildings are making a nationwide impact not only on energy savings but also in customer personal preferences. Smart devices applications are making possible individualized customization of the work environment and other spaces.

Hubbell Wiring Device-Kellems puts forward solutions that are cost efficient while meeting or exceeding current energy efficiency codes and standards. Whether there is a requirement for localized, central or distributed control, Hubbell Wiring Device-Kellems comprehensive offering encompass solutions for each of these control architectures.



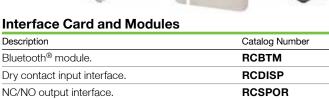
Space Control	Distributed Control	Centralized Control
Localized control flexibility.	Advanced control flexibility.	Superior control flexibility.
Based on standalone devices like	Controllers are distributed throughout	Control located at a central location with
occupancy sensors or time switches.	the floor/building. Although there can be	the option of a remote device located at
Ideal for small building with few individual	a centralized control, distributed control	a separate location but subjected to the
spaces.	systems are autonomous to perform individual control functions.	primary control.
Operations like vacancy, dimming, pre-set		Coordinated operations like vacancy,
light levels, automatic receptacle control,	Coordinated operations like vacancy,	dimming, pre-set light levels, automatic
daylight harvesting, etc, are coordinated	dimming, pre-set light levels, automatic	receptacle control, daylight harvesting, etc.
via control traditional wiring between	receptacle control, daylight harvesting, etc.	are embedded on the devices.
devices.	are embedded on the devices.	
	Due towaring stand wining at Doduces at the	A mix of traditional and pre-terminated
Devices need to be configured individually.	Pre-terminated wiring. Reduces the	wiring exists.
No natworking canability	amount of wiring errors. Full networking capability.	Davissa pand to be configured at the
No networking capability.	Capability.	Devices need to be configured at the central location.
When wired appropriately meet most of	Addressable controllers and devices are	Certifal location.
the current Energy Efficiency Codes and	self-configured or configured via a smart	Meet or exceed the current Energy
Standards.	device application.	Efficiency Codes and Standards.
	action application.	Line of Seaso and Standards.
	Meet or exceed the current and future	
	Energy Efficiency Codes and Standards.	



The Load:Logic Room Controller integrates automatic and manual control of lighting with the simplicity of plug-in installation and auto-configuration. Devices such as digital wall switches, vacancy/occupancy and daylight sensors are connected to the room controller by means of RJ45 connections reducing wiring errors. Comprehensive configuration of dimming, daylight and color tuning functions can be accomplished with the use of a Bluetooth® communication interface and free app available for both Android and iOS® devices. All of these features meet or exceed the current energy codes and standards resulting in an efficient and trouble-free installation.



Wireless transmitter.



Note: See page E-36 for technical specifications and wiring schematics.





2 button

RCS2BK

RCS2GY

Catalog Number

LLC2RD

LLC2R



3 button

RCS3BK

RCS3GY

RCS3LA

RCS3W

RCS3I

Description



4 button

RCS4BK

RCS4GY

RCS4LA

RCS4I

RJ45 adapter for non native RJ45 devices (10-pack).



6 button

RCS6BK

**RCS6GY** 

RCS6LA

RCS6W

RCS6I

HBLRJ45A10

**WLCA** 

# Switches with **Pilot Light**

**Room Controller** 

Description

Color	1 button
Black	RCS1BK
Gray	RCS1GY
lvory	RCS1I
Light Almond	RCS1LA
White	RCS1W

2 Relays, 2 dimming channels, 120/277V AC.

2 Relays, no dimming, 120/277V AC.









# Specialty **Switches**

Color	4 button, no pilot light, ON/Raise/Lower/OFF.
Black	RCSNRLFBK
Gray	RCSNRLFGY
vory	RCSNRLFI
Light Almond	RCSNRLFLA
//hite	DCSNDI EW

6 button, with pilot light, Scene. **RCSSCBK RCSSCGY** RCSSCI **RCSSCLA** 

**RCSSCW** 

Raise/Lower. **RCSRLBK RCSRLGY** RCSRLI **RCSRLLA RCSRLW** 

2 button, no pilot light,

Time to ON. **RCSTOBK RCSTOGY** RCSTOI **RCSTOLA** 

**RCSTOW** 

1 button, with pilot light,

**RCSNFBK RCSNFGY RCSNFI RCSNFLA RCSNFW** 

ON/OFF.

2 button, no pilot light,

# Sensing Devices

Description	Catalog Number
Daylight Sensor, Indoor.	RCDP
Daylight Sensor, Outdoor.	RCODP
Dual Technology Ceiling Sensor, 2,000 sq.ft.	ATD2000C*
Switched Receptacle, Split Controlled, 20A, White.	HBL5362LC1W*
Switched Receptacle, Full Controlled, 20A, White.	HBL5362LC2W*

Note: \*Requires (1) HBLRJ45A10.

# UTP Cat. 5e Patch Cords, Plenum. No Boot

rienam, No Boot		
Size	Color	Catalog Number
3 ft.	Yellow	NS5EY03PNB
10 ft.	Yellow	NS5EY10PNB
25 ft.	Yellow	NS5EY25PNB
50 ft.	Yellow	NS5EY50PNB
100 ft.	Yellow	NS5EY100PNB





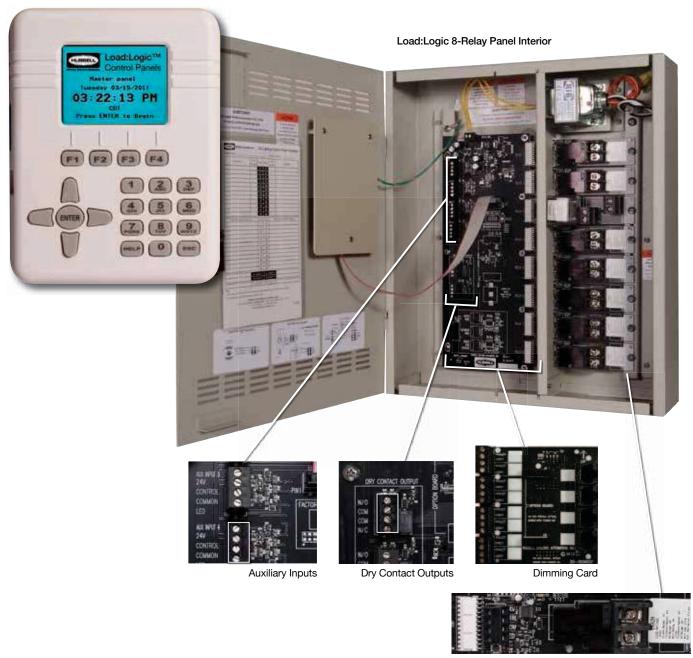
## **Features and Benefits**

# Centralized Control - Load:Logic® Control Panels

These control panels feature a broad set of programming capabilities allowing for manual or scheduled control of up to 48 loads. Designed to be a cost effective solution for compliance with the latest energy codes and standards, the panel offers maximum flexibility to a wide range of small to medium commercial and institutional applications.

The commissioning process is achieved via simple and intuitive scrolling menus. To program, check status or updates, pre-programmed scenarios that can be saved and exported in a portable document file (PDF) format.

- Time based or occupancy based control capabilities
- Same form factor, 1-pole or 2-pole, single input smart relay cards
- Configurable auxiliary contact inputs and outputs
- 0-10V dimming card with demand response capability
- Automatic Receptacle Control capability
- Compatible with Hubbell occupancy sensors and low voltage switches



Individual Mounted Relay Card



# Load:Logic® Energy Efficiency Panels, Relays and Accessories

4 and 8-Relay Panels

4-Relay		8-Relay		
Description	Stand Alone	Master	Secondary	_
Relay panel with space for field installation,	CP042RRR3	CP082RRR1	CP082RRR2	
120/208/240/277V AC.				

16 and 24-Relay Panels

	16-Relay		24-Relay	
Description	Master	Secondary	Master	Secondary
Relay panel with space for field installation, 120/277V AC.	CP162RRR1	CP162RRR2	CP242RRR1	CP242RRR2
Relay panel with space for field installation, 480V AC.	CP163RRR1	CP163RRR2	CP243RRR1	CP243RRR2





# Field Installed Relay Cards

Description	Catalog Number
20A 1-Pole Electrically Held N/O 120-277V.	R21HN
30A 1-Pole Latching 120-277-347V.	R31LX
20A 2-Pole Electrically Held N/O 480V.	R202HN
20A 2-Pole Electrically Held N/C 480V.	R202HC



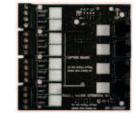


# **Dimming Load:Logic Interface Card**

- Full range dimming with preset dimming levels
- RJ45 connection ports for dimming switches
- Operates with 0-10V dimmable ballasts
- Max. Dim Level (Demand Response System Settings)
- Upgrade option to existing and new Load:Logic Panels
- Provides manual and automatic control of dimming levels

## **Interface Cards**

Description	Catalog Number
8-channel dimming contoller option board.	CPDM8CTRB















# Dimming Switches (Compatible with Hubbell Wiring Device Load Control Panels)

Description	Color	1 button	2 button	3 button	4 button	6 button*	
Load control panel, low voltage dimming	Black Gray	CPSD1BK CPSD1GY	CPSD2BK CPSD2GY	CPSD3BK CPSD3GY	CPSD4BK CPSD4GY	CPSD6BK CPSD6GY	
switches.	lvory Light Almond White	CPSD1I CPSD1LA CPSD1W	CPSD2I CPSD2LA CPSD2W	CPSD3I CPSD3LA CPSD3W	CPSD4I CPSD4LA CPSD4W	CPSD6I CPSD6LA CPSD6W	

Note: Compatible with Load:Logic Control Panels equipped with dimming controller card ONLY.
Configurable for a variety of button functions. Function specific button caps supplied with units.
Use standard decorator wallplates (order separately).
\*Special order only.

# Load:Logic® Energy Efficiency Panels, Relays and Accessories









# **Low Voltage Switches**

Description	Color	with LED pilot light	2 button	2 button with LED pilot light	with LED pilot light	
Low voltage switch, momentary.	lvory Light Almond White	DSM30I1P DSM30LA1P DSM30W1P	DSM30I2 DSM30LA2 DSM30W2	DSM30I2P DSM30LA2P DSM30W2P	DSM30I4P DSM30LA4P DSM30W4P	

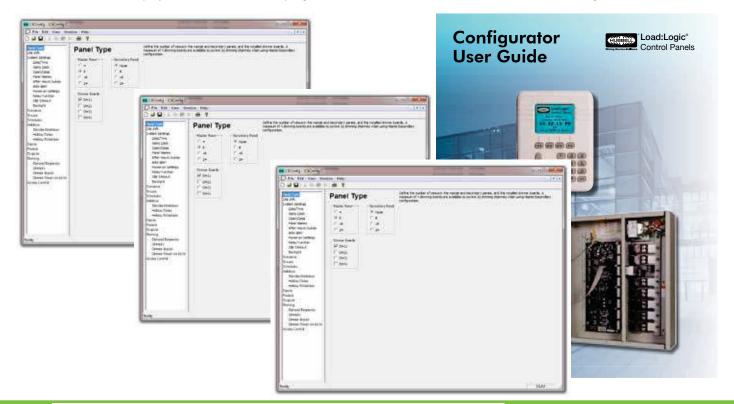


# **Replacement Parts**

Description	Catalog Number
Transformer, 120/208/240/277V AC to 24V AC, 4 and 8-relay panel.	CPTFMR27
Transformer, 120-277V AC to 24V AC, 16-24 relay panel.	CPTFMR12
Transformer, 347-480V AC to 24V AC, 16-24 relay panel.	CPTFMR48
Panel replacement motherboard for 4-relay panel.	CPMBRD04
Panel replacement motherboard for 8-relay panel.	CPMBRD08
Panel replacement motherboard for 16-24 relay panel (8-relays).	CPMBRD16
Master controller, replacement kit.	CPMCTRRKT

# Load:Logic® Configuration Software

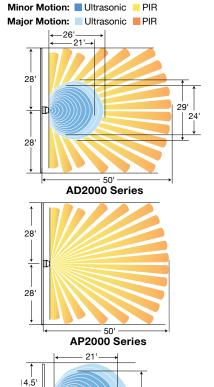
The optional configuration software allows commissioning of the Load:Logic® Control Panel using a personal computer to create a program file. Once the file is completed, it is then copied to an SD memory card and uploaded to the panel. The Master Panel has an SD Card slot on the left side of the User Interface that allows for this upload. Additionally, the program file can be downloaded to an SD Card and then opened on a personal computer. The software also allow for a portable document file (pdf) output of the panel configuration parameters that can be submitted as project documentation. The program is available as a free download at www.hubbell-wiring.com.



# Adaptive Technology Wall Switch Sensors

Electrical	AD2000, APD2000, AP2000 and AU2000 Series
Power Supply	120/277V AC, 50/60Hz
Load Capacity	
120V AC	800W Incandescent, 1000W Electronic Ballast, 5A LED
277V AC	1800W Electronic Ballast, 5A LED
Motor Load	1/6HP
Power Requirements	24V DC nominal, 33mA from Hubbell CU series control unit (AD2240 Series)
Agency Approvals	UL and cUL Listed
Physical	
Housing	High impact plastic (UL 94-5V)
Lens	Dual element pyrometer and 12 element cylindrical hard lens (AP2000 only)
Dimensions	Face 2.57"H x 1.71"W, 0.53"D (from wall out)
Mounting Height	42 to 54 inches above floor
Environmental	
Operating	32° F to 104°F (0°C to 40°C); 0% to 95% non-condensing relative humidity
Controls	
Time Delay	Digital, adaptive 4 to 30 minutes, 20 minutes default
Ambient Light	Adjustable ambient light override, 10 to 500 foot candles
Front Press Switch	Auto/OFF
Sensitivity	Adaptive 0% to 100%
Service Switch	Air gap OFF
Dimming	0-10V, Sink up to 30mA (APD2000 series only)
Sensing Indicator	
Passive Infrared	Red LED (AD & AP series only)
Ultrasonic	Green LED (AD & AU series only)

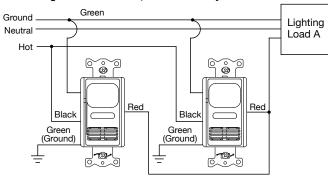
# **Wall Switches Coverage Patterns**



# Wiring Schematic AD, AU, AP, 2000 Series Wall Switch Sensors

### Single Circuit Wiring Two Circuit Sensor, Wired for Two Loads Line Circuit 1 120/277V AC Ø 0 120/277V AC Black Load 1 Red Load 1 Black Ground Green (Ground Blue Load 2 Purple Line Circuit 2 120/277V AC <u>-</u>

## Single Circuit Sensors, Wired as 3-Way Sensors\*



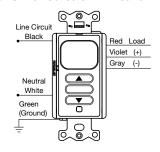
Note: \*Load can not exceed the rating of one switch. Sensor is shipped with all DIP switches in the OFF position (factory default).

## **Wall Switch Sensors with Neutral Wires**

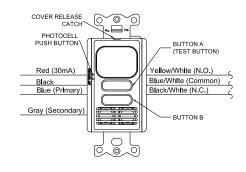
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AU2000 Series



## Low Voltage Wall Switch Sensors\*

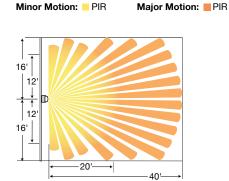


# **Adaptive Technology PIR Wall Switches** WS2000, WS1000 and WS1020 Series

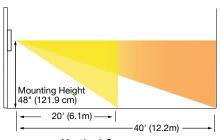
Electrical	WS2000 Series	WS1000/WS1020 Series
Power Supply	120/277V AC, 60Hz	120V AC, 60Hz
Load Capacity		
Incandescent	1000 watts	5A/600 watts
120V Ballast, CFL, LED	1000 watts, 1/6HP	5A/600 watts, 1/6HP
277V Ballast, CFL, LED	1800 watts	N/A
Agency Approvals	cULus Listed	cULus Listed
Warranty	5 years	5 years
Physical		
Housing	Flame retardant UL 94 V-	0 ABS
Lens	Polyethylene	
Dimensions	Face 2.59"H x 1.30"W, 0.6	61"D (from wall out)
Mounting Height	42 to 54 inches above floo	or
Environmental		
Operating	32°F to 122°F (0°C to 50°	C) with rate of change
	not exceeding 20°F (11°C)	) per hour; 20% to 90%
	non-condensing relative h	numidity
Storage	-40°F to 150°F (-40°C to 6	65°C);
	20% to 90% non-condens	sing relative humidity
Controls	WS1000/WS2000 Series	WS1001/WS1020 Series
Time Delay	Manual 6 seconds to 20 r	minutes
Ambient Light	Digital, pushbutton,	N/A
	10 to 500 foot candles	
Front Press Switch	ON/OFF	ON/OFF
Service Switch	OFF (service)	OFF (service)
	Vac (manual ON)	ON (service)
	Occ (auto ON)	·
Sensing Indicator		
•		

# **Wall Switches Coverage Patterns**

Minor Motion: PIR

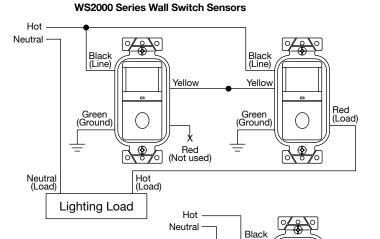


WS2000, WS1000 and WS1020 Series

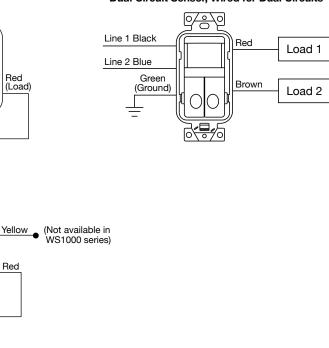


**Vertical Coverage** WS2000, WS1000 and WS1020 Series

# Wiring Schematic WS2000, WS1000 and WS1020 Series Wall Switches



Neutral (Load)



## WS1020 Series Wall Switch Sensors

# **Dual Circuit Sensor, Wired for Dual Circuits**

(Ground)

Lighting Load

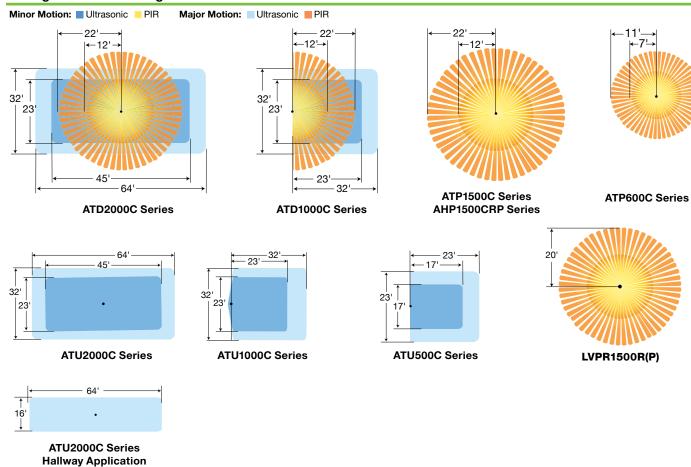
Red

Hot (Load)

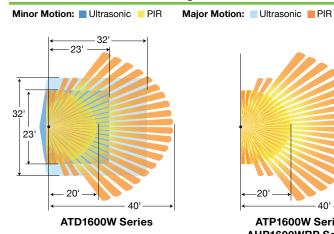
# Adaptive Dual Technology, Ultrasonic and Passive Infrared Ceiling and Wall Mount Sensors ATD, ATU, AHP and ATP Series

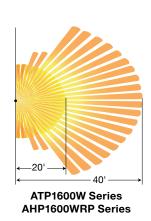
Electrical	<u> </u>	·	
Power Requirements	24V DC nominal, 33mA from Hubbell CU series control unit		
Isolated Relay (sensors with RP suffix)	Relay: N/O + N/C contacts; 500mA rated @ 24V DC; 3-wire isolated relay		
Agency Approvals	UL and cUL Listed		
Physical	Ceiling Sensors	Wall Mount Sensors	
Housing	Flame retardant UL 94 V-0 ABS	Flame retardant UL 94 V-0 ABS	
Protection	NEMA 4X, when used with ACIPE	NEMA 4X, IP66, outdoor use rated (AHP only	
Lens	Polyethylene	Polyethylene	
Dimensions	1.5"H x 4.5"Diameter	6"H x 2"W x 1.5"D	
Color	Office white	Office white; Gray (AHP series)	
Mounting Height	8 to 12 feet	8 to 12 feet, 8 to 30 feet (ATP120HB series)	
Environmental			
Operating	32°F to 104°F (0°C to 40°C) with rate of change not exceeding 20°F (11°C) per hour;		
	0% to 95% non-condensing relative humidity		
	-40°F to 149°F (-40°C to 65°C) with rate of change not exceeding 20°F (11°C) per hour;		
	0% to 95% non-condensing relative humidity (AHP series)		
Storage	-20°F to 150°F (-29°C to 65°C); 0% to 95% non-condensing relative humidity		
Controls			
Time Delay	Test (8 seconds), adaptive 8 to 40 minutes		
Ambient Light	1 to 1000 foot candles	· · · · · ·	
Sensitivity	Adaptive 0 to 100%		
Sensing Indicators			
Ultrasonic (ATD and ATU Series)	Green LED		
Passive Infrared (ATD, AHP and ATP Series)	Red LED		

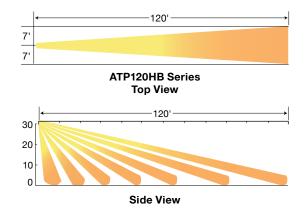
# **Ceiling Sensors Coverage Patterns**



# **Wall Mount Sensors Coverage Patterns**







# Control Units - CU300A or CU300M and CU300HD Series

Electrical	CU300A or CU300M	CU300ELC	CU300HD
Power Supply	100-277V AC, 50/60Hz	100-277V AC	100-277V AC, 50/60Hz
Power Output	24V DC, 150mA	N/A	24V DC, 250mA
Load Capacity Motor Loads	16A, 8A LED	16A	20A
	1HP	1HP	1HP @ 120V
			2HP @ 240/277V
AT Sensor/AAR Capacity	1 to 4 combined		1 to 6 combined
Agency Approvals	UL and cUL Listed	cULus Listed	cULus Listed
Physical			
Housing	Flame retardant UL94-5VA thermoplastic	Flame retardant ULS	94-5VA thermoplastic
Dimensions	3.69"L x 2.33"W x 1.36"H	4.00"L x 3.4"W x 1.	73"H
Color	Black	Black	
Environmental			
Operating	32°F to 104°F (0°C to 40°C); 0% to 90% non-condensing relative humidity		-40°F to 149°F (-40°C to 65°C). Below 32°F (0°C) must use suitably rated non-metallic enclosure. 0% to 90% humidity, non-
Storage	-20°F to 150°F (-29°C to 65°C); 0% to 90 relative humidity	% non-condensing	condensing

# **Add-A-Relay Control Units**

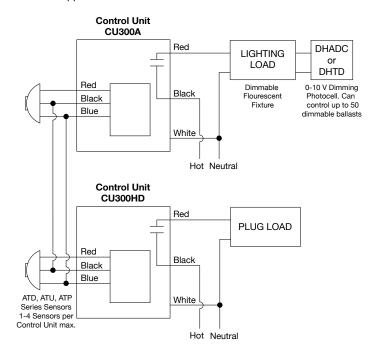
Electrical	AAR	AAR20P
Power Input	24V DC nominal, 33mA from Hubbell CU series control unit	24V DC nominal, 50mA from Hubbell CU300HD series control unit
Load Capacity	16A, 120/277V AC, 8A LED	20A, 100-277V AC
Motor Loads	1800 watts	Motor Loads
1HP @ 120V	2400 watts	1HP @ 120V
2HP @ 240/277V	2400 watts	2HP @ 240/277V
Operation Mode	Auto ON/Auto OFF	Selectable Auto ON/Auto OFF or Manual ON/Auto OFF
Agency Approvals	UL and cUL Listed	cULus Listed
Physical		
Housing	Flame retardant UL94-5V thermoplastic	Flame retardant UL94-5VA thermoplastic
Dimensions	3.69"L x 2.33"W x 1.36"H	4.00"L x 3.4"W x 1.73"H
Color	Black	Black
Environmental		
Operating	32°F to 104°F (0°C to 40°C); 0% to 90% non-condensing relative humidity	-40°F to 149°F (-40°C to 65°C). Below 32°F (0°C) must use suitably rated non-metallic enclosure. 0% to 90% humidity,
Storage	-20°F to 150°F (-29°C to 65°C); 0% to 90% non-condensing relative humidity	non-condensing

# Ceiling and Wall Mount Sensors ATD, ATU and ATP Series

Single lighting circuit 1 to 4 sensors wired to control unit with optional override OFF switch application.

**CU Series Control Unit** Ν Black Black White Blue Red Blue Red Switch\* ATD, ATU and ATP Series Sensors\*\* Lighting Load \*Optional Override OFFSwitch Black Gray (Control + Photocell) Blue/White (Relay Common)
Black/White (Relay Normally Closed)

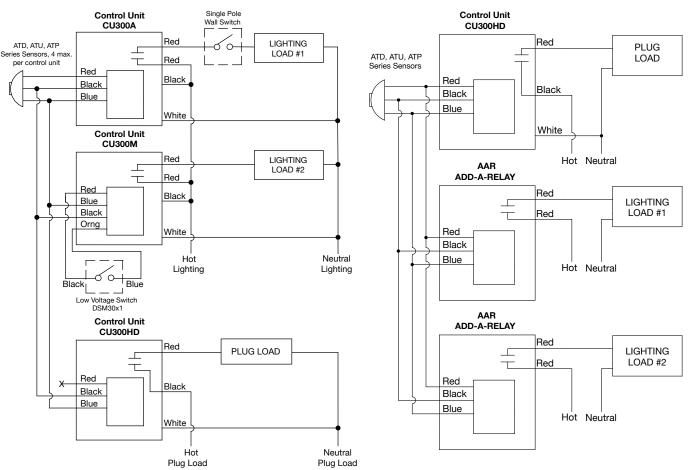
Single lighting circuit with 0-10V dimming and automatic receptacle control application.



Bi-level lighting circuit and automatic receptacle control application.

Ceiling sensor with "RP" option

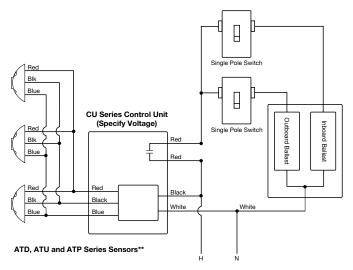
Two lighting circuits and automatic receptacle control application.



# Adaptive Technology Dual, Ultrasonic, and Passive Infrared Ceiling and Wall Mount Sensors ATD, ATU and ATP Series

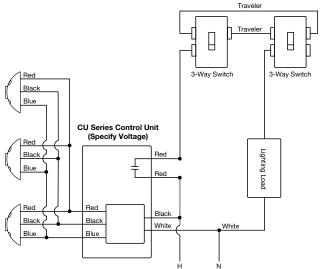
## Single Circuit, Dual Level Switching Application:

1 to 4 sensors wired to control unit with optional override off switches.



# Single Circuit, 3-Way Switching Application:

1 to 4 sensors wired to control unit with optional override off switches.



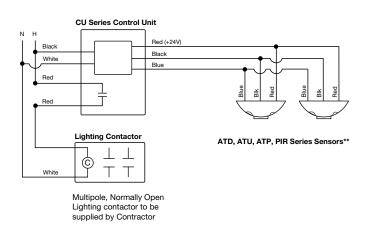
ATD, ATU and ATP Series Sensors\*\*

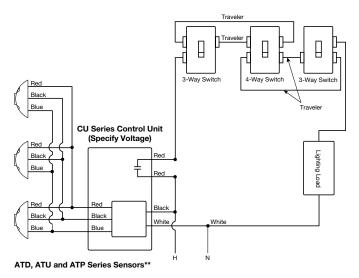
# Multi-Circuit Application:

1 to 4 sensors wired to control unit that is wired to a multi-pole lighting contactor.

# Single Circuit, 4-Way Switching Application:

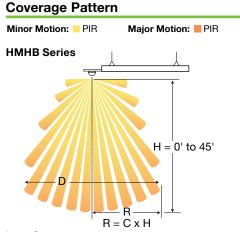
1 to 4 sensors wired to control unit with optional override off switches.





Note: \*\*For wiring sensors with isolated relay and photocell option (models with "RP" suffix): Photocell Option: Cap off Blue sensor wire. Connect Gray sensor wire to Blue control unit wire. Isolated Relay Option: Common-Blue/White wire, Normally Closed-Black/White wire, Normally Open-Yellow/White wire.

OPTIMYZER® H	High Bay and Low Bay End Mo	ount PIR Sensors	
User Interface	(1) twelve pin DIP switch		
Timer time-outs	Primary: 8-second test mode, 4, 8, 16 and 30 minute time-outs Secondary: (Can be disabled) 30, 60 and 90 minute time-outs		
Passive infrared	Dual element pyrometer and spherical Fresnel lens		
Daylight sensor	Dual element pyrometer and spherical Fresnel lens designed for robust detection of a walking person*		
Coverage	360° lens provided, 180° aisle and end-	of-aisle lenses also available	
Load ratings (Line voltage units)	120V AC: 800W ballast or tungsten, 5 LED 277V AC: 1200W ballast, 5 LED 347V AC: 1500W ballast	208/240V AC: 1200W ballast 480V AC: 2400W ballast 1/4 HP motor load @ 120V AC, 1/6 HP @ 347V AC	
Low voltage sensors (Output)	24V DC nominal, 33mA from Hubbell Cl Relay: N/O + N/C contacts; 500mA rated		
0-10V Dimming	Capable of sinking up to 30mA (Dimming series)		
Dimming presets unoccupied	70%, 60%, 50%, 20% (Dimming series)		
Full OFF timer delay enabled Full OFF timer delay disabled	After 60 minutes in the Unoccupied low level Sensor will maintain low level setting wh (Dimming series)		
Operating Indoor use only models environment Operating temperature: (standard version) 32°F to Relative humidity (non-condensing): 0% to 95%			
	Indoor and outdoor use (Watertight) IP6 Operating temperature: -40°F to 149°F		
Construction	Casing: High-impact injection-molded thermoplastic		
Size and weight	Size: 4.0" Diameter x 1.5" Height; Weight: 7 oz.		
Color	White		



Lens Coverage C = 1.4 @ 00-30 and 1.1 @ 30-45 (FT)

Height (H)	Radius ( <b>R</b> )	Diameter <b>(D)</b>
18	25.2	50.4
20	28	56
24	33.6	67.2
28	39.2	78.4
30	42	84
32	35.2	70.4
36	39.6	79.2
40	44	88
42	46.2	92.4
45	49.5	99

Note: \*When used with program start ballast, a 1-2 second delay from occupancy detection to lamp turn-on may be experienced.

Mounts directly to end of a fixture through an extended ½ inch chase nipple for deeper body fixtures, an optional Extender Adapter (HMHBSA available separately) positions the sensor flush or below the bottom of

Conforms to UL STD 508, UL STD 244A, and IP65 (Watertight) models

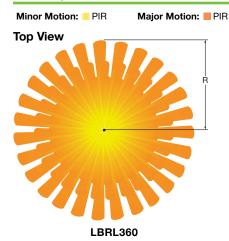
# OPTIMYZER® Low Mount Lens Modification Coverage Patterns

HBSXT series

5 year limited

the reflector for a full field of view

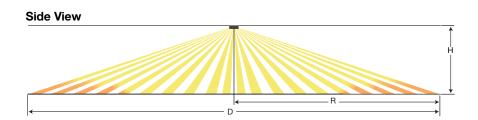
cULus Listed, indoor models



Mounting

Certifications

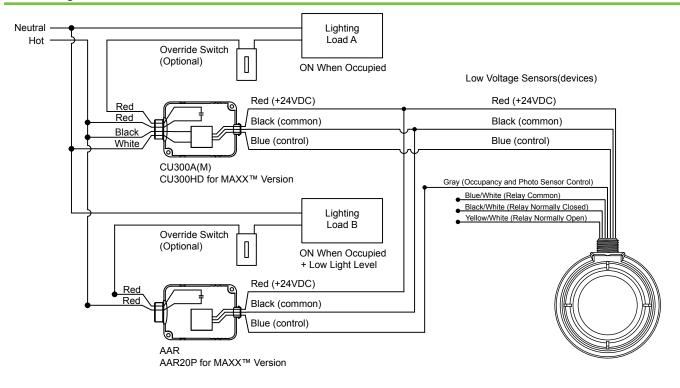
Warranty

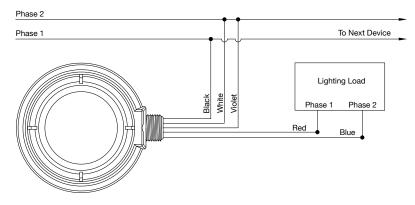


Lens Coverage 3:1 Ratio (FT)

Height <b>(H)</b>	Radius ( <b>R</b> )	Diameter <b>(D)</b>
8	24	48
10	30	60
12	36	72
14	42	84
16	48	96

# OPTIMYZER® High Bay and Low Bay End Mount PIR Sensors, Low Voltage Sensor with Control Unit

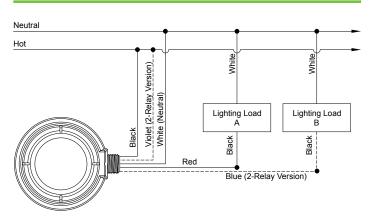




# OPTIMYZER® High Bay and Low Bay End Mount PIR Sensors, Dual Relay, Single Fixture

# Neutral Hot Single Fixture Lighting Load A B A B Blue (2-Relay Version)

# OPTIMYZER® High Bay and Low Bay End Mount PIR Sensors, Dual Relay, Two Fixtures







HBL5362LC2W

HBL2172LC2W

# HBL® Heavy Duty Style Line® Specification Grade and Hospital Grade Straight Blade Switched Duplex Receptacles

Specifications					
Receptacle	Part	Description			
Typical Specification - Catalog No. HBL5262LC1, HBL2172LC1	Receptacle	15A (Always Hot), 8.3A (Switched)			
Manufacturer's Identification - Hubbell HBL5262LC1 Receptacle	Тор	Nylon			
Description - Straight Blade Switched Duplex Receptacle	Base	Nylon			
Type - 2 Pole, 3 Wire Grounding	Power Contacts	0.031 in. (0.8) Brass			
Rating - Uncontrolled (Always Hot) 15A, 125V	Wire Clamp	0.062 in. (1.6) Steel-Nickel Finish			
- Controlled (Switched) Tungsten 8.3A, CFL & LED: 3.75A	Mounting Strap	0.047 in. (1.2) Brass			
Motor Load: 1/2HP	Line Terminal Screws	#8-32 Brass, Multiple Drive			
Certification - cULus 498B SA: UL File No. E481574	Ground Screw	#8-32 Brass, Multiple Drive			
Fed. Spec. WC596G	Center Assembly Staple	0.040 in. (1) Steel (Galvanized)			
	Automatic Self-Grounding Staple	Stainless Steel			
	Mounting Screws	Zinc Plated Steel			

# **Specifications**

Receptacle	Part	Description
Typical Specification - Catalog No. HBL5362LC1, HBL2182LC1	Receptacle	20A (Always Hot), 12.5A (Switched)
Manufacturer's Identification - Hubbell HBL5362LC1 Receptacle	Тор	Nylon
Description - Straight Blade Switched Duplex Receptacle	Base	Nylon
Type - 2 Pole, 3 Wire Grounding	Power Contacts	0.031 in. (0.8) Brass
Rating - Uncontrolled (Always Hot) 20A, 125V	Wire Clamp	0.062 in. (1.6) Steel-Nickel Finish
- Controlled (Switched) Tungsten 12.5A, CFL & LED: 5A	Mounting Strap	0.047 in. (1.2) Brass
Motor Load: 1HP	Line Terminal Screws	#8-32 Brass, Multiple Drive
Certification - cULus 498B SA: UL File No. E481574	Ground Screw	#8-32 Brass, Multiple Drive
Fed. Spec. WC596G	Automatic Self-Grounding Staple	Stainless Steel
	Mounting Screws	Zinc Plated Steel

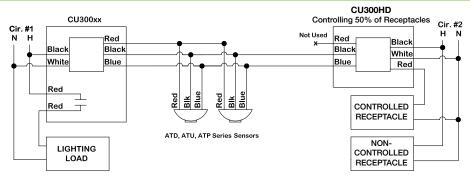
# Performance

Electrical (Always Hot Receptacle)	
Dielectric Voltage Max. Working Voltage Current Interrupting Temperature Rise	Withstands 2,000V minimum. 125V AC Certified for current interrupting at full current. Max 30°C temperature rise at full rated current after 50 cycles of overload at 150% of rated current at power factor of 75%.
Mechanical	
Terminal Identification Terminal Accomodation Product Identification	Terminals identified in accordance with UL498 and CSA (Brass, White, Green). #14-10 AWG stranded or solid copper conductor only. Ratings are a permanent part of the device.
Environmental	
Flammabilty Operating Temperature	UL94V-2 32°F (0°C) to 104°F (40°C)

## **WLC Load Control Devices with Wireless Clear Connect Communication**

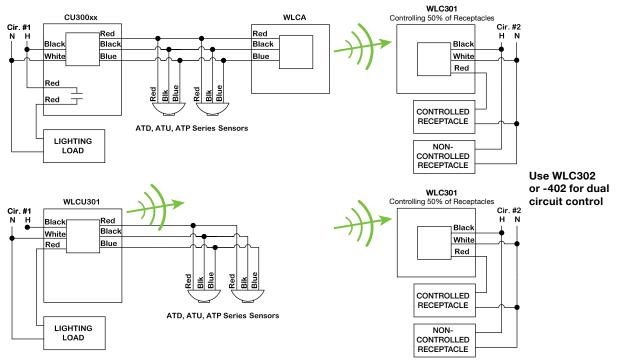
Electrical	WLCA	WLCU301	WLC301	WLC302	WLC402W	
Power Supply	24V DC	100-277V AC, 50/60Hz	100-277V AC, 50/60Hz	100-277V AC, 50/60Hz	100-277V AC, 50/60Hz	
Power Output	N/A	24V DC 250mA	N/A	N/A	N/A	
Circuits Controlled	N/A	1	1	2	2	
Load Capacity		100-277V AC, 20A	100-277V AC, 20A	100-277V AC, 20A	100-277V AC, 20A	
		1HP @ 120V AC				
		2HP @ 240/277V AC				
Agency Approvals	UL Listed, cULus, FCC, IC, UL/cUL 916 listed for energy management equipment					
Device Type (Transmit	TX	TX	RX	RX	RX	
or Receive)						
Range (Standard/	30 ft. (10m)	30 ft. (10m)	30 ft. (10m)	30 ft. (10m)	30 ft. (10m)	
Obtructed)						
Range (Unobstructed,	60 ft. (30m)	60 ft. (30m)	60 ft. (30m)	60 ft. (30m)	60 ft. (30m)	
line of sight)						
Physical						
Housing	Flame retardant UL 94-5VA thermoplastic					
Dimensions	4.00"L x 3.4"W x 1.73"H 4.68"L x 4.94"W x 2.78"H					
Color	Black	Black	Black	Black	White	

# **Wired Load Control**



# **Wireless Load Control**

Easily upgrade existing occupancy based lighting control systems to support automated receptacle control systems.



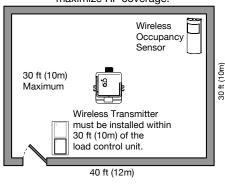
### Wireless Wall Switch (WLS1278 Series)

Electrical	Operating voltage: 120/277V AC, 50/60Hz; Green indicator light
Operating	Indoor use only
Environment	Ambient operating temperature: 32°F to 104°F (0°C to 40°C); relative humidity: 0% to 90% humidity, non-condensing
Wire Size	#20 to 16 AWG (0.5 to 1.5mm²) solid or stranded wire
Capacity	Up to 9 WLAS accessory switches can be configured to work together with one WLS1278
Range	RF range is 30 ft. (10m) obstructed, 60 ft. (18m) line of sight
Certifications	UL Listed, CSA Certified, FCC Approved; Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules
Warranty	1 year

#### Wireless Control Unit (WLC316R) Operating voltage: 120/277V AC, 50/60Hz Electrical LED status indicator: displays load status and provides programming feedback Power failure memory: (Relay returns to previous level prior to interruption) Output is non-latching Operating Indoor use only Environment Ambient operating temperature: 32°F to 131°F (0°C to 55°C); Relative humidity: 0% to 90% humidity, non-condensing Load Maximum load: 16A general purpose. No minimum Motor rating: 0.5 HP (120V AC), 1.5 HP (277V AC) Isolated Relay Normally open (NO) and normally closed (NC) dry contacts Maintained latching output The isolated relay is not rated to control unclamped, inductive loads Inductive loads include, but are not limited to relays, solenoids and motors to control these types of equipment RF range is 30 ft. (10m) obstructed, 60 ft. (18m) line of sight Range Certifications UL Listed, UL 2043 Plenum Rated, FCC Approved. Complies with the limits for a Class B device, pursuant to Part 15 of the FCC rules. CSA and IC

### **Range Diagram**

Install in center of room to maximize RF coverage.

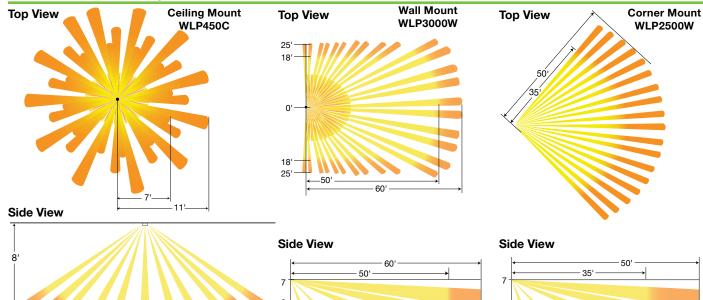


Line of sight distance, 60 ft (18m)

Contact Hubbell first for applications using foil-backed or metallic ceiling tiles.

### **Wireless Sensor Coverage Patterns**

Warranty



### Sensor Coverage Chart (for sensor mounted in center of room)

Ceiling height Maximum room dimensions for complete floor coverage*					
8 ft. (2.4m)	18 ft. x 18 ft. (5.5m × 5.5m)	324 sq. ft. (30.2m <sup>2</sup> )			
9 ft. (2.7m)	20 ft. x 20 ft. (6.1m × 6.1m)	400 sq. ft. (37.2m <sup>2</sup> )			
10 ft. (3.0m)	22 ft. x 22 ft. (6.7m × 6.7m)	484 sq. ft. (44.9m <sup>2</sup> )			
12 ft. (3.7m)	26 ft. x 26 ft. (7.9m × 7.9m	676 sq. ft. (62.4m <sup>2</sup> )			

Note: \*12 ft. (3.7m) is the recommended maximum mounting height.

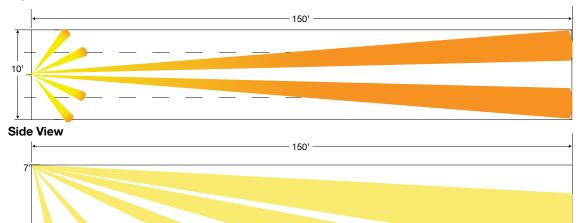
Clear Connect® is a registered trademark of Lutron Electronics Co., Inc.

### Wireless Hallway Sensor

Opera 10-yea	ating voltage: 3V ating current: 14 µA nominal ar battery life design ied with one CR 123 lithium battery
• • • • • • • • • • • • • • • • • • • •	rolatile memory (saved changes are stored during power loss)
Construction High in	mpact, UL 94-5V plastic
	r use only ating temperature: 32°F to 104°F (0°C to 40°C)
Range RF ran	nge is 30 ft. (10m) obstructed, 60 ft. (18m) line of sight
	ated test button Iluminates orange in response to motion during test mode
Wireless Communication Test Dedication	ated test button; Turn associated loads ON and OFF
·	ute (intended for use in high-activity, briefly occupied areas only); 5 minutes; nutes (default setting); 30 minutes
"Disab	oled" – Sensor turns lights ON and OFF automatically – default setting oled" – Lights must be turned ON manually from a switching device or turns lights OFF automatically
Sensitivity Options Low A	activity (default setting); Medium Activity; High Activity
	s Listed, FCC Certified, IC Certified s CA (USA) Energy Commission Title 24 requirements
Warranty 1 year	

### **Wireless Hallway Sensor Coverage Patterns**

### Top View



### WLP150H

### Sensor Coverage Chart (Hallway)

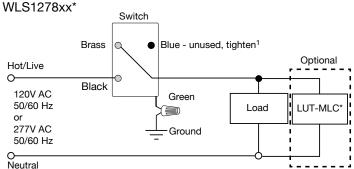
Width of Hall	Length of Hall
6 ft. (1.0m) or less	50 ft. (15.2m)
8 ft. (2.4m)	100 ft. (30.5m)
10 ft. (3.0m) or more	150 ft. (45.7m)

Note: Sensor mounting shown at 7 ft. (2.1m) Mounting height should be between 6 and 8 ft. (1.6 and 2.4m).

Clear Connect® is a registered trademark of Lutron Electronics Co., Inc.

### Wireless Wall Switch (WLS1278 Series)

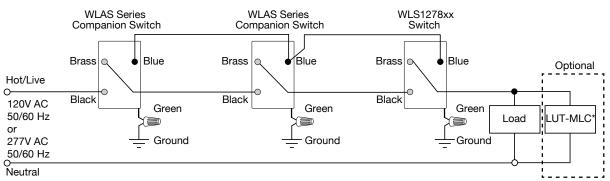
### Single Location Installation



Note: \*The included LUT-MLC ensures proper function when fluorescent, CFL, or LED loads are used. Install the LUT-MLC inside a load fixture or in a separate J-box of the circuit.

- 1 When using controls in single location installations, tighten the blue terminal without any wires attached. DO NOT connect the blue terminal to any other wiring or to ground.
- 2 Up to 9 Accessory Switches may be connected to the Wireless Switch. Total blue terminal wire length may be up to 250 ft. (76m).
- 3 Requires WLAS120 for 120V AC applications, and WLAS277 for 277V AC applications.

# Multi-Location Installation<sup>2</sup> with WLAS1278xx or WLAS277xx<sup>3</sup>



#### Low Voltage Switches with 0-10V Dimming

### **Specifications**

Base Catalogs: DSM30xx, DSL30xx, DSC010xx, DSM010xx, DSL010xx

Compatible with Hubbell Wiring Device-Kellems CU300HD, CU300M control units, AAR20P relay packs.

0-10V Dimming Series compatible with IEC60929 Annex E.2 compliant LED Drivers

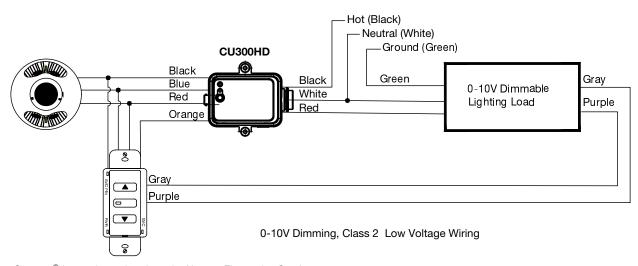
Accepts Hubbell Wiring Device-Kellems NPS26 and NP26 series decorator style wall plates (Not Included) Two-year warranty

### **Electrical Ratings**

100mA @ 30VDC

0-10V Dimming Series: Current Sinking Capacity: 100mA

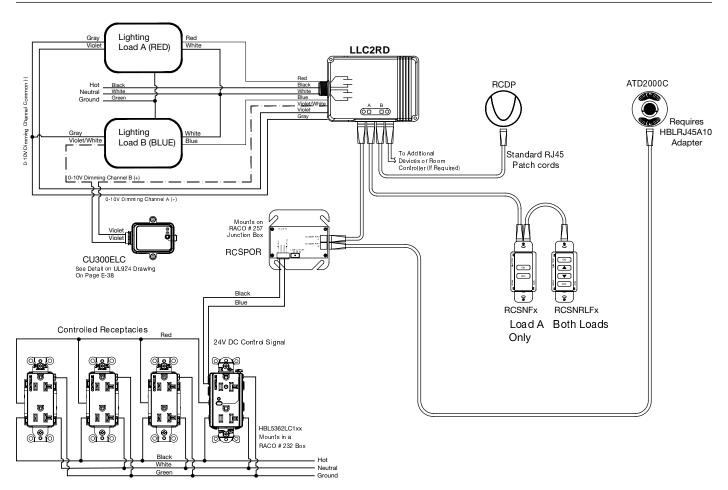
Available in Latching, Momentary, and Combination (DSC010series) of both configurations



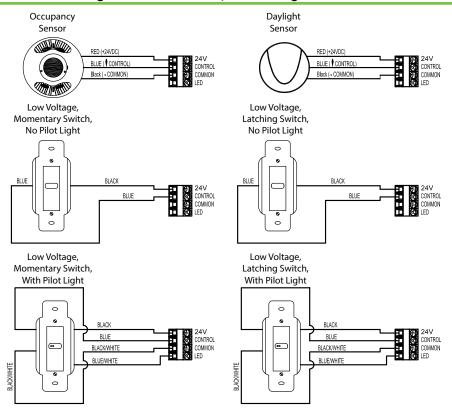
Clear Connect® is a registered trademark of Lutron Electronics Co., Inc.

### **Distributed Control Load:Logic Room Controller**

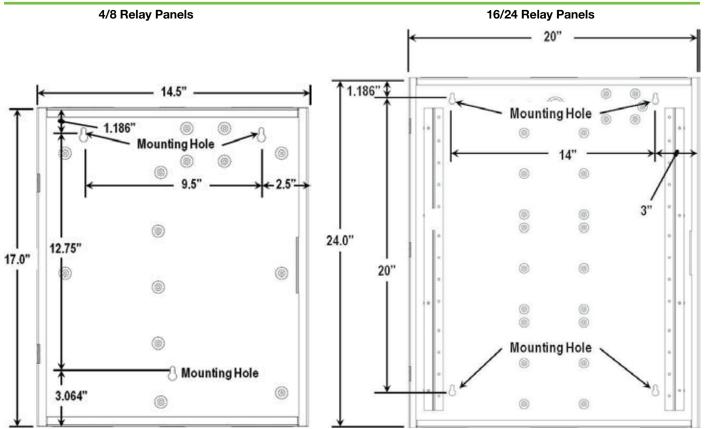
77/347VAC, 20A Max, 60Hz /AC, 20A Max, 60Hz
A, Tungsten, 120VAC only A, Magnetic Ballast, 8A LED A, Electronic Ballast, 8A LED P. Motor @120V, 3/4 H.P. @277V; 1\2 H.P.@347V P models the maximum combined output of both relays: 20A Ports: Ports
A per channel (LLC2RD)  n low-voltage, two-wire dimming ballast and LED drivers.
emperature: 0°C to 40°C nidity (non-condensing): 0 to 95%
SM UL Rated 94 HB Plastic
ith requirements for use in a plenum area ed for external junction box mounting
x 3.85"W x 1.30"H
ctly to an external junction box through an extended ½" chase nipple.
nding
vith UL916 and Certified to CAN/CSA C22.2 No. 205-M1983
nited



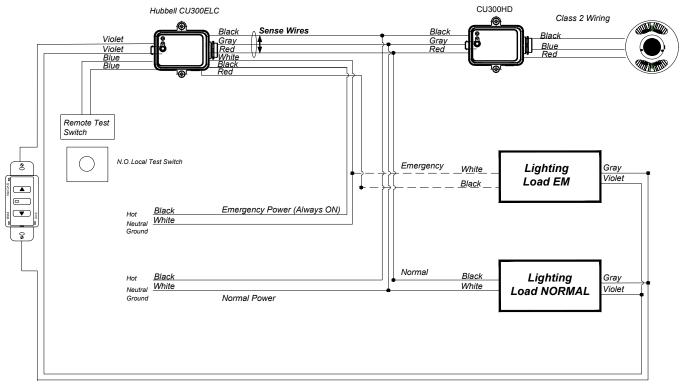
### Centralized Control - Load:Logic® Control Panels, Low Voltage Connections



### **Enclosure Dimensions**

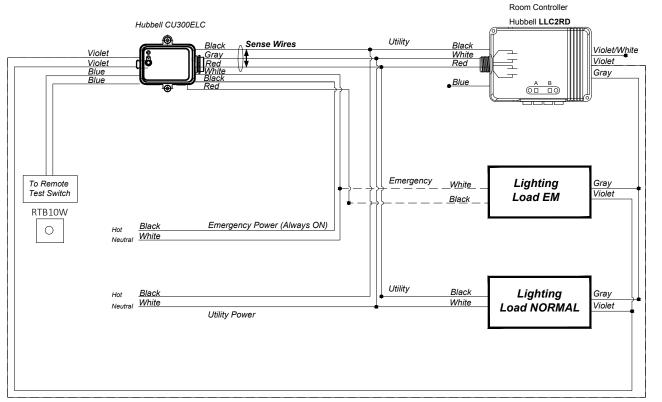


### CU300ELC Unit Wired with Control Unit CU300HD



Class 2 Wiring 0-10V Dimming

### **CU300ELC Unit Wired with Room Controller LLC2RD**



Class 2 Wiring 0-10V Dimming

# SECTION F

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### Products at a Glance

#### UL508/UL60947 Circuit-Lock® Motor Disconnects



### Labelless Circuit-Lock® Disconnect Switches

- Non-metallic and stainless steel options
- Available in 30, 60 and 100 Amp versions
- IP69k and Type 4X, 12K water ingress protection
- Permanent labelless markings
- Available with six highly visible LED Indicators
- Certified by NSF for hygiene in Food Processing applications
- Highly visible red handle which meets OSHA LO/TO capabilities
- Accepts up to 2 auxiliary contacts
- Cover cannot be removed with switch in the "ON" position



#### **Enhanced Features:**

- **inSIGHT** LED indicators provide visual confirmation of power by phase
- MotorQuick® Plug and play functionality to reduce Total Cost of Ownership
- VFDs Factory installed auxiliary contact for safe disconnecting in VFD applications
- JOG Factory installed Jog switch for point of use communication to PLC/VFD
- Stainless Steel Sloped Top 15° rounded top aids run-off by minimizing horizontal surfaces





### **UL98 Circuit-Lock® Motor Disconnects**



## 200A Circuit-Lock® Disconnect Switches

- Non-metallic & stainless steel
- Type 4X, 12
- Accepts up to 2 auxiliary contacts
- OSHA Compliant Lockout/ Tagout handle
- Unable to open the cover when "ON"; cover locked when energized



#### Circuit-Lock® 30 and 60 Amp Fused Disconnect Switches

- Non-metallic enclosure meets UL 50E Type 4X (watertight) 12 (dust-tight) and IP66 suitability requirements
- Removable door for ease of wiring and installation
- Switch accepts Class "J" fuses and up to 2 auxiliary contacts

### **UL98 and UL508 Disconnect Switches**



#### **Hazardous Locations**

- Compact NEMA 4X enclosure and footfrint allows easy installation in tight locations
- Top and bottom drilled and tapped conduit entrances
- For use as motor disconnects

### **UL508 Switches**



#### **Disconnect Switches**

- Thermoset body provides high resistance to electrical arc tracking
- Withstands high temperatures
- Provides long-life reliability







### **New Innovations**

## Circuit-Lock® 30A Disconnects with LED Indicators

Hubbell's new 30A Circuit-Lock Disconnect with integral phase indication LEDs redefines the benchmark for safety by providing insight into the enclosure while in use. Six highly visible LEDs (3 line side/3 load side) communicate the electrical status of the switch by phase. This voltage detection feature significantly improves existing safety and maintenance procedures by visually providing personnel critical information prior to removing the enclosure cover; e.g. a welded contact or dropped phase.

Hubbell ÎnSIGHT™ phase indicating disconnect switches are available in non-metallic and stainless steel versions. Replacement covers are available for upgrades to existing installations. With an ever growing focus on safety improvements Hubbell ÎnSIGHT™ disconnects provide a difference you literally can see.



Insight (n): the power or act of seeing into a situation





### **Housing Design**

- Six highly visible integral phase identification LEDs
- LEDs provide secondary means of visual confirmation of make/break on all phases
- Cover cannot be removed with switch in the "ON" position



### Safety

Verification of opening of load side contacts



 Highly visible red handle can be locked in the OFF position as a method of compliance with OSHA Lockout/Tagout requirements

### 30 Amp Unfused Disconnect Switches with LEDs\*

Description	Non-Metallic	Stainless Steel Square Top	Stainless Steel Sloped Top
Disconnect switch with LEDs.	HBLDS3P	HBLDS3SSP	HBLDS3SSRP
Disconnect switch with HBLAC1 auxiliary contact.	HBLDS3PAC	_	_
Disconnect with Jog switch and LEDs.	HBLDS3PJ	_	HBLDS3SSRPJ

**LED Replacement Covers** 

		Stainless Steel	Stainless Steel
Description	Non-Metallic	Square Top	Sloped Top
Replacement cover for 30A switches with LEDs.	HBLDS3RCP	HBLDS3SSRCP	HBLDS3SSRRCP
Note: For use with 3Ø Y configurations only.			

**Auxiliary Contacts** 

Description	Catalog Number
"Break After Main Break", 1 set of n/o contacts, 1 set of n/c contacts.	HBLAC1**
"Break Before Main Break", 1 set of n/o contacts for use with variable frequency drives.	HBLAC2**

Note: \*Certified by NSF, International.



HBLDS3P



HBLDS3SSRP

<sup>\*\*</sup>Up to two auxiliary contacts per enclosure.







### **Features and Benefits**

### Non-Metallic Labelless Circuit-Lock® Switched Disconnect Enclosures

NEC section 430.102(B) requires each motor controller to have a disconnect within line of sight from the motor and driven equipment. Hubbell's Circuit-Lock® Unfused Disconnect Switches are UL listed as a manual motor controller and also "suitable as a motor disconnect" and meet these code requirements.

- Constructed from corrosion and impact resistant UV stabilized non-metallic material
- IP69k and Type 4X,12K water ingress protection
- Certified by NSF for hygiene in food processing applications
- Highly visible red handle which meets OSHA Lockout/Tagout capabilities
- Cover cannot be removed with switch in the "ON" position
- Accepts up to 2 Auxiliary contacts
- Reversible interior accomodates top or bottom conduit opening



HBLDS3 (Cover)

#### **Enhanced Features:**

- Adjustable mounting feet are now 40% stronger to help prevent nuisance breakage
- Product ratings are permanently laser-marked to the HBLDS3 devices and will not wash off
- Truly captive screws prevent lost screws
- Now shipped from factory as bottom feed for quicker installation in 4X applications



#### **LED Indicators**

- Six highly visible integral phase identification LEDs
- External LEDs provide secondary means of visual confirmation of make/break on all phases



#### Variable Frequency Drive (VFD)

- Integrates a verified break before break auxiliary contact factory installed in our HBLDS series
- Prevents downtime from out of sequence equipment shutdowns



### Jog Switch

- Cost savings by utilizing existing space in the motor disconnect enclosure reducing parts and labor costs
- Convenience by having point of use control circuit to PLC within line of sight of the motor
- Added safety by allowing maintenance personnel the functionality to "Try Out" after Lockout/Tagout



#### MotorQuick® Version

- Significantly reduces the time it takes to replace motors by combining the plugand-play technology of the LINKOSITY® power system
- Motor rotation can be pre-checked in a maintenance shop to further speed the installation







### Non-Metallic Labelless Circuit-Lock® Switched Disconnect Enclosures\*

Description	30 Amp	60 Amp	100 Amp
Disconnect switch.	HBLDS3	HBLDS6	HBLDS10
Disconnect switch for use with variable frequency drives.	HBLDS3VFD	HBLDS6VFD	HBLDS10VFD
Disconnect switch with HBLAC1 auxiliary contact.	HBLDS3AC	HBLDS6AC	HBLDS10AC
Disconnect switch without conduit knockout or conduit fitting.	HBLDS3NK	_	-
Disconnect switch with HBLAC1 auxiliary contact without conduit knockout or conduit fitting.	HBLDS3ACNK	_	-
Disconnect switch with 3 auxiliary contacts, without conduit knockouts. Break before main break – 1 set "normally open", 1 set "normally closed". Break after main break – 2 sets "normally open", 1 set "normally closed".		_	-



HBLDS3

### Non-Metallic Disconnects with LEDs

Description	30 Amp	60 Amp	100 Amp
Disconnect switch with LEDs.	HBLDS3P	_	-
Disconnect with Jog switch and LEDs.	HBLDS3PJ	_	-

Note: For use with 3Ø Y configurations only.



Description	30 Amp	60 Amp	100 Amp
Disconnect switch.	HBLDS3J	HBLDS6J	_
Disconnect switch for use with variable frequency drives.	HBLDS3VFDJ	_	_
Disconnect switch with HBLAC1 auxiliary contact.	HBLDS3ACJ	_	_



HBLDS3VFD

### Auxiliary Contacts for 30, 60 and 100 Amp Switch, NEMA A600 Pilot Duty

Description	Catalog Number
"Break After Main Break", 1 set of n/o contacts, 1 set of n/c contacts.	HBLAC1**
"Break Before Main Break", 1 set of n/o contacts for use with variable frequency drives.	HBLAC2**

Note: \*Certified by NSF, International.

\*\*Up to two auxiliary contacts per enclosure. Not for use with HBLDS33ACNK.

30A Units are supplied with one ¾ in. NPT Raintight conduit fitting.

60A and 100A Units are supplied with two 11/4 in. NPT Raintight conduit fittings.



HBLDS3P

### **Variable Frequency Drive Diagram**

When installing a disconnect in series with a VFD it is critical to include the correct auxiliary contact. Through extensive testing, Hubbell has determinted the timing of our early break auxiliary contact HBLAC2 safely disconnects the power by signaling the VFD that the motor disconnect is being turned OFF. The VFD then executes a coast-to-stop preventing any damage to the disconnect switch and the VFD output device.



HBLDS3J





HBLAC2







### **Features and Benefits**

## Stainless Steel Circuit-Lock® Unfused Switched Disconnect Enclosures\*

NEC section 430.102(B) requires each motor controller to have a disconnect within line of sight from the motor and driven equipment. Hubbell's Circuit-Lock<sup>®</sup> Unfused Disconnect Switches are UL listed as a manual motor controller and also "suitable as a motor disconnect" and meet these code requirements.

- Formed in nonporous 304 stainless steel
- IP69k and Type 4X,12K water ingress protection
- Certified by NSF for hygiene in food processing applications
- Fixed offset 1/4 inch mounting feet meet NEC airspace requirements for metal enclosures
- Labelless markings on the cover
- Highly visible red handle which meets OSHA Lockout/Tagout capabilities
- Cover cannot be removed with switch in the "ON" position
- Accepts up to 2 Auxiliary contacts





More than ever food and beverage processing facilities see the value of investing in intelligent design and following best practices in hygiene.

The sloped top enclosure is consistent with these best practices. Horizontal surfaces have been minimized to assist with getting it clean and keeping it clean.



#### **LED Indicators**

- Six highly visible integral phase identification LEDs
- External LEDs provide secondary means of visual confirmation of make/break on all phases



### **Housing Design**

- Sloped top design sheds water and debris
- Fully shrouded handle prevents damage to the handle
- Captive screws prevent lost screws



### Jog Switch

- Cost Savings by utilizing existing space in the motor disconnect enclosure reducing parts and labor costs
- Convenience by having point of use control circuit to PLC within line of sight of the motor
- Added Safety by allowing maintenance personnel the functionality to "Try Out" after Lockout/Tagout



#### Labor Savings

- 15° Sloped Top version available predrilled with ¾ inch stainless steel hubs for bottom feed applications
- Ample gutter space for hassle free installation







### Stainless Steel Circuit-Lock® Unfused Switched Disconnect Enclosures\*

Description	30 Amp	60 Amp	100 Amp
Square Top disconnect switch.	HBLDS3SS	HBLDS6SS	HBLDS10SS
Square Top disconnect switch for use with variable frequency drives.	HBLDS3SSVFD	HBLDS6SSVFD	HBLDS10SSVFD
Square Top disconnect switch with HBLAC1 auxiliary contact.	HBLDS3SSAC	HBLDS6SSAC	HBLDS10SSAC
Sloped Top disconnect switch.	HBLDS3SSR	HBLDS6SSR	HBLDS10SSR
Sloped Top disconnect, 4X with (2) ¾ inch stainless steel hubs.	HBLDS3SSR2K	_	-
Sloped Top disconnect switch for use with variable frequency drives.	HBLDS3SSRVFD	HBLDS6SSRVFD	HBLDS10SSRVFD
Sloped Top disconnect switch with HBLAC1 auxiliary contact.	HBLDS3SSRAC	HBLDS6SSRAC	HBLDS10SSRAC
Sloped Top enclosure, Blank.	HBLDSSRNK3	HBLDSSRNK6	_



HBLDS3SS

### **Stainless Steel Disconnects with LEDs**

Disconnect switch with LEDs.  HBLDS3SSP  Disconnect with Jog switch and LEDs.  HBLDS3SSRP  HBLDS3SSRPJ	Description	Stainless Steel Square Top	Stainless Steel Sloped Top
Disconnect with Jog switch and LEDs. — HBLDS3SSRPJ	Disconnect switch with LEDs.	HBLDS3SSP	HBLDS3SSRP
5	Disconnect with Jog switch and LEDs.	_	HBLDS3SSRPJ



HBLDS3SSJ

Note: For use with 3Ø Y configurations only.

**Stainless Steel Disconnects with Jog Switch** 

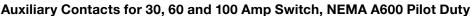
Description	Stainless Steel Square Top	Stainless Steel Sloped Top
30A disconnect with Jog switch.	HBLDS3SSJ	HBLDS3SSRJ



HBLDS3SSR

### **Stainless Steel Conduit Hubs**

Description	Catalog Number
¾ inch stainless steel conduit hub.	HUB75SS
1¼ inch stainless steel conduit hub.	HUB125SS



Maximary Contacto for Co, Co and Too Minp Contact, NEW Mint Daty		
Description	Catalog Number	
"Break After Main Break", 1 set of n/o contacts, 1 set of n/c contacts.	HBLAC1**	
"Break Before Main Break", 1 set of n/o contacts for use with variable frequency drives.	HBLAC2**	

Note: \*Certified by NSF, International.

\*\*Up to two auxiliary contacts per enclosure. Not for use with HBLDS33ACNK. 30A Units are supplied with one ¾ in. NPT Raintight conduit fitting. 60A and 100A Units are supplied with two 1¼ in. NPT Raintight conduit fittings.



HBLDS3SSRPJ







HBLDSSRNK3





HBLDS3RCP

## Non-Metallic Replacement Covers

Description	30 Amp	60 Amp	100 Amp
For disconnect switch.	HBLDS3RC	HBLDS6RC	HBLDS10RC
For disconnect switch with LEDs.	HBLDS3RCP	-	-
For disconnect switch with LEDs and Jog.	HBLDS3RCPJ	_	_
For disconnect with Jog switch.	HBLDS3RCJ	HBLDS6RCJ	_

**Stainless Steel Replacement Covers** 

Description	30 Amp	60 Amp	100 Amp
For square top disconnect switch.	HBLDS3SSRC	HBLDS60100SSRC	HBLDS60100SSRC
For square top disconnects with LEDs.	HBLDS3SSRCP	_	_
For square top disconnect with Jog switch.	HBLDS3SSRCJ	_	_
For sloped top disconnect switch.	HBLDS3SSRRC	HBLDS60100SSRRC	HBLDS60100SSRRC
For sloped top disconnect with LEDs.	HBLDS3SSRRCP	_	_
For sloped top disconnect with Jog switch.	HBLDS3SSRRCJ	_	_



Description	Catalog Number
For 30A switches.	HBL30RGB
For 60A and 100A switches.	HBL60100RGB

**Replacement Neutral Block** 

Description	Catalog Number
For 30A switches.	HBL30RNB
For 60A switches.	HBL60RNB
For 100A switches.	HBL100RNB

**Replacement Switches** 

Description	Catalog Number
For 30A switches.	HBLDS3RS
For 60A and 100A switches.	HBLDS60100RS
For HBLDS33ACNK.	HBLDS33ACRS

**Replacement Mounting Feet** 

Description	Catalog Number
For 30A non-metallic switches.	HBLRFT1 <sup>△</sup>
For 60A and 100A non-metallic switches.	HBLRFT2 <sup>△</sup>

Note: <sup>A</sup> Package of 10 feet and 10 screws.



HBLDS3RCJ



HBLDS3SSRC



HBLDS3SSRRC



HBLDS3SSRRCP



HBL30RGB



HBL30RNB



HBLDS3RS



HBLRFT<sup>\*</sup>

#### **Dimensions**

	Labelles	ss Non-Metallic	Stainless S	Steel, Square Top	Stainless Steel, Sloped Top		
Key	30A inch (mm)	60A/100A inch (mm)	30A inch (mm)	60A/100A inch (mm)	30A inch (mm)	60A/100A inch (mm)	
Α	6.00 (152)	7.75 (197)	_	_	_	_	
В	5.12 (130)	6.87 (175)	4.87 (124)	7.30 (185)	5.41 (137)	7.66 (195)	
С	4.12 (105)	4.75 (121)	3.30 (84)	5.50 (140)	4.50 (114)	6.45 (164)	
D	6.62 (168)	8.00 (203)	_	_	_	_	
Е	7.62 (194)	9.95 (253)	7.05 (179)	10.30 (262)	8.60 (218)	11.41 (290)	
F	8.50 (216)	11.00 (279)	8.38 (213)	11.63 (296)	8.22 (209)	11.17 (284)	
G	4.12 (105)	5.94 (151)	5.39 (137)	5.93 (151)	4.92 (125)	6.10 (155)	

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ON

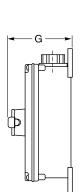
### **Horsepower Ratings**

Voltage	30A	30A*	60A	100A
1Ø 120V AC	1	1	7.5	7.5
1Ø 200–240V AC	3	2.5	15	15
1Ø 480V AC	5	5	30	30
3Ø 200-240V AC	7.5	5	30	30
3Ø 480V AC	15	10	50	50
3Ø 600V AC	15	10	50	50

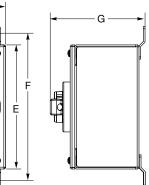
Note: \*HBLDS33ACNK.

### Non-Metallic

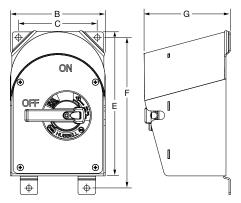
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## Stainless Steel, Square Top



### Stainless Steel, Sloped Top



### Circuit-Lock® Unfused Disconnect Switches

### Specifications

Moisture Resistance

Flammability

Operating Temperature **UV** Resistance

Dielectric Voltage Max. Working Voltage

Current Interrupting

Short Circuit Current Ratings (SCCR):

(Motor Disconnect)

Indoor and Outdoor - Type 4X (Wash down, Corrosion resistant);

Indoor – 30, 60A and 100A Type 12 (Dust-tight, Falling Dirt, Noncorrosive Liquids).

UL94-5VA and V0 Classification.

Maximum Continuous 75°C; Minimum Continuous -40°C without impact.

All materials are UV stabilized.

Withstands 3000V AC minimum.

600V AC RMS.

Certified for current interrupting at full rated current and voltage.

- 30/60/100A: Suitable for use on a circuit capable of delivering not more than 10kA RMS symmetrical, 600V AC max.
- 30A: Suitable for use on a circuit capable of delivering not more than 65kA RMS symmetrical, 600V AC max. when protected by Class J fuses rated 30A max.
- 60/100A: Suitable for use on a circuit capable of delivering not more than 65kA RMS symmetrical, 600V AC max. when protected by Class J fuses rated 100A max.

In accordance with UL, CSA and international conventions.

Identification and ratings are part of external label.

Non-Metallic - External fully adjustable feet. Stainless Steel - Feet are fixed.

In accordance with UL 746C.

Terminal Identification Product Identification Mounting Impact Resistance

Materials		
Part	Non-Metallic	Stainless Steel
Base	PBT	#14 Gauge Type 304 Stainless Steel
Тор	PBT	#14 Gauge Type 304 Stainless Steel
Handle	PBT	PBT
Conduit Hub	Zinc 30A Unfused - ¾ in.	Zinc 30A - ¾ in.
	Zinc 60/100A Unfused - 11/4 in.	Zinc 60/100A - 11/4 in.
Enclosure Gasket	Neoprene	Neoprene
Shaft (Unfused)	PBT	PBT
Shaft Seal	Molded Neoprene	Molded Neoprene
Frame	Galvanized Steel	N/A
Enclosure Screws	Stainless Steel 300 Series	Stainless Steel

### **Plug and Play Technology**

MotorQuick® significantly reduces the time it takes to replace motors by combining the plug-and-play technology of the LINKOSITY® power system with the versatility of Circuit-Lock® motor disconnect switches. Quick disconnect terminations will reduce motor changeout time by aproximately 65%. Keeping spare motors

already pre-wired with a LINKOSITY® inlet enables wiring to be done off-line when it is convenient, not critical. Motor rotation can be pre-checked in a maintenance shop to further speed the installation. The net result is that equipment is up and running in a fraction of the time, helping improve the bottom line.







### MotorQuick® Cost of Ownership Analysis

### **Traditional Motor Changeout**

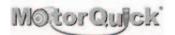
Catalog Number	Total Material Cost	Labor Cost/ Hr	Downtime	Total Labor Cost	Downtime Cost/hr	Total Downtime Cost	Total Cost
HBL1389D	\$106.00	\$53.00	1 hour	\$53.00	\$750.00	\$750.00	\$909.00
HBLDS3	\$185.00	\$53.00	1 hour	\$53.00	\$750.00	\$750.00	\$988.00

### MotorQuick® Motor Changeout

Catalog Number	Total Material Cost	Labor Cost/ Hr	Downtime	Total Labor Cost	Downtime Cost/hr	Total Downtime Cost	Total Cost	Total Savings
HBL1389MQ*	\$299.00	\$53.00	20 minutes	\$17.67	\$750.00	\$250.00	\$566.67	\$342.33
HBLDS3MQ*	\$411.00	\$53.00	20 minutes	\$17.67	\$750.00	\$250.00	\$678.67	\$309.33

Note: \*MotorQuick catalog numbers are based on the average cost of the various designs.





### **Housing Design**

• Thermoplastic Cover on Plated Steel Base

- NEMA 1 Enclosure
- Pre-wired with LINKOSITY® Components
- Crush and Impact Resistance of MC Cable





### **Housing Design**

- High Impact PBT Enclosure
- Type 4X Enclosure
- Permanent Labelless Marking
- Lockable Handle to Meet OSHA Lockout/Tagout Regulations
- Cable Ratings: TC-ER, MTW, STOOW



### Matar Ouiak® Disconnect Switches

Type 1 Non-Metallic Enclosure 30A 3 Pole 600V AC		Catalog Number
HBL1389D with one pre-wired LINKOSITY® female receptacle (load side).		HBL1389MQR
HBL1389D with 5 foot pre-wired LINKOSITY® female cable (load side).		HBL1389MQ5
HBL1389D with one pre-wired LINKOSITY® male receptacle (line side)		HBL1389MQR2
and one pre-wired LINKOSITY® female receptacle (load side).		
Type 4X Non-Metallic Labelless Enclosure 30A 3 Pole 600V AC		
HBLDS3 with one pre-wired LINKOSITY® female receptacle (load side).		HBLDS3MQR
HBLDS3 with 5 foot pre-wired LINKOSITY® female cable (load side).		HBLDS3MQ5
HBLDS3 with one pre-wired LINKOSITY® male receptacle (line side)		HBLDS3MQR2
and one pre-wired LINKOSITY® female receptacle (load side).		
Type 4X Stainless Steel Enclosure 30A 3 Pole 600V AC	Sloped Top	Square Top
HBLDS3SS with one pre-wired LINKOSITY® female receptacle (load side).	HBLDS3SSRMQR	HBLDS3SSMQR
HBLDS3SS with 5 foot pre-wired LINKOSITY® female cable (load side).	HBLDS3SSRMQ5	HBLDS3SSMQ5
HBLDS3SS with one pre-wired LINKOSITY® male receptacle (line side)	HBLDS3SSRMQR2	HBLDS3SSMQR2
and one pre-wired LINKOSITY® female receptacle (load side).		



HBL1389MQR2



HBLDS3MQR

### **Accessories**

Description	Catalog Number
3P 4W LINKOSITY® male receptacle for installation on motor.	RM3004PA001
3P 4W LINKOSITY® female receptacle for installation in switch.	RF3004PA001
3P 4W LINKOSITY® double ended (male/female) 5-50 foot cable.	PH3004PAxxx*
3P 4W LINKOSITY® single ended (female) 5-50 foot cable.	PF3004PAxxx*
Cord connector, ¾ in. NPT .6375 in. (16.0-19.1) diameter.	SHC1037CR
Lock-on cover for LINKOSITY® connections.	PH2030C

Note: \*Cables available from 5-50 feet in 5 foot increments. To purchase larger cable, replace the XXX with the required length in feet. (Examples: PH3004PA005 = 5 foot cable, PH3004PA050 = 50 foot cable.)



HBLDS3SSMQR

### Sample Set Up (1) HBLDS3MQR +



Note: \*\* Retrofit parts available for pre-existing disconnect switch installations. Please consult factory for availability.





#### Type 4X **Dimensions** Type 1 – 6.00" (152) <del>–</del> -5.12" (130)-3.97" Male 4.12" 4.12" (100.84)LINKOSITY (105)(105)Receptacle (MQR2 Option) (**a**) ON (HUBBELL) 6.62" (168)3.40" 4.52" 7.62" (86.36).88" (114.81)(194) (22.35) 8.50" (216)Female Female LINKOSITY Cord Male LINKOSITY (O) (MQ5 Option) LINKOSITY Receptacle Receptacle

(MQR2 Option)

Female

LINKOSITY Cord

(MQ5 Option)

Specifications	Type 1	Type 4X
Electrical Performance		
Distantia Malkana	0.000// 10	0.0001/40

Electrical Performance						
Dielectric Voltage	2,200	V AC minimum fo	or 1 minute.	2,200V AC minimum for 1 minute.		
Electrical Life	6,000	cycles with load	d.	6,000 cycles with load.		
Max. Working Voltage	600V	VACRMS. 60		600V AC RMS.		
Short Circuit Current Ratings (SCCR): (Motor Disconnect)	,	0,000 RMS symmetrical amps when tested • vith 60A max J fuses.		• 30: Suitable for use on a circuit capable of delivering not more than 10kA RMS symmetrical, 600V AC max.		
Short Circuit Current Ratings (SCCR): (Motor Controller)	,	00 RMS symmetri 125A RK5 fuses.	cal amps when tested	more than 6		ircuit capable of delivering not netrical, 600V AC max. when rated 30A max.
Mechanical						
Mechanical Life	10,00	00 minimum cycle	es.	10,000 minimum cycles.		
	Amps	s AWG Min.	AWG Max.	Amps	AWG Min.	AWG Max.
Terminal Accommodations	30	#14	#10	30	#14	#10
Terminal Torque	30	20 inch pounds		30	20 inch pound	S
Impact Resistance		_	_	UL746C		
Environmental						
Flammability	UL94	HB/V-0.		UL94-5VA and	V0 Classification	on.
Operating Temp.	Max.	continuous	60°C	Max. continuo	us 75°C	
	Min.	continuous w/o in	npact -40°C	Min. continuou	ıs -40°C	
Listings						·
UL 508	Indus	trial Control Equip	ment File #E36355	Industrial Cont	rol Equipment F	ile #E36355

### LINKOSITY® Connection

**HP Rating** 

7.5

15

120V AC

240V AC

480V AC

600V AC

Certifications		Materials		
Connecting Components	Listed to UL 2238 and UL 50E.	Connectivity System Components		
Electrical Performance		Contact Carrier	Nylon 6/6, white.	
Voltage	Up to 600V AC.	Contact Materials	Pins - brass.	
Amperage	Up to 30A.	•	Sockets - leaded nickel copper w/ stainless steel sleeve.	
Environmental		Contact Plating	Hard gold over palladium/nickel.	
Connectivity System Compone	ents	Overmold Material	Glass filled polyurethane, gray.	
Moisture Resistance	UL Type 4, 4X, 12 and 13.	Coupling Hardware	Nickel plated brass.	
Ingress Protection	IP67 Suitability.	Cable (16 AWG and Up)	UL 600V Type TC-ER, MTW 90°C	
Flammability	UL94HB cables / UL94V-0 receptacles.		or STOOW 600V 105°C.	

Dimensions in Inches (mm)

Female

LINKOSITY

Receptacle

**HP Rating** 

7.5

15

15

120V AC

240V AC

480V AC

600V AC

### **Features and Benefits**

### Circuit-Lock® 200A Disconnect Switches

Hubbell's 200A Disconnect Switches are the latest addition to the Circuit-Lock® family of switched enclosures. The enclosures are designed to withstand harsh environments with exposure to water, chemicals, oils and frequent washdowns. Available in non-metallic or stainless steel, the enclosures are UL Listed Type 4X and 12.

- UL 98 Rated Switch
- Non-Metallic and Stainless Steel
- Type 4X, 12
- Accepts up to 2 Auxiliary Contacts
- Highly Visible Red Rotary Handle
- OSHA Compliant Lockout/Tagout Handle
- Unable to Open the Cover when ON; Cover Locked when Energized
- 200kA SCCR Rating when Protected by a Class "J" Fuse



Circuit-Lock® 200A Disconnect Switches

Description	Catalog Number
200A non-metallic disconnect.	HBLDS20
200A stainless steel disconnect.	HBLDS20SS
N/O auxiliary contact - "Break Before Main".	HBLAC200
200A replacement switch.	HBLDS20RS
200A replacement handle.	HBL200HDL

### Materials - 200A Non-Metallic

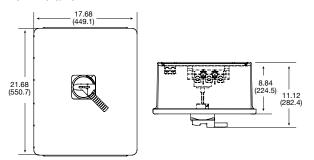
Material	Finish
FR Polyester	_
Plastic	Red/Yellow
Plastic	_
12 Ga. Aluminum	None
Aluminum	Tin Plated
Steel	Zinc Plated
	FR Polyester Plastic Plastic 12 Ga. Aluminum Aluminum

### Materials - 200A Stainless Steel

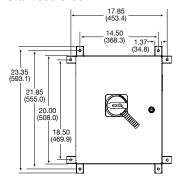
Description	Material	Finish
Enclosure	14 Ga. 304 SST	Smooth Grain
Handle	Plastic	Red/Yellow
Switch	Plastic	_
Backplate	14 Ga. 304 SST	304 Ann 2B
Terminals	Aluminum	Tin Plated
Fasteners	Steel	Zinc Plated
Mounting Fee	t 304 SST	_

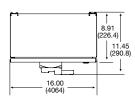
#### **Dimensions**

### Non-Metallic



### Stainless Steel

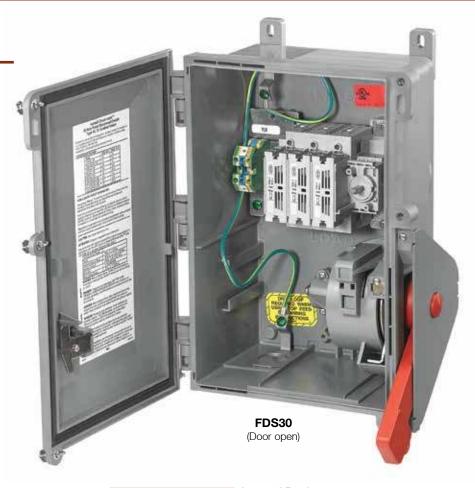




### **Features and Benefits**

## Circuit-Lock® 30 and 60 Ampere Fused Disconnect Switches

The Circuit-Lock Fused Disconnect Switch provides fused switched control of a directly wired load. The switch cannot be turned ON unless the enclosure cover is closed. The fuses cannot be accessed until the switch is turned OFF. The fuse holder accepts Class "J" fuses. This enclosure is non-metallic and is listed for Outdoor/Indoor (Type 4X Wash down, Corrosion resistant). The handle can be locked in the OFF position to comply with OSHA Lockout/Tagout regulations.





### **Housing Design**

- Non-metallic enclosure meets UL 50E Type 4X (watertight) 12 (dust-tight) and IP66 suitability requirements
- Enclosure is molded of rugged PBT to resist abuse, corrosion and enhance safety
- Stainless steel 1/4 in. turn door fasteners for quick, easy access to fuses.



### Internal Design

- Fused disconnect switches accept Class "J" fuses
- Internal frame automatically bonds all grounds
- Captured neoprene gasket provides a watertight seal between cover and base



#### Safety

- Enclosure door can be locked to prevent unauthorized access. Additionally, if the switch is ON, the door cannot be opened
- Lockable highly visible red handle to meet OSHA lockout/tagout
- Safety interlocked fuse access door



#### Interior

- Removable door for ease of wiring and installation
- Three molded-in conduit drill points are located on the top, bottom and back surface of enclosure. Conduit hub provided: 30A 1 in. NPT, 60A 1¼ in. NPT



#### Installation

- Conduit hub and adjustable mounting feet are supplied with each Circuit-Lock<sup>®</sup> fused disconnect switch.
- Adjustable mounting feet (4) can be mounted in any of three positions for ease of installation



#### Switch

 Compact Fused Disconnect Switch accepts Class "J" fuses. Fuse holders are top mounted for easy access. The switch accepts auxiliary contacts for control circuit applications including the ON/OFF control of remote pilot lights or signal for programmable controllers.



IP66

UL Listed, CSA Certified TYPE 4, 4X and 12 Enclosure Rating

### 30 and 60 Amp Fused Disconnect Switches

Description	Catalog Number
30A Circuit-Lock fused disconnect switch.	FDS30*
60A Circuit-Lock fused disconnect switch.	FDS60*

Note: \*Class "J" fuses not included.

### **Auxiliary Contacts**

Description	Black Style Switch Catalog Number	Gray Style Switch Catalog Number
Auxiliary contact, normally open, A600 pilot duty, break before break.	ACFSNO	HBLACFSNO
Auxiliary contact, normally closed, A600 pilot duty, break before break.	ACFSNC	HBLACFSNC

Note: Auxiliary contacts are specific to the style switch noted and are NOT interchangeble.

### **Replacement Switches**

Description	Gray Style Switch Catalog Number
For 30A fused switches.	HBL30MIFRS
For 60A fused switches. Gray Style switch will retro fit Black Style switch.	HBL60MIFRS

**Watertight Closure Plug Kits** 

Description	Catalog Number
For 30A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK30
For 60 and 100A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK60

### **Replacement Mounting Feet**

Description	Catalog Number
Replacement mounting feet and screws for 30 and 60A fused mechanical interlocks.	HBLRFT2 <sup>△</sup>

Note: 30A Units supplied with two 1 in. NPT raintight conduit fittings. 60A Units supplied with two 1¼ in. NPT raintight conduit fittings.

<sup>△</sup>Package of 10 feet and 10 screws.



HBLRFT2



Gray Style Switch





HBLACFSNO HBL30MIFRS





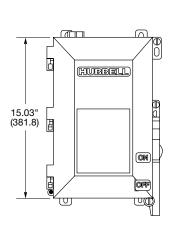


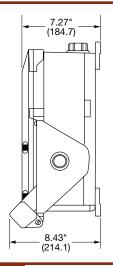
**ACFSNO** 

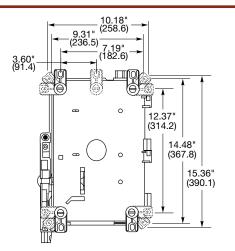


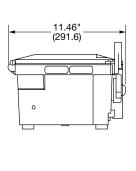
MICPK30

### **Dimensions**









Dimensions in Inches (mm)

### **Horsepower Ratings**

Ratings	Volts	Standard HP	Maximum HP*	Catalog Number
30A	120V AC	0.5	2	FDS30
600V AC	208-240V AC	1.5	3	
Max.	3Ø 240V AC	3	7.5	
	3Ø 480V AC	5	15	
	3Ø 600V AC	7.5	20	
	3Ø Y 120/208V AC	3	5	
	3Ø Y 277/480V AC	5	15	
	3Ø Y 347/600V AC	7.5	20	
60A	120V AC	1.5	3	FDS60
600V AC	208-240V AC	3	7.5	
Max.	3Ø 240V AC	7.5	15	
	3Ø 480V AC	15	30	
	3Ø 600V AC	15	50	
	3Ø Y 120/208V AC	7.5	15	
	3Ø Y 277/480V AC	15	30	
	3Ø Y 347/600V AC	15	40	

Note: \*Requires time delay fuses.

### **Fuse and Short Circuit Information**

Horsepower Ratings	The starting current of motors of more than the standard horsepower rating may require the use of fuses with appropriate time-delay characteristics.
Short Circuit Withstand Rating	Suitable for use on a circuit capable of delivering not more than 200,000 RMS symmetrical amperes at the voltage rating of receptacle when protected by Class "J" fuses.

Note: Replacement fused switch must be the same type Hubbell switch as original and have equal or greater short circuit current withstand rating.

### Circuit-Lock® Fused Disconnect Switch

Specifications	
Moisture Resistance	Indoor and Outdoor - Type 4X (Wash down, Corrosion resistant);
	Indoor – Type 12 (Dust-tight, Falling Dirt, Noncorrosive Liquids).
Flammability	UL94-5VA and V0 Classification.
Operating Temperature	Maximum Continuous 75°C;
	Minimum Continuous -40°C without impact.
UV Resistance	All materials are UV stabilized.
Dielectric Voltage	Withstands 3000V AC minimum.
Max. Working Voltage	600V AC RMS.
Impact Resistance	In accordance with UL 746C.
Terminal Identification	In accordance with UL, CSA and international conventions.
Product Identification	Identification and ratings are part of external label.
Mounting	External fully adjustable feet.
Fuse Types	UL Listed, Class "J"; CSA Certified, HRCI-J.
Materials	
Part	Material
Base	PBT
Door	PBT
Handle	PBT
Conduit Hub	Zinc, 30A Fused – 1 in., 60A Fused – 1¼ in.
Enclosure Gasket	Neoprene
Shaft	Brass
Shaft Seal	Neoprene
Frame	Galvanized Steel
Ground Plate	Galvanized Steel
Enclosure Screws	Stainless Steel 300 Series

### **Ratings Quick Reference Guide**

### Circuit-Lock® Switched Enclosures

					HP		
np Description	Phase	Poles	120	240	480	600	Catalog Number
0 TYPE 1 Non-Metallic	3	3	3	7.5	15	20	HBL1389MQR
TYPE 1 Non-Metallic	3	3	3	7.5	15	20	HBL1389MQ5
TYPE 1 Non-Metallic	3	3	3	7.5	15	20	HBL1389MQR2
NEMA 1 Aluminum	1	2	2	5	10	15	HBL1372D
	3	3				15	
NEMA 1 Aluminum			3	7.5	15	20	HBL1379D
NEMA 1 Non-Metallic	1	2	2	5	10	15	HBL1392D
NEMA 1 Non-Metallic	3	3	3	7.5	15	20	HBL1389D
NEMA 3/3R Non-Metallic	1	2	2	5	10	15	HBL13R22D
NEMA 3/3R Non-Metallic	3	3	3	7.5	15	20	HBL13R23D
NEMA 3R Die Cast Aluminum	1	2	2	5	10	15	UDI 42D40D
	3	3				15	HBL13R12D
NEMA 3R Die Cast Aluminum			3	7.5	15	20	HBL13R13D
NEMA 3R Aluminum	1	2	2	5	10	15	HBL13R92D
NEMA 3R Aluminum	3	3	3	7.5	15	20	HBL13R89D
IP69k TYPE 4X Labelless Non-Metallic	3	3	1	7.5	15	15	HBLDS3
IP69k TYPE 4X Labelless Non-Metallic	3	3	1	7.5	15	15	HBLDS3AC
IP69k TYPE 4X Labelless Non-Metallic	3	3	1	7.5	15	15	HBLD\$3NK
IP69k TYPE 4X Labelless Non-Metallic	3	3	1	7.5	15	15	HBLDS3ACNK
IP69k TYPE 4X Labelless Non-Metallic	3	3	1	5	10	10	HBLDS33ACNK
TYPF 4X Labelless Non-Metallic	3	3	1	7.5	15	15	HBLDS3MQR
TYPE 4X Labelless Non-Metallic	3	3	1	7.5	15	15	HBLDS3MQ5
TYPE 4X Labelless Non-Metallic	3	3	1	7.5 7.5	15	15	HBLDS3MQ5
		3					HBLDS3SS
IP69k TYPE 4X Stainless Steel	3	-	1	7.5	15	15	
IP69k TYPE 4X Stainless Steel	3	3	1	7.5	15	15	HBLDS3SSAC
IP69k TYPE 4X Stainless Steel	3	3	1	7.5	15	15	HBLDS3SSVFD
TYPE 4X Stainless Steel	3	3	1	7.5	15	15	HBLDS3SSMQR
TYPE 4X Stainless Steel	3	3	1	7.5	15	15	HBLDS3SSMQ5
IP69k TYPE 4X, 12 and IP69k Sloped, SS	1	3	1	3	5	15	HBLDS3SSR
IP69k TYPE 4X, 12 and IP69k Sloped, SS	1	3	1	3	5	15	HBLDS3SSR2K
IP69k TYPE 4X, 12 and IP69k Sloped, SS	1	3	1	3	5	15	HBLDS3SSRVFD
IP69k TYPE 4X, 12 and IP69k Sloped, SS	1	3	1	3	5	15	HBLDS3SSRAC
IP69k TYPE 4X, 12 and IP69k Sloped, SS	1	3	1	3	5	15	HBLDS3SSRMQI
IP69k TYPE 4X, 12 and IP69k Sloped, SS	1	3	1	3	5	15	HBLDS3SSRMQ
IP69k TYPE 4X, 12 and IP69k Sloped, SS	1	3	1	3	5	15	HBLDS3SSRMQF
TYPE 4X Non-Metallic Fused Disconnect	3	3	1	7.5	15	20	FDS30
NEMA 4X Stainless Steel	3	3	3	7.5	15	20	HBL13S33D
NEMA 4X Non-Metallic	3	3	3	7.5	15	20	HBL13X33D
0 NEMA 3R Aluminum	1	2	_	10	15	20	HBL16R92D
NEMA 3R Aluminum	3	3	_	10	25	30	HBL16R93D
IP69k TYPE 4X Non-Metallic	3	3	7.5	30	50	50	HBLDS6
IP69k TYPE 4X Non-Metallic	3	3	7.5	30	50	50	HBLDS6AC
IP69k TYPE 4X Non-Ivietallic IP69k TYPE 4X Stainless Steel	3	3	7.5 7.5	30	50 50	50	
							HBLDS6SS
IP69k TYPE 4X Stainless Steel	3	3	7.5	30	50 50	50 50	HBLDS6SSAC
IP69k TYPE 4X, 12 and IP69k Sloped, SS	3	3	7.5	30	50	50	HBLDS6SSR
IP69k TYPE 4X, 12 and IP69k Sloped, SS	3	3	7.5	30	50	50	HBLDS6SSRVFD
IP69k TYPE 4X, 12 and IP69k Sloped, SS	3	3	7.5	30	50	50	HBLDS6SSRAC
TYPE 4X Non-Metallic Fused Disconnect	3	3	3	15	30	40	FDS60
NEMA 4X Stainless Steel	3	3	_	10	25	30	HBL16S63D
NEMA 4X Non-Metallic	3	3	_	10	25	30	HBL16X63D
00 IP69k TYPE 4X Non-Metallic	3	3	7.5	30	50	50	HBLDS10
IP69k TYPE 4X Non-Metallic	3	3	7.5	30	50	50	HBLDS10AC
IP69k TYPE 4X Stainless Steel	3	3	7.5	30	50	50	HBLDS10SS
IP69k TYPE 4X Stainless Steel	3	3	7.5	30	50	50	HBLDS10SSAC
IP69k TYPE 4X, 12 and IP69k Sloped, SS	3	3	7.5	30	50	50	HBLDS10SSR
IP69k TYPE 4X, 12 and IP69k Sloped, SS	3	3	7.5	30	50	50	HBLDS10SSRVFD
IP69k TYPE 4X, 12 and IP69k Sloped, SS	3	3	7.5	30	50	50	HBLDS10SSRAC
00 Type 4X, 12 Non-Metallic			10	75 75	150 150	200	HBLDS20 HBLDS20SS
Type 4X, 12 Stainless Steel			10			200	







HBL13R89D





HBL16R93D





HBLDS3





HBLDS3P

HBLDS3J





HBLDS3MQ5





HBLDS3SS

HBLDS3SSR





HBLDS20

HBLDS20SS



### **Features and Benefits**

### **Hazardous Location Non-Fused Disconnect Switches**

Hubbell's hazardous location line of non-fused disconnect switches are typically used for applications with the presence of flammable gasses or vapors, ignitable dusts and fibers. They are also suitable for use in outdoor or indoor damp, wet and dirty locations or in areas where frequent wash downs, heavy rain, or water spray routinely occurs. These switches are compact in size to reduce cost and make it easier to position on the wall or piece of equipment. The enclosures are made of copper-free aluminum and have a polyester/epoxy finish to prevent corrosion. The highly visible handles can be locked out to comply with OSHA Lockout/Tagout regulations.

Class I, Div. 1 & 2, Groups B,C,D

Class I, Zones 1 & 2, Groups IIB+ H2, IIA

Class II, Div. 1 & 2, Groups E,F,G

Class III, NEMA 3, 4, 4X, 7(B,C,D), 9(E,F,G)



- Grain manufacturing and storage
- · Industrial chemical and gas manufacturing
- Petroleum refining
- Fertilizer manufacturing
- Vehicle repair/paint shops
- Coal mining
- · Cotton and fabric mills



### **Housing Design**

- Copper-free aluminum construction with electrostatically applied polyester/ epoxy finish to prevent corrosion
- Compact NEMA 4X enclosure and footprint allows easy installation in tight locations
- Top and bottom drilled and tapped conduit entrances



#### Safety

- Lockable handle to meet OSHA Lockout/Tagout regulations
- For use as motor disconnects



HBLB7NFD13A

### Internal Design

• Gasketed flange with O-ring located inside bolt circle to seal out moisture

HBLB7NFD26A

• Bodies have top and bottom drilled and tapped conduit entrances for power connection



#### Safety

- Lockable handle to meet OSHA Lockout/Tagout regulations
- Large visible rotary handle with "ON-OFF" indicator allows a quick means of disconnecting power
- For use as motor disconnects



#### Installation

- Fewer cover bolts reduces installation and maintenance time
- Removable ductile mounting lugs adjust to irregular mounting surfaces
- 316 Stainless steel bolts



- Disconnects contain UL98 certified switch
- MI include UL508/UL60947 disconnect switch
- Optional to add one (1) N/O "Break Before Main Break" auxiliary contact





#### Standard Materials/Finish

- Enclosures: Copper-free aluminum (less than 4/10 of 1% copper content)
- Cover Bolts: 316 Stainless Steel
- O-Ring Gasket: Silicone
- Finish: Grey Powder Polyester painted exterior, electrostatically applied
- Ratings: 600V AC, 230V DC 30-100 Amp
- Optimal to include up to one (1) N/O "Break Before Main Break" auxiliary contact

HBLB7NFD13A



HBLB7NFD26A

#### **Unfused Hazardous Location Disconnect Switches**

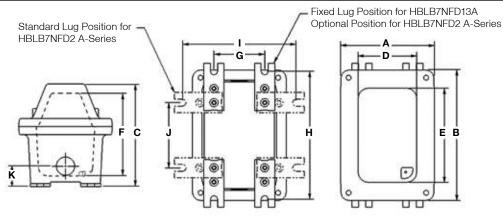
Description	30 Amp	60 Amp	100 Amp
3 Pole disconnect switch.	HBLB7NFD13A	HBLB7NFD26A	HBLB7NFD21A
3 Pole disconnect switch with auxuliary contact.	HBLB7NFD13AA	HBLB7NFD26AA	HBLB7NFD21AA

### **Disconnect Horsepower Ratings**

Switch	Single P	hase HP		Three P	hase HP		DC HP	Terminal	Conduit	
Amps/Phase	120V AC	230V AC	208V AC	230V AC	480V AC	600V AC	230V DC	Wire Size	Sizes	Catalog Number
30A / 3P	2	5	10	10	20	30	1	#14-10	1 NPT	HBLB7NFD13A
60A / 3P	3	7.5	20	20	40	40	10	#14-4	1½ NPT	HBLB7NFD26A
100A / 3P	5	15	25	30	50	50	20	#8-1	1½ NPT	HBLB7NFD21A

#### **Dimensions**

	Outside Box			Inside Box				Mounting Dimensions			
	Α	В	С	D	Е	F	G	Н	ı	J	K
30 Amp	53/4	81/16	65/16	35/8	5 <sup>13</sup> / <sub>16</sub>	51/16	31/8	81/8	-	-	11/4
60 & 100 Amp	81/8	131/16	713/16	41/4	93/16	65/16	21/2	11%	63/8	71/2	1 13/16



### Non-Fused UL1686 Mechanical Interlocks and Plugs

Amp	Circuit	Mechanical Interlock	Metallic Plug	Insulgrip Plug
30 Amp	2W 3P	HBLVSQ3023	HBLVP3385	HBL330PS2W
600V AC	3W 4P	HBLVSQ3034	HBLVP3485	HBL430PS2W
60 AMP	2W 3P	HBLVSQ6023	HBLVP6385	HBL360PS2W
600V AC	3W 4P	HBLVSQ6034	HBLVP6485	HBL460PS2W

Note: Early break contact comes standard with mechanical interlocks.

HBLVSQ 30 Amp models come standard with 1 inch drilled and tapped conduit openings top and bottom plus two 1 inch x ¾ inch reducers and one % inch close-up plug for maximum flexibility. 60 amp models come with one 11/2 inch opening on top and bottom and one 11/2 inch close-up plug.

See page G-44 for Dimensions on Mechanical Interlocks and Plugs.

#### Horsepower Ratings (VAC)\*

Horsept	TWEI Hatili	93 (170)				
Amp	Circuit	120	240	480	600	Catalog Number
30 Amp	1Ø	2	5	10	15	HBLVSQ3023
	3Ø	3	7.5	15	20	HBLVSQ3034
60 Amp	1Ø	_	10	15	20	HBLVSQ6023
_	3Ø	_	10	25	30	HBLVSQ6034

Note: \*Internal switch only.



HBLVSQ3034



HBL430PS2W

Dimensions in Inches (mm)

Ē

### **Features and Benefits**

### **AC Manual Toggle Controllers/Disconnects**

The most complete offering of Circuit-Lock® controllers rated "Suitable as Motor Disconnect" with top horsepower and high amperage ratings in such a compact device.



30A, 40A and 50A



60A and 85A



### **Housing Design**

- Thermoset body provides high resistance to electrical arc tracking
- Withstands high temperatures
- Excellent dimensional stability
- Superior dielectric strength



### Internal Design

- Strong ON/OFF action with quick-make, slow break operation
- Provides long-life reliability
- 10,000 Amp high fault short circuit withstand rating



#### Safety

- Optional Side Finger Guards for close wall applications and finger safe environments
- For 30A, 40A and 50A controllers
- Recessed wiring wells makes it finger safe environment



#### Contacts

- Four large silver alloy contacts per pole has excellent conductivity with maximum longevity
- 100% Copper contact arm has high heat management and reliability



#### Installation

- #10 Brass terminal screw with clamping plate for secure back or side wiring (30A only)
- Front and back wiring steel screws and copper terminals



#### Switch

 Lubrication-free controller with continued ON/OFF cycling even in harsh, dust and high heat environments

### **600V AC Manual Toggle Controllers/Disconnects**

For use in almost any industrial environment. Ideal component switch for motor control and as a disconnect. Toggle controllers can be built into equipment and enclosures for either box or panel-mount installation.

					HP	Rating		
Amp	Poles	ToggleType	Wire	120V AC 1Ø	240V AC 3Ø	480V AC 3Ø	600V AC 3Ø	Catalog Number
30	2	Standard	Back/Side	2	5	10	15	HBL7832D
	2	Short	Back/Side	2	5	10	15	HBL7832DS
	2	Standard	Back/Side	2	5	10	15	HBL7832DX
	3	Standard	Back/Side	3	7.5	15	20	HBL7810D
	3	Short	Back/Side	3	7.5	15	20	HBL7810DS
40	2	Standard	Side	2	5	10	15	HBL7842D
	3	Standard	Side	3	7.5	15	20	HBL7843D
50	2	Standard	Side	2	5	10	15	HBL7852D
	3	Standard	Side	3	7.5	15	25	HBL7853D
60	2	Standard	Back	_	10	15	20	HBL7862D
	3	Standard	Back	_	10	25	30	HBL7863D
	2	Standard	Front	_	10	15	20	HBL7862FWD
	3	Standard	Front	_	10	25	30	HBL7863FWD
85	2	Standard	Back	_	10	15	20	HBL7882D
	3	Standard	Back	_	10	25	40	HBL7883D
Option	al Side (	Guard, for clo	se wall applica	tions and fir	nger safe e	nvironmen	ts.	HBLFG30*





**HBL7810D** 

HBL7853D





**HBL7863D** 

HBLFG30

Note: \*For 30A, 40A and 50A controllers.

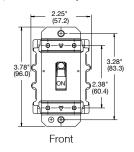
### **Specifications**

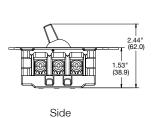
#### Electrical Performance Dielectric Voltage Min. 2,200V AC minimum for 1 minute Min. 6,000 Cycles at rated switch load Electrical Life Max. Working Voltage 600V AC RMS 10,000 RMS Switches Short Circuit 30A & 40A 60A max. when protected by J fuses Withstand Rating 50A 50A max. when protected by J fuses as Motor Disconnect 60A & 85A 80A max. when protected by J fuses Short Circuit 125A max. RK5 fuses Withstand Rating All Switches as Motor Controller Mechanical Mechanical Life Min. 10,000 minimum cycles Switch Rating AWG Max. Terminal #10 Accommodations 40A & 50A #8\*\* 60A & 85A #4 Wire Type Solid and stranded copper wire only. Terminal Torque 30A - 50A 20 inch pounds Switch Rating 60A - 85A 25 inch pounds Environmental Flammability UL94HB/VO Operating Temp. Max. 75°C Min. -40°C continuous without impact Listings Industrial Control File UL 508 #E70402 I R-46186 CSA-C22.2 No.14

Note: \*\*Use listed certified ring terminal.

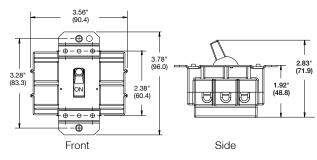
#### **Dimensions**

### 30, 40 and 50 Amp Standard Toggles





#### 60 and 85 Amp Standard Toggles



### **NEMA 1 Disconnect Switches**

#### **Housing Design**

- Thermoplastic cover on a plated steel base
- Durable, non-conductive cover
- Wiring conduit knockouts
- 1/2" and 3/4" NPT
- Top, bottom or back wire entry points
- Surface mount control
- Switch can be locked in the OFF position as a method of compliance with OSHA lockout/tagout



**HBL1389D** 

### **Housing Design**

- All aluminum cover and base
- Base is pre-drilled for rear surface mounting
- Wiring conduit knockouts
- 1/2" and 3/4" NPT
- Top, bottom or back wire entry points
- Surface mount control
- Switch can be locked in the OFF position as a method of compliance with OSHA lockout/tagout



HBL1379D





**HBL1389D HBL1379D** 

## Circuit-Lock® NEMA 1 Enclosures with Switch

Ideal for use in industrial environments, i.e. conveyer systems, industrial fans, etc.

				HP F			
Amp	Poles	Enclosure Material	120V AC 1Ø	240V AC 3Ø	480V AC 3Ø	600V AC 3Ø	Catalog Number
30	2	Thermoplastic	2	5	10	15	HBL1392D
30	3	Thermoplastic	3	7.5	15	20	HBL1389D
30	2	Aluminum	2	5	10	15	HBL1372D
30	3	Aluminum	3	7.5	15	20	HBL1379D

Note: See page F-21 for technical information.







HBL1370

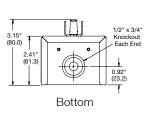
### Circuit-Lock® NEMA 1 Enclosures without Switch

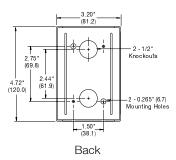
For use with switches shown on page F-21.

			No. Equipmen	t
Description	Cover Material	Base Material	Grounds	Catalog Number
For use with 30A switch.	Thermoplastic	Steel	1	HBL1390
For use with 30A switch.	Aluminum	Aluminum	2	HBL1370

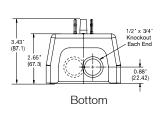
### **Dimensions**

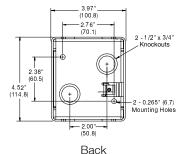
### HBL1370, HBL1372D and HBL1379D





### HBL1390, HBL1389D and HBL1392D





### Circuit-Lock® NEMA 3 and 3R Enclosures with Switch

Ideal for use on outdoor equipment.

					HP F			
Amp	Poles	Enclosure Material	Water Ingress	120V AC 1Ø	240V AC 3Ø	480V AC 3Ø	600V AC 3Ø	Catalog Number
30	2	Thermoplastic	3	2	5	10	15	HBL13R22D
30	3	Thermoplastic	3	3	7.5	15	20	HBL13R23D
30	2	Aluminum	3/3R	2	5	10	15	HBL13R12D <sup>†</sup>
30	3	Aluminum	3/3R	3	7.5	15	20	HBL13R13D <sup>†</sup>



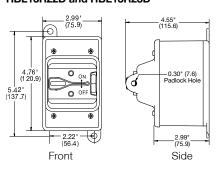


HBL13R23D

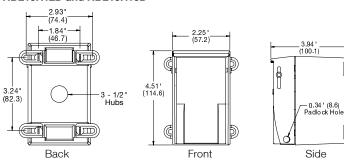
HBL13R13D

### **Dimensions**

#### HBL13R22D and HBL13R23D



#### HBL13R12D and HBL13R13D



### Circuit-Lock® NEMA 3R Enclosures with Switch

Ideal for use in outdoor environments.

				HP Rating					
Amp	Poles	Enclosure Material	120V AC 1Ø	240V AC 3Ø	480V AC 3Ø	600V AC 3Ø	Catalog Number		
30	2	Aluminum	2	5	10	15	HBL13R92D		
30	3	Aluminum	3	7.5	15	20	HBL13R89D		
60	2	Aluminum	_	10	15	20	HBL16R92D		
60	3	Aluminum	_	10	25	30	HBL16R93D		

Note: For switch specifications refer to page F-21.



HBL13R89D

HBL16R93D

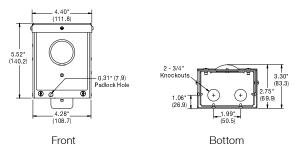
### Circuit-Lock® NEMA 3R Enclosures without Switch

For use with switches shown on page F-21.

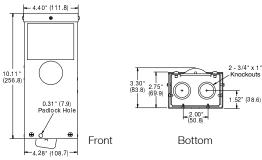
Description	Enclosure Material	Catalog Number
For use with 30A switch.	Aluminum	HBL13R90
For use with 60A switch.	Aluminum	HBL16R90

### **Dimensions**

### HBL13R90, HBL13R89D and HBL13R92D



### HBL16R90, HBL16R92D and HBL16R93D



Note: See page F-21 for technical information.

<sup>\*</sup>Drill weephole to alter from NEMA 3 to NEMA 3R.

<sup>†</sup>Equipped with HBLFG30 sidewall insulation barriers.







HBL1389D









Description	Catalog Number
30A, double pole, single throw, AC manual motor controller, black nylon handle, side and back wired.	HBL7832D
30A, double pole, single throw, AC manual motor controller, black nylon handle, short toggle.	HBL7832DS
30A, double pole, single throw, AC manual motor controller. 50 piece bulk pack.	HBL7832DX
HBL7832D in HBL1390 Type 1 enclosure with non-metallic cover, ½ in. and ¾ in. knockouts on top, bottom and back of steel frame.	HBL1392D
HBL7832D in HBL1370 metal Type 1 enclosure.	HBL1372D
HBL7832D in NEMA 3R non-metallic enclosure.	HBL13R22D
HBL7832D in HBL13R90 metal Type 3R enclosure.	HBL13R92D
HBL7832D in NEMA 3R flip-lid enclosure.	HBL13R12D

Note: See page F-21 for technical information.

### 30A 600V AC Manual Motor Controllers, Three Pole

Description	Catalog Number
30A, three pole, single throw, AC manual motor controller, black nylon handle, side and back wired.	HBL7810D
30A, three pole, single throw, AC manual motor controller, black nylon handle, short toggle.	HBL7810DS
HBL7810D in HBL1390 Type 1 enclosure with non-metallic cover, ½ in. and ¾ in. knockouts on top, bottom and back of steel frame.	HBL1389D
HBL7810D in HBL1370 metal Type 1 enclosure.	HBL1379D
HBL7810D in NEMA 3R non-metallic enclosure.	HBL13R23D
HBL7810D in HBL13R90 metal Type 3R enclosure.	HBL13R89D
HBL7810D in NEMA 3R flip-lid enclosure.	HBL13R13D
30A, 600V, three pole, rotary controller in NEMA 4X stainless steel enclosure.	HBL13S33D
30A, 600V, three pole, rotary controller in NEMA 4X non-metallic enclosure.	HBL13X33D
Note: See page F-21 for technical information.	

**Motor Rating** 

Product	120V AC	240V AC	480V AC	600V AC	Phase
30A Double Pole	2HP	5HP	10HP	15HP	1
30A Three Pole	3HP	7½HP	15HP	20HP	3
40A Double Pole	2HP	5HP	10HP	15HP	1
40A Three Pole	3HP	7½HP	15HP	20HP	3
50A Double Pole	2HP	5HP	10HP	15HP	1
50A Three Pole	3HP	7½HP	15HP	25HP	3
60A Double Pole	-	10HP	15HP	20HP	1
60A Three Pole	-	10HP	25HP	30HP	3
85A Double Pole	-	10HP	15HP	20HP	1
85A Three Pole	-	10HP	25HP	40HP	3





## IP44\*

### **40A 600V AC Manual Motor Controllers**

Description	Catalog Number
40A, double pole, single throw, AC manual motor controller, black nylon handle, side wired.	HBL7842D
40A, three pole, single throw, AC manual motor controller, black nylon handle, side wired.	HBL7843D

Note: See page F-21 for technical information.

### **50A 600V AC Manual Motor Controllers**

Description	Catalog Number
50A, double pole, single throw, AC manual motor controller, black nylon handle, side wired.	HBL7852D
50A, three pole, single throw, AC manual motor controller, black nylon handle, side wired.	HBL7853D

Note: See page F-21 for technical information.

### **60A 600V AC Manual Motor Controllers**

Description	Catalog Number
60A, double pole, single throw, AC manual motor controller, black nylon handle, back wired.	HBL7862D
Same as HBL7862D except front wired.	HBL7862FWD
HBL7862FWD in Type 3R enclosure.	HBL16R92D
60A, three pole, single throw, AC manual motor controller, black nylon handle, back wired.	HBL7863D
Same as HBL7863D except front wired.	HBL7863FWD
HBL7863FWD in a Type 3R enclosure.	HBL16R93D
60A, 600V, three pole, rotary controller in NEMA 4X stainless steel enclosure.	HBL16S63D
60A, 600V, three pole, rotary controller in NEMA 4X non-metallic enclosure.	HBL16X63D

Note: See page F-21 for technical information.

### 85A 600V AC Manual Motor Controllers

Description	Catalog Number
85A, double pole, single throw, AC manual motor controller, black nylon handle, back wired.	HBL7882D
85A, three pole, single throw, AC manual motor controller, black nylon handle, back wired.	HBL7883D

Note: See page F-21 for technical information.

### **Motor Controller Accessories**

Description	Catalog Number
Finger Guards, fit 30A, 40A and 50A controllers.	HBLFG30
Auxiliary Contacts, NO/Common/NC, for use in rotary switches only.	HBLAUX







HBL16R93D



HBL16S63D

### **NEMA 4X Disconnect Switches**

#### **Housing Design**

- Thermoplastic 4X Non-metallic enclosures
- Un-drilled case allows custom placement of wire entry
- Switch can be locked in the OFF position as a method of compliance with OSHA lockout/tagout



HBL13X33D

### **Housing Design**

- 304 Stainless steel enclosure chemical and corrosion resistant
- PBT handle and collar chemical and impact resistant
- Hinged cover with removable continuous pin
- Un-drilled case allows custom placement of wire entry
- Switch can be locked in the OFF position as a method of compliance with OSHA lockout/tagout



HBL13S33D



### Interior Design

- Interlocking shaft and handle prevents cover removal when switch is ON
- Poured in closed cell neoprene gasket
- Up to 2 optional auxiliary contacts for PLCs and external indicators

HBL16S63D HBL13X33D

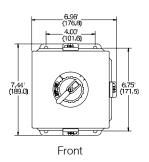
### Circuit-Lock® NEMA 4X Enclosures with Switch and Accessories

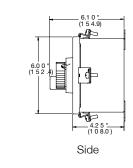
Ideal for use in environments where wash-down is necessary, i.e. food processing, laboratories, etc.

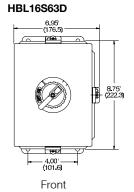
				HP	Rating		
Amp	Poles	Enclosure Material	120V AC 1Ø	240V AC 3Ø	480V AC 3Ø	600V AC 3Ø	Catalog Number
30	3	Stainless Steel	3	7.5	15	20	HBL13S33D
30	3	Non-Metallic	3	7.5	15	20	HBL13X33D
60	3	Stainless Steel	_	10	25	30	HBL16S63D
60	3	Non-Metallic	_	10	25	30	HBL16X63D
Finger	Guard or	otion for 30A switch.					HBLFG30
NO/Co	mon/NC	auxiliary contact, 10A	120/250V A	C for 30 and	60 Amp swi	tches.	HBLAUX

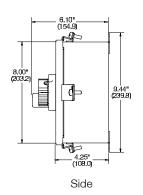
### **Dimensions**

### HBL13S33D











### **CPB Series Compact Pendant Stations, Two Button, NEMA 4X**

Description	Catalog Number
Single-speed normally open-normally closed without mechanical interlock.	CPB20
Single-speed with mechanical interlock between pushbuttons.	CPB21
Two-speed with mechanical interlock between pushbuttons.	CPB22

Note: Included with product: nylon cord grip and sealing washer (must be installed to achieve NEMA 4X rating). Indication label pack. Cord dia. range .375–.625 in. (9.5–15.9) Ambient temperatures: 25°F to 140°F (32°C to 60°C).

Typical applications: Package electric motor hoists. Remote control of machinery.

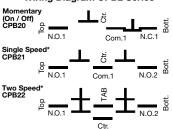
### **Contact Ratings, CPB Series**

Single-Speed	Voltage	Current
AC	120V	6A
35% PF	240V	3A
DC	125V	1.1A
IND	250V	.55A
Two-Speed	Voltage	Current
AC	120V	ЗА
35% PF	240V	1.5A



## CPB21 Wiring Diagram CPB2 Series

9.13" (231.9)



\*Mechanical "floating ball" interlock prevents activating both Pushbuttons simultaneously.

### PBS Series Heavy Duty Pendant Pushbutton Stations, NEMA 3R

Description	Catalog Number
2 button, single speed.	PBS2
2 button, two speed.	PBS22
4 button, single speed.	PBS4
4 button, two speed.	PBS42
6 button, single speed.	PBS6
6 button, two speed.	PBS62
8 button, single speed.	PBS8
8 button, two speed.	PBS82

### **Product Dimensions, PBS Series**

Style	Α	Approx. Wt. Assembled	Catalog Number
2 button	7.88" (200.0)	2.5 lbs	PBS2
4 button	13.69" (347.6)	4.5 lbs	PBS4
6 button	18.0" (457.2)	5.5 lbs	PBS6
8 button	22.31" (566.7)	7.5 lbs	PBS8

Note: Housing: Yellow vinyl rubber.

### **Contact Interrupting Ratings, PBS Series**

Two-Speed Single Break	Voltage	Current
AC	120V	6A
35% PF	240V	3A
DC	125V	.4A
IND	250V	.2A
Single-Speed Double Break	Voltage	Current
	10011	0.4
AC	120V	6A
AC 35% PF	120V 240V	6A 3A



Cable Entrance Threaded
1" (25.4) NPT I.D.
1.125" (28.6) O.D.

30mm
K.O.

Dimensions in Inches (mm)

0.88" (22.4)

3 25"

3.50" (88.9)























**PBSBC** 



PBSPL1



### **Replacement Inserts**

When the insert switches are in need of replacement, simply unplug the old insert and plug in a new one.

Description	Catalog Number
Single speed insert momentary N.O. and N.C.	PG2
ON-OFF insert (no mechanical interlock). Momentary, start-stop, reset-stop.	PG6
2 or 3 speed insert, momentary. Used to a maximum of 3 speed points.	MS2
5 speed insert, momentary. Used to a maximum of 5 speed points. For five speed applications replace an existing terminal board with the TB5 terminal board and replace an existing insert with the five speed (MS5) insert.	MS5

### **Conversion Inserts**

In addition to single speed and two speed applications, pre-assembled units can be adapted to handle other applications.

Description	Catalog Number
Terminal board, required for each insert switch PG2, PG6 and MS2.	TB2
Terminal board, required for insert switch MS5.	TB5

### **Accessories**

Description	Catalog Number
Indicator labels for replacement package contains 1 each: hoist, trolley, bridge, forward-reverse, raise-lower, in-out, right left, east-west, north-south, reset-stop, start-stop, power, main hoist, auxuliary hoist, ON-OFF, up-down.	PBSLP
Rubber button cover for replacement purposes.	PBSBC
120V red pilot light for 4, 6, and 8 button units only.	PBSPL1*

Note: \*Each pendant station can accommodate one of the pilot light in the 1.20 in. (30.6) diameter mounting hole.

### Kellems® Deluxe Aluminum Cord Fitting

Outdoor or indoors where subject to moisture, splash or submersion. Kellems grips provide strain relief for multi-conductor cable.

Description	Cord Range	Catalog Number
Kellems grip.	.750"875" (19-22.2)	07401023
Kellems grip.	.875"-1.00" (22.2-25.4)	07401025

# **SECTION G**

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HBL® Watertight IEC Pin and Sleeve



Advantage<sup>™</sup> Series Switch-Rated Devices



Circuit-Lock<sup>®</sup> Unfused and Fused Mechanical Interlocks



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## Pin and Sleeve Devices/Mechanical Interlocks

### Products at a Glance



### **IEC Watertight Devices**

- Provide safe and dependable performance in the most demanding environments
- Heavy duty non-conductive nylon construction provides impact and corrosion protection
- Thermoset polyester contact carriers withstand high temperatures and provide resistance to electrical tracking



### Circuit-Lock® Mechanical Interlocks

- IEC pin and sleeve devices are color coded by voltage for easy identification
- Available in either fused or non-fused versions
- IEC reverse service units available for safely connecting generators



## Advantage™ Series Pin and Sleeve Switch-Rated Devices

- Advantage<sup>™</sup> series devices are approved as disconnecting means for both motor circuitry and branch circuits
- Robust and durable housing, UV-stabilized, impact and corrosion-resistant PBT housing is designed to withstand harsh industrial environments



#### **Corrosion Resistant Devices**

- This superior grade of IEC and Insulgrip devices are ideal for the most demanding environments
- Nickel-plated brass on the IEC and nickelplated Tellurium copper on the Insulgrip contacts prevent corrosion and heat rise



### Low Profile Devices

- 90° Angled plugs and recessed receptacles allow for connections in tight spaces
- Cords can be controlled easily along the wall
- The integrated cord grips limit strain on terminals and prevent strain on plugs



### Insulgrip® NEMA 4X UL 1686 C1 Devices

- Metallic where you want it and non-metallic where you need it
- This tough product line is NEMA 4X rated for use in the harshest environments
- Devices are fully interchangeable with other manufacturers of UL1686 C1 devices



#### **Back Boxes and Accessories**

- A complete line of metallic and nonmetallic back boxes, angle adapters, closure caps and liquidtight adapters are available
- Accessories aid with installation efficiencies and support the various applications in which the products are used



### **Hazardous Location Devices**

- Copper-free aluminum construction with electrostatically applied polyester/epoxy finish to prevent corrosion
- Large visible rotary handle with ON/OFF indicator allows a quick means of disconnecting power

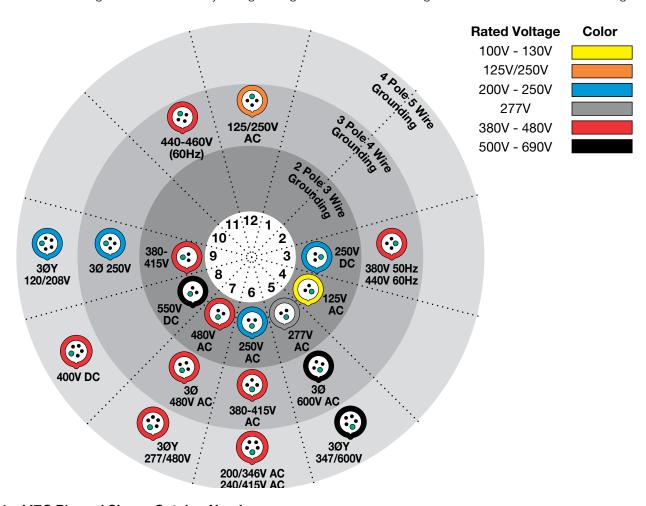
# **IEC Configurations Chart**

## **Singly Rated Configurations**

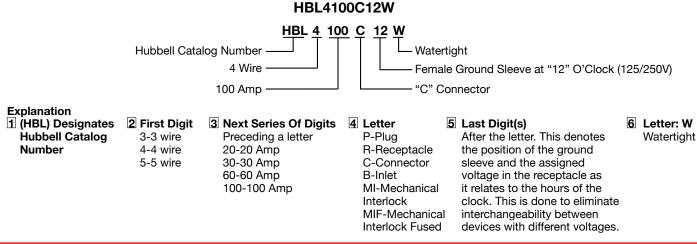
Hubbell Pin and Sleeve products are designed and manufactured to meet the International Standard IEC 60309-1 and IEC 60309-2. This device standard calls out a singly rated, non-interchangeable configuration for every voltage and type of service throughout the world. Pin and sleeve device housings are color coded by voltage rating.

## Voltage

The voltage is determined by the location of the female ground contact relative to the housing keyway. Simply by manufacturing the device with a ground contact in a certain "clock" position, the device will be rated for a particular voltage system. The diagram shows the keying position and the color coding that is associated with each voltage.



## Typical IEC Pin and Sleeve Catalog Number

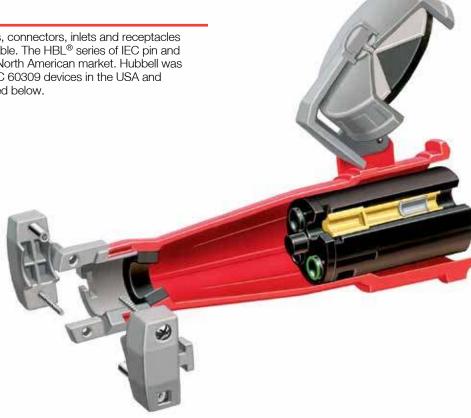




## **Features and Benefits**

## **Watertight Devices**

Hubbell's IEC 60309 Pin and Sleeve plugs, connectors, inlets and receptacles are the highest performing products available. The HBL® series of IEC pin and sleeve were designed for the demanding North American market. Hubbell was the first and is still only manufacturer of IEC 60309 devices in the USA and have numerous of innovative features noted below.



IP67



# Housing Design

- Insulated non-metallic housing, super tough, non-conductive and chemical resistant for heavy duty industrial environments
- IEC pin and sleeve devices are color coded by voltage for easy identification
- Self-closing gasketed cover, detents into position to fully close automatically



# Liquidtight Conduit Adapters

• Aluminum or non-metallic adapters are available to provide a means for attaching flexible liquidtight metal conduit to rear of Hubbell Pin and Sleeve plug or connector



#### Powerful Mechanical Cord Grip

- Hubbell's design incorporates two molded-in teeth to securely grip the outer cable jacket, and internal conductors to prevent slippage and strain on terminations
- Captive barrel nuts ease assembly and allow higher tightening torque for maximum cord retention



#### Sequential Contact Engagement

- Ground makes first and breaks last. Neutral makes second and breaks second (to prevent a momentary over-voltage on components connected phase to neutral)
- Phase contacts make last and break first



#### Watertight Cord Entrance

- The tapered bore entrance creates high compression forces on sealing gland, providing a watertight seal around cord
- Individual solid neoprene glands are supplied to match a full range of cord sizes and assure watertight performance



#### Multi-Contact Spring

- (60/63 and 100/125 Amp) Recessed within the female sleeve, provides and maintains high unit pressure on mating pins to minimize temperature rise
- Broaches oxide film to achieve low resistance contact for cooler operation

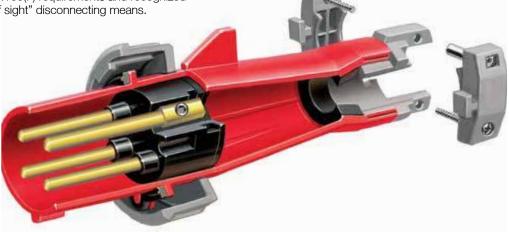


#### **Features and Benefits**



## **Watertight Devices**

The IEC line of plugs and connectors are made with a rugged super tough, one-piece housing. The thermoset polyester contact carrier provides a high resistance to electrical tracking. They withstand higher temperatures which may result from overload or arcing. The heavy-duty, external cord grip provides superior strain relief on the conductors. Hubbell's horsepower rated plugs and receptacles meet NEC 430.109(F) requirements and recognized as an approved disconnecting/"line of sight" disconnecting means.





# **Housing Design**

- Rugged one-piece housing, thick wall construction protects internal components, eliminates joints preventing infiltration of contaminants
- Amperage/voltage rating and catalog number molded in housing for easy identification



#### **Shrouded Pins**

- Super tough plug shroud protects pins from deforming from physical abuse
- Protects the user from the possibility of touching live contacts during insertion and withdrawal of mating parts
- Solid one-piece pins, machined from solid brass for longer life and reliable electrical contact



#### Safety

 Lockout/Tagout, tapered opening on plug shroud accommodates up to % inch (9.7mm) lock shackle diameter



## Thermoset Polyester Contact Carrier

- Molded thermoset polyester provides high resistance to electrical tracking
- Withstands higher temperatures which may result from overload or arcing
- Thermoset properties provide dimensional stability for this critical assembly



## **Cord Grips**

 Heavy duty external cord grips provide maximum cord retention to maintain secure terminations



## **Swivel Pressure Pads**

 16/20 and 30/32 Amp devices feature patented swiveling pressure pad terminal screws and prevent damage to conductor strands. 60/63 and 100/125 Amp devices feature large hex-head stainless steel screws which provide higher torque levels for secure terminations







	Rating						Watertiç	jht Devices			Accessories		Replacement Interiors	
	Poles and	Configura Recep./	Plug/								Boxes	Closure	Recep./	Plug/
Amps 16	2P 3W	Conn.	Inlet	AC Voltage 100-130V		ceptacle 316R4W	Plug HBL316P4W	Connector HBL316C4W	HBL316B4W <sup>†</sup>	Non-Metallio BB2030N	BB201W BB301W	Caps PC320	Conn.	Inlet IN320BM
	2P 3W		<u></u>	220-240V	HBL	316R6W	HBL316P6W	HBL316C6W	HBL316B6W	BB2030N	BB201W BB301W	PC320	IN320BF	IN320BM
	3P 4W		<b>③</b>	380-415V	HBL4	416R6W	HBL416P6W	HBL416C6W	_	BB2030N	BB201W BB301W	PC420	IN420DF	IN420DM
	4P 5W		<b>③</b>	220/380V 240/415V	HBL	516R6W	HBL516P6W	HBL516C6W	HBL516B6W	BB2030N	BB201W BB301W	PC520	IN520EF <sup>†</sup>	IN520EM
20	2P 3W		<b>(3)</b>	125V	HBL	320R4W	HBL320P4W	HBL320C4W	HBL320B4W	BB2030N	BB201W BB301W	PC320	IN320AF	IN320AM
	2P 3W		<u> </u>	250V	HBL	320R6W	HBL320P6W	HBL320C6W	HBL320B6W	BB2030N	BB201W BB301W	PC320	IN320BF	IN320BM
	2P 3W		<u> </u>	480V	HBL	320R7W	HBL320P7W	HBL320C7W	HBL320B7W	BB2030N	BB201W BB301W	PC320	IN320BF	IN320BM
	3P 4W		<u> </u>	125/250V	HBL4	420R12W	HBL420P12W	HBL420C12W	HBL420B12W	BB2030N	BB201W BB301W BB201W	PC420	IN420CF	IN420CM
	3P 4W		<u> </u>	3Ø 250V	HBL4	420R9W	HBL420P9W	HBL420C9W	HBL420B9W	BB2030N	BB301W BB201W	PC420	IN420DF	IN420DM
	3P 4W		<u> </u>	3Ø 480V			HBL420P7W	HBL420C7W	HBL420B7W	BB2030N	BB301W BB201W	PC420	IN420DF	IN420DM
	3P 4W		<u>©</u>	3Ø 600V	_	420R5W	HBL420P5W	HBL420C5W	HBL420B5W	BB2030N	BB301W BB201W	PC420	IN420DF	IN420DM
	4P 5W		<u> </u>	120/208V 3ØY		520R9W	HBL520P9W	HBL520C9W	HBL520B9W	BB2030N	BB301W BB201W	PC520	IN520EF†	IN520EM
	4P 5W		<u> </u>	277/480V 3ØY •			HBL520P7W	HBL520C7W	HBL520B7W	BB2030N	BB301W BB201W	PC520	IN520EF†	IN520EM
30	4P 5W		<u> </u>	347/600V <b>1</b> 25V			HBL520P5W	HBL520C5W	HBL520B5W	BB2030N	BB301W BB201W	PC520	IN520EF†	IN520EM
	2P 3W		<u> </u>	250V		330R4W 330R6W	HBL330P4W	HBL330C4W	HBL330B4W HBL330B6W	BB2030N BB2030N	BB301W BB201W	PC3430 PC3430	IN330AF	IN330AM†
	2P 3W		<u> </u>	480V		330R7W	HBL330P7W	HBL330C7W	HBL330B7W	BB2030N	BB301W BB201W	PC3430	IN330BF	IN330BM
	2P 3W 3P 4W		<u> </u>	125/250V			HBL430P12W	HBL430C12W	HBL430B12W	BB2030N	BB301W BB201W	PC3430	IN430CF	IN430CM
	3P 4W		$\frac{\odot}{\odot}$	3Ø 250V			HBL430P9W	HBL430C9W	HBL430B9W	BB2030N	BB301W BB201W	PC3430	IN430DF	IN430DM
	3P 4W		<u></u>	3Ø 480V			HBL430P7W	HBL430C7W	HBL430B7W	BB2030N	BB301W BB201W	PC3430	IN430DF	IN430DM
	3P 4W		<u></u>	3Ø 600V ▮			HBL430P5W	HBL430C5W	HBL430B5W	BB2030N	BB301W BB201W	PC3430	IN430DF	IN430DM
	4P 5W		<u></u>	3ØY 120/208V	_		HBL530P9W	HBL530C9W	HBL530B9W	BB2030N	BB301W BB201W BB301W	PC530	IN530EF	IN530EM
	4P 5W		<u></u>	3ØY 277/480V	HBL	530R7W	HBL530P7W	HBL530C7W	HBL530B7W	BB2030N	BB201W BB301W	PC530	IN530EF	IN530EM
	4P 5W		<u> </u>	3ØY 347/600V ■	■ HBL5	530R5W	HBL530P5W	HBL530C5W	HBL530B5W	BB2030N	BB201W BB301W	PC530	IN530EF	IN530EM
32	2P 3W		<u></u>	100-130V	HBL	332R4W <sup>†</sup>	HBL332P4W <sup>†</sup>	HBL332C4W <sup>†</sup>	HBL332B4W <sup>†</sup>	BB2030N	BB201W BB301W	PC3430	IN330BF	IN330BM
	2P 3W		<u></u>	220-240V	HBL	332R6W	HBL332P6W	HBL332C6W	HBL332B6W	BB2030N	BB201W BB301W	PC3430	IN330BF	IN330BM
	3P 4W		<b>©</b>	380-415V	HBL4	432R6W	HBL432P6W	HBL432C6W	HBL432B6W	BB2030N	BB201W BB301W	PC3430	IN430DF	IN430DM
	3P 4W		<b>③</b>	380V 50Hz 440V 60Hz	HBL4	432R3W	HBL432P3W	HBL432C3W	HBL432B3W <sup>†</sup>	BB2030N	BB201W BB301W	PC3430	IN430DF	IN430DM
	4P 5W		<b>③</b>	220/380V 240/415V	HBL	532R6W	HBL532P6W	HBL532C6W	HBL532B6W	BB2030N	BB201W BB301W	PC530	IN530EF	IN530EM
	_													

Note: See page G-14 and G-15 for back boxes and accessories, G-16 and G-17 for product dimensions, G-18 and G-19 for product specifications and HP ratings. See page G-15 for closure caps, purchased separately. PC320, PC420, PC520, PC3430, PC530 are not UL or CSA.

\*These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.
†Consult factory.





	Rating						Watertig	ht Devices			Accessories		Replacem	ent Interiors
	Poles and	Configura Recep./	Plug/					-			k Boxes	Closure	Recep./	Plug/
Amps 60	Wires	Conn.	Inlet	AC Volta	ige	Receptacle	Plug	Connector	Inlet		allic Metallic* BB601W		Conn.	Inlet
	2P 3W		<u> </u>	125V	_	HBL360R4W	HBL360P4W	HBL360C4W	HBL360B4W	BB60N	BB602W BB601W	PC60	IN360AF	IN360AM
	2P 3W		<u> </u>	250V		HBL360R6W	HBL360P6W	HBL360C6W	HBL360B6W	BB60N	BB602W	PC60	IN360BF	IN360BM†
	2P 3W		<b>(3)</b>	480V		HBL360R7W	HBL360P7W	HBL360C7W	HBL360B7W	BB60N	BB601W BB602W	PC60	IN360BF	IN360BM <sup>†</sup>
	3P 4W		<b>③</b>	125/250\	/	HBL460R12W	HBL460P12W	HBL460C12W	HBL460B12W	BB60N	BB601W BB602W	PC60	IN460CF	IN460CM
	3P 4W		<b>③</b>	3Ø 250V		HBL460R9W	HBL460P9W	HBL460C9W	HBL460B9W	BB60N	BB601W BB602W	PC60	IN460DF	IN460DM
	3P 4W		<b>(3)</b>	3Ø 480V		HBL460R7W	HBL460P7W	HBL460C7W	HBL460B7W	BB60N	BB601W BB602W	PC60	IN460DF	IN460DM
	3P 4W		<b>(3)</b>	3Ø 600V		HBL460R5W	HBL460P5W	HBL460C5W	HBL460B5W	BB60N	BB601W BB602W	PC60	IN460DF	IN460DM
	4P 5W		<b>③</b>	3ØY 120/208\	,	HBL560R9W	HBL560P9W	HBL560C9W	HBL560B9W	BB60N	BB601W BB602W	PC60	IN560EF	IN560EM <sup>†</sup>
	4P 5W		<b>③</b>	3ØY 277/480\	,	HBL560R7W	HBL560P7W	HBL560C7W	HBL560B7W	BB60N	BB601W BB602W	PC60	IN560EF	IN560EM <sup>†</sup>
	4P 5W			3ØY 347/600\	, <b>=</b>	HBL560R5W	HBL560P5W	HBL560C5W	HBL560B5W	BB60N	BB601W BB602W	PC60	IN560EF	IN560EM <sup>†</sup>
63	2P 3W		<b>③</b>	220-240\	/	HBL363R6W	HBL363P6W	HBL363C6W	HBL363B6W	BB60N	BB601W BB602W	PC60	IN360BFS	IN360BMS†
	3P 4W		<b>③</b>	380-415\	<b>/</b>	HBL463R6W	HBL463P6W	HBL463C6W	HBL463B6W	BB60N	BB601W BB602W	PC60	IN460DFS	IN460DMS
	4P 5W			220/380\ 240/415\		HBL563R6W	HBL563P6W	HBL563C6W	HBL563B6W	BB60N	BB601W BB602W	PC60	IN560EFS†	IN560EMS
100	2P 3W		<b>©</b>	125V		HBL3100R4W	HBL3100P4W	HBL3100C4W	HBL3100B4W	BB100N	BB1001W BB1002W	PC100	IN3100AF	IN3100AM
	2P 3W		<b>③</b>	250V		HBL3100R6W	HBL3100P6W	HBL3100C6W	HBL3100B6W	BB100N	BB1001W BB1002W	PC100	IN3100BF	IN3100BM†
	2P 3W		<b>③</b>	480V		HBL3100R7W	HBL3100P7W	HBL3100C7W	HBL3100B7W	BB100N	BB1001W BB1002W	PC100	IN3100BF	IN3100BM†
	3P 4W			125/250\	/	HBL4100R12W	HBL4100P12W	HBL4100C12W	HBL4100B12W	BB100N	BB1001W BB1002W	PC100	IN4100CF <sup>†</sup>	IN4100CM
	3P 4W		<b>③</b>	3Ø 250V		HBL4100R9W	HBL4100P9W	HBL4100C9W	HBL4100B9W	BB100N	BB1001W BB1002W	PC100	IN4100DF	IN4100DM
	3P 4W			3Ø 480V		HBL4100R7W	HBL4100P7W	HBL4100C7W	HBL4100B7W	BB100N	BB1001W BB1002W	PC100	IN4100DF	IN4100DM
	3P 4W			3Ø 600V		HBL4100R5W	HBL4100P5W	HBL4100C5W	HBL4100B5W	BB100N	BB1001W BB1002W	PC100	IN4100DF	IN4100DM
	4P 5W		<b>③</b>	3ØY 120/208\	,	HBL5100R9W	HBL5100P9W**	HBL5100C9W	HBL5100B9W	BB100N	BB1001W BB1002W	PC100	IN5100EF	IN5100EM
	4P 5W		<b>③</b>	3ØY 277/480\	,	HBL5100R7W	HBL5100P7W	HBL5100C7W	HBL5100B7W	BB100N	BB1001W BB1002W	PC100	IN5100EF	IN5100EM
	4P 5W		<b>(3)</b>	3ØY 347/600\	, <b>=</b>	HBL5100R5W	HBL5100P5W	HBL5100C5W	HBL5100B5W	BB100N	BB1001W BB1002W	PC100	IN5100EF	IN5100EM
125	2P 3W		<b>(3)</b>	220-240\	/	HBL3125R6W	HBL3125P6W	HBL3125C6W	HBL3125B6W	BB100N	BB1001W BB1002W	PC100	IN3100BFS <sup>†</sup>	IN3100BMS <sup>†</sup>
	3P 4W		<b>③</b>	380-415\	/	HBL4125R6W	HBL4125P6W	HBL4125C6W	HBL4125B6W	BB100N	BB1001W BB1002W	PC100	IN4100DFS	IN4100DMS
	4P 5W		<u> </u>	220/380\ 240/415\		HBL5125R6W	HBL5125P6W	HBL5125C6W	HBL5125B6W	BB100N	BB1001W BB1002W	PC100	IN5100EFS	IN5100EMS

Note: See page G-14 and G-15 for back boxes and accessories, G-16 and G-17 for product dimensions, G-18 and G-19 for product specifications and HP ratings. All 63A and all 125A devices have pilot pins or contacts.
See page G-15 for closure caps, purchased separately. PC60 and PC100 are not UL or CSA.

<sup>\*\*</sup>Short housing plug HBL5100P9WSH. IP22 suitability.

\*\*Consult factory.







#### **Features and Benefits**

# Advantage™ Series Pin and Sleeve Switch-Rated

Hubbell Wiring Device-Kellems Advantage™ Series Pin and Sleeve Switch-Rated Devices are IEC 60309-2 compatible devices that are approved as a disconnecting means for motor and branch circuits. Compact design, this device is similar in size to standard IEC 60309-2 devices. Robust and durable housing, UV-stabilized, impact and corrosion-resistant PBT housing is designed to withstand harsh industrial environments. Stainless steel hardware provides superior corrosion resistance in wet and harsh environments Receptacles mount to standard Hubbell IEC Pin and Sleeve back boxes.





# Housing Design

- Rugged one-piece housing, thick wall construction protects internal components, eliminates joints preventing infiltration of contaminants
- IEC pin and sleeve devices are color coded by voltage for easy identification



## **Heavy Duty External Cord Grips**

- Provides maximum cord retention to maintain unstressed terminations
- Pocketed recess for screws deters slippage of the screwdriver and are conveniently located on the same side for easy installation



#### Ease of Use

 Ergonomic design puts the Advantage™ into the palm of your hands with the easy-to-use leverage grip design from Hubbell



#### Spring-Loaded Cover

- Spring-loaded to the open position, reminding users that the cover must be secured to ensure maximum ingress protection
- Impact resistant cover arm compact and durable internal swing arm is fully shrouded protecting it from damage



#### Spring-Loaded Disconnect Button

 Oversized for easy actuation with gloved hands



## Full Line of Accessories

- Advantage series receptacles have same mounting pattern as our standard receptacles, for non-metallic and metallic back boxes (see page G-14)
- Full offering of liquidtight adapters (see page G-15)







#### **Features and Benefits**

## Advantage™ Series Pin and Sleeve Switch-Rated

The Advantage™ Series has a UL witnessed IP69k and 4X,12 environmental rating, two power-indicating LEDs, continuous ground engagement, labelless laser markings and a compact and ergonomic design.

Hubbell's Pin and Sleeve connections have always been safe – that hasn't changed. The Advantage™ series simply has more... Advantages.



# The Hubbell Advantages



# Sleek and Modern Design

• The ergonomic device is easy to keep clean making it ideal for hygienic food processing facilities





# Permanent Labelless Markings

 Product ratings are laser-marked into the device and will not wash off for easy permanent identification





#### **Continuous Ground Engagement**

 Unswitched feed-through ground pin is first-to-make and last-to-break followed by switched neutral and phase contact(s)





## **Superior Water Ingress Protection**

 UL witnessed IP69k and UL Type 4X and 12. Device is built to withstand wet and harsh environments





#### IEC 60309 Singularly Rated Device

 Mates with existing installed base of IEC 60309-2 pin and sleeve devices.
 Color coded by voltage for easy identification of mating devices





## **Power Indicating LED Lights**

 Highly visible and long lasting green LED lights on both sides of the device provide visual verification of power when connected









		Rat	ing			Pin and S	Sleeve	e Devices		Acces	sories
Amno	Poles and Wires		tion Plug/ Inlet	AC Voltage	Connector	Proportion	HP	Mating Plug**	IP67 Inlet	Back Boxes	Closure Caps
Amps	2P 3W			125V	HBLS330C4W	Receptacle HBLS330R4W		HBLS330P4W	HBL330B4W	BB2030N	PC3430
30	2P 3W		<u></u>	100–130V	HBLS332C4W	HBLS332R4W	2	HBLS332P4W	HBL332B4W	BB2030N	PC3430
30	2P 3W		<b>©</b>	250V	HBLS330C6W*	HBLS330R6W*	5	HBLS330P6W*	HBL330B6W*	BB2030N	PC3430
32	2P 3W		<b>③</b>	220-240V	TIBESSSCOW	TIDESSOUTOW	5	TIBLOGGEROW	HDLSSSDOW	DD203014	F C 0 4 3 0
30	2P 3W		<u></u>	480V	HBLS330C7W	HBLS330R7W	10	HBLS330P7W	HBL330B7W	BB2030N	PC3430
30	3P 4W		<u></u>	125/250V	HBLS430C12W	HBLS430R12W	2	HBLS430P12W	HBL430B12W	BB2030N	PC3430
30/32	3P 4W		<b>③</b>	3Ø 250V	HBLS430C9W*	HBLS430R9W*	10	HBLS430P9W*	HBL430B9W*	BB2030N	PC3430
30	3P 4W		<b>(3)</b>	3Ø 480V	HBLS430C7W	HBLS430R7W	20	HBLS430P7W	HBL430B7W	BB2030N	PC3430
30	3P 4W		<b>©</b>	3Ø 600V	HBLS430C5W	HBLS430R5W	30	HBLS430P5W	HBL430B5W	BB2030N	PC3430
30/32	3P 4W		<b>③</b>	380-415V	HBLS430C6W*	HBLS430R6W*	7.5	HBLS430P6W*	HBL430B6W*	BB2030N	PC3430
32	3P 4W		<b>©</b>	380-440V	HBLS432C3W	HBLS432R3W	10	HBLS432P3W	HBL432B3W	BB2030N	PC3430
30	4P 5W		<u></u>	3ØY 347/600V	HBLS530C5W	HBLS530R5W	30	HBLS530P5W	HBL530B5W	BB2030N	PC530
30	4P 5W		<b>③</b>	200/346- 240/415V	HBLS530C6W*	HBLS530R6W*	7.5	HBLS530P6W*	HBL530B6W*	BB2030N	PC530
32	4P 5W		<b>③</b>	220/380V 240/415V	HBL3330C0W"	HBLOSSUNOW	7.5	HBLSSSUPOW	HBL330B0W	BBZUJUN	F0330
30	4P 5W		<b>③</b>	3ØY 277/480V	HBLS530C7W	HBLS530R7W	20	HBLS530P7W	HBL530B7W	BB2030N	PC530
30/32	4P 5W		<u> </u>	3ØY 120/208V	HBLS530C9W*	HBLS530R9W*	10	HBLS530P9W*	HBL530B9W*	BB2030N	PC530

Note: \*Certain IEC configurations allow for a single product to be certified as both a North American (Series 2) and International amperage (Series 1). These products are marked accordingly with both the UL Listing and UL Classified markings.

## **Materials**

Part	Material	Connector	Receptacle	Plug/Inlet
Cover	PBT	Х	Х	
Cover Gasket	Neporene	Х	Х	
Housing	PBT	Х	Х	X
Gasket	Santoprene	Х	Х	Х
Female Contact Carrier	Nylon	Х	Х	
Male Contact Carrier	Thermoset			Х
Phase, Ground Sleeves	Brass	Х	Х	
Sleeve Springs	Beryllium Copper with Silver Plating	Х	Х	
Pins	Brass			Х
Glands	Solid Neoprene	Х		Х
Cord Clamps	PBT	Х		Х
Clamp Nut	Nickel-Plated Brass	Х		Х
Screws	Stainless Steel (300 Series)	Х	Х	Х
Locking Ring	PBT			Х
Switch Contacts	Laminated Silver	Х	Х	

## **Specifications**

•	
Temperature Rise	< 30°C
Dielectric Voltage	Min 2,200V AC
Electrical Life	Min 6,000 Cycles at rated switch load (p.f.= .7580)
Max Working Voltage	600V AC
Current Interrupting	Certified for current interrupting at full rated current and voltage
Horsepower Locked Rotor Test	50 Operations at 600% of full load motor current (p.f.= .4050)
Short Circuit	100kA when protected by 100A Class J fuse or 125A RK1 fuse
Endurance	Min 10,000 mating cycles
Flammability	HB or Better per UL 94 or CSA C22.2 No. 0.17
Operating Temperature	Max Continuous +75°C; Min continous -40°C
Environmental	Type 4X, 12 and IP69k
UV Resistance	All materials are UV stabilized

<sup>&</sup>quot;Mating plug required to maintain 4X/IP69k ratings when used with ADVANTAGE™ Series Connections.

ADVANTAGE™ Series Receptacles have the same mounting pattern as standard Hubbell IEC pin and sleeve.





		R	ating			Pin and S	Sleeve	Devices		Acces	sories
Amps	Poles and Wires	Configu Recep./ Conn.	ration Plug/ Inlet	AC Voltage	Connector	Receptacle	HP	Mating Plug**	Inlet**	Back Boxes	Closure Caps
60	2P 3W		<u></u>	125V	HBLS360C4W	HBLS360R4W	3	HBLS360P4W	HBLS360B4W	BB60N	PC60
60	2P 3W		<b>③</b>	250V	LUBI GOOGGOWA	LIBI GOODDOWA		LIBI GOODDOM	LIBI GOODBOWY	BBOOM	<b>DO</b> 00
63	2P 3W		<b>©</b>	220-240V	HBLS360C6W*	HBLS360R6W*	7.5	HBLS360P6W*	HBLS360B6W*	BB60N	PC60
60	2P 3W		<b>(</b>	480V	HBLS360C7W	HBLS360R7W	15	HBLS360P7W	HBLS360B7W	BB60N	PC60
60	3P 4W		<u></u>	125/250V	HBLS460C12W	HBLS460R12W	3	HBLS460P12W	HBLS460B12W	BB60N	PC60
60/63	3P 4W		<b>③</b>	3Ø 250V	HBLS460C9W*	HBLS460R9W*	10	HBLS460P9W*	HBLS460B9W*	BB60N	PC60
60	3P 4W		<b>③</b>	3Ø 480V	HBLS460C7W	HBLS460R7W	30	HBLS460P7W	HBLS460B7W	BB60N	PC60
60	3P 4W		<b>(</b>	3Ø 600V	HBLS460C5W	HBLS460R5W	40	HBLS460P5W	HBLS460B5W	BB60N	PC60
60/63	3P 4W		<b>③</b>	380-415V	HBLS460C6W*	HBLS460R6W*	10	HBLS460P6W*	HBLS460B6W*	BB60N	PC60
60	4P 5W		<u></u>	3ØY 347/600V	HBLS560C5W	HBLS560R5W	40	HBLS560P5W	HBLS560B5W	BB60N	PC60
60/63	4P 5W		<b>③</b>	200/346- 240/415V	HBLS560C6W*	HBLS560R6W*	10	HBLS560P6W*	HBLS560B6W*	BB60N	PC60
60	4P 5W		<b>③</b>	3ØY 277/480V	HBLS560C7W	HBLS560R7W	30	HBLS560P7W	HBLS560B7W	BB60N	PC60
60/63	4P 5W	<b>©</b>	<b>③</b>	3ØY 120/208V	HBLS560C9W*	HBLS560R9W*	10	HBLS560P9W*	HBLS560B9W*	BB60N	PC60

Note: \*Certain IEC configurations allow for a single product to be certified as both a North American (Series 2) and International amperage (Series 1). These products are marked accordingly with both the UL Listing and UL Classified markings.

Just add a "P" suffix for Pilot pin for 60 amp devices.

# Optional Pilot Pin Available on All 60A Devices

The Pilot Pin is smaller than the ground and phase pins and are designed to make after main and break before main breaks. This pin can be used to communicate with auxiliary devices within your facility. They are "Break before main break" and by design are the last contact in the sequence to make and first to break.

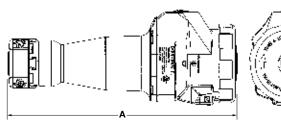
	Rat	ing		Pin and Sle	eve Devices	
Amps	Poles/ Wires	AC Voltage	Connector with Pilot Sleeve	Receptacle with Pilot Sleeve	Plug with Pilot Pin	Inlet with Pilot Pin
60/63	3P 4W	3Ø 250V	HBLS460C9WP*	HBLS460R9WP*	HBLS460P9WP*	HBLS460B9WP*

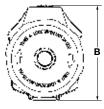


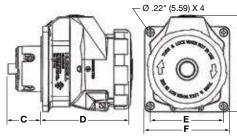
Note: \*Just add a "P" suffix for Pilot pin for 60 amp devices.

#### **Dimensions**

	А	В	С	D	E	F	G
Description	Co	nnector			Receptacle	<b>;</b>	
30A	9.9" (251.5)	4.5" (114.3)	1.06" (27.2)	3.83" (97.3)	3.13" (79.4)	3.75" (95.2)	4.5" (114.3)
60A	12.22" (310.4)	5.17" (131.3)	1.85" (47.0)	4.77" (121.2)	3.88" (98.6)	4.52" (114.8)	5.09" (129.3)







Dimensions in Inches (mm)

<sup>\*\*</sup>Mating plug or inlet required to maintain 4X/IP69k ratings when used with ADVANTAGE™ Series Connections.

ADVANTAGE™ Series Receptacles have the same mounting pattern as standard Hubbell IEC pin and sleeve.









## **Corrosion Resistant Devices that Withstand the Most Abusive Environments**

Hubbell offers a superior grade of 100A IEC Pin and Sleeve designed for use in the most demanding environments. These devices feature nickel plated solid brass pins for long life and reliable electrical contact in the most corrosive environments. They have a high visibility yellow supertough nylon housing. The heavy duty external cord clamps provide maximum cord retention to maintain secure terminations. The screws and fasteners are made from stainless steel.









- Food Processing
- Factory

- Water Treatment
- Washdown
- Temporary Power
- Meat Packing
- Construction
- Agriculture
- Outdoor Entertainment

## **Standard Service**

		Ra	iting			Watertight De	vices		Accessorie	s
Amps	Poles And Wires	Configuration Recep./ Conn. Plug		AC Voltage	Receptacle	Plug	Connector	Back Non-Metallio	s Boxes	Closure Caps
100	3P 4W		<b>③</b>	125/250V	M4100R12	M4100P12	M4100C12	BB100N	BB1001W BB1002W	PC100
	4P 5W		<b>(3)</b>	3ØY 120/208V	M5100R9	M5100P9	M5100C9	BB100N	BB1001W BB1002W	PC100
	4P 5W			3ØY 277/480V	M5100R7	M5100P7	M5100C7	BB100N	BB1001W BB1002W	PC100

## "Reverse Service"

		Ra	ting			Watertight D	Pevices	Accessories		
	Poles And	Configu	ıration		16		Co	Back Boxes		Closure
Amps	Wires	Conn.	Inlet	AC Voltage	Inlet	Plug	Connector	Non-Metall	ic Metallic*	Caps
100	3P 4W			125/250V	M4100B12R	-	M4100C12R	BB100N	BB1001W BB1002W	PC100
	4P 5W		<b>(3)</b>	3ØY 120/208V	M5100B9R	_	M5100C9R	BB100N	BB1001W BB1002W	PC100
	4P 5W			3ØY 277/480V	M5100B7R	_	M5100C7R	BB100N	BB1001W BB1002W	PC100

Note: \*These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint. See page AA-19 for corrosion resistant cord sets.

# IP67





## **Data Center DC Rated Pin and Sleeve Devices**

In today's environmentally conscious world, energy savings is a pinnacle part of going green. DC (Direct Current) is being used to reduce power consumption and decrease the amount of infrastructure needed to energize specific types of data center equipment. Electrical devices provide a means of connecting DC power.

Hubbell is the first manufacturer to introduce a series of IEC Pin and Sleeve devices configured for the UL1686 eight o'clock ground position for DC voltage (Disconnecting use only). Hubbell's IEC DC rated pin and sleeve line has been qualified by UL to the requirements of DC voltage. The thermoset polyester contact carrier provide high resistance to electrical tracking, it withstands higher temperatures for this type of demanding application. The solid one-piece pins are machined from solid brass for longer life and reliable electrical contact. In addition, the heavy-duty external cord grips provide maximum cord retention to maintain secure terminations. Finally, the super tough, color coded, non-conductive V-0 rated PBT housing is heavy duty for safety and protecting the internal components.





		R	Rating			Watertight Devices	•
	Poles And	Configu Recep./	uration				
Amps	Wires	Conn.	Plug	DC Voltage	Receptacle	Plug	Connector
30	2P 3W			550V	HBL330R8WDC	HBL330P8V0DC	HBL330C8V0DC
60	2P 3W		<b>©</b>	550V	HBL360R8WDC*	HBL360P8V0DC	HBL360C8V0DC
100	2P 3W		<b>©</b>	550V	HBL3100R8WDC	HBL3100P8V0DC	HBL3100C8V0DC
	4P 5W			400V	HBL5100R8WDC	HBL5100P8V0DC	HBL5100C8V0DC

Note: \*Inlet available - HBL360B8WDC.









## **Dual Certified Pin and Sleeve Devices**

Hubbell's dual certified pin and sleeve devices are ideal for the data center and high tech server industry. They are UL Listed to UL1682 for the North American market and are TUV Rheinland Certified for the European and International market. Customers can use the same plug and connector for multiple electrical configurations. They reduce the number of SKU's end users have to use if they sell to both domestic and overseas customers. These devices are IP67 rated, RoHs compliant and showcase all the inherent safety benefits of their V-0 rated PBT housing and internal components.

		R	ating			Water	tight Devices	
	Poles And	Configu Recep./	uration					
Amps	Wires	Conn.	Plug	AC Voltage	Receptacle	Plug	Connector	Inlet
30/32	3P 4W			380-415 <b>V</b>	HBL430R6V02	HBL430P6V02	HBL430C6V02	HBL430B6V02
	4P 5W			200/346V 240/415V	HBL530R6V02	HBL530P6V02	HBL530C6V02	HBL530B6V02
60/63	3P 4W		<b>③</b>	380-415 <b>V</b>	HBL460R6V02	HBL460P6V02	HBL460C6V02	HBL460B6V02
	4P 5W			200/346V 240/415V	HBL560R6V02	HBL560P6V02	HBL560C6V02	HBL560B6V02









BB60N



**BB601W** 



FW6010055



FT202W



FW60100



HBL2030AP



**AA2030PS** 

#### **Back Boxes**

Hubbell manufactures an extensive line of back boxes for use with IEC Pin and Sleeve devices. Each back box is designed to give the user the maximum amount of wiring room while achieving grounding to metallic conduit. Hubbell back boxes are available in non-metallic and cast metal versions.

Non-Metallic 15° Angle Back Box

Description	NPT Hub Size*	Catalog Number
Back box for 16, 20, 30 and 32A devices.	1"	BB2030N
Back box for 60 and 63A devices.	11/4"	BB60N
Back box for 100 and 125A devices.	1½"	BB100N

Note: \*Hub is not included; order one of the following Raco® part numbers: 1 in. = 1704, 11/4 in. = 1705, 11/2 in. = 1706. These boxes meets IP67 requirement and Type 4X requirements when installed with a watertight conduit hub.

Metallic 15° Angle Back Box and Adapter\*\*

Description	NPT Hub Size	Catalog Number
Back box for 16, 20, 30 and 32A devices.	3/4"	BB201W
	1"	BB301W
Back box for 60 and 63A devices.	11/4"	BB601W
	1½"	BB602W
Back box for 100 and 125A devices.	1½"	BB1001W
	2"	BB1002W
Angle adapter only for 60, 63, 100 and 125A devices.	_	AA6010015

Note: \*\*These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

Metallic 55° Angle Back Box and Adapter\*\*

Description	NPT Hub Size	Catalog Number
Feed-thru box back box and adapter for 16, 20, 30 and 32A devices.	1"	AB203055
Angle adapter only.	_	AA203055
Back box and adapter for 60, 63, 100 and 125A devices.	1½"	FW6010055
Angle adapter only.	_	AA6010055

Note: \*\*These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

Metallic Feed-Thru Back Box\*\*

Description	NPT Hub Size	Catalog Number
Feed-thru box for 16, 20, 30 and 32A devices.	3/4"	FT202W
	1"	FT302W

Note: \*\*These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

Metallic Four-Way 15° Angle Back Box\*\*

Description	NPT Hub Size	Catalog Number
Four-way box for 60, 63, 100 and 125A devices.	1½"	FW60100

Note: \*\*These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

**Straight Wall Box Adapter** 

Description	Catalog Number
Adapts 16, 20, 30 and 32A Watertight IEC Pin and Sleeve devices to	HBL2030AP
2-gang, device boxes and FD boxes.	

**Angle Wall Box Adapter** 

Aligio Wali Box Adaptol	
Description	Catalog Number
Adapts 16, 20, 30 and 32A Watertight IEC Pin and Sleeve devices to	AA2030PS
standard wall boxes.	

Note: Adapts 20 and 30A Watertight Pin and Sleeve receptacle to single, 2-gang standard wall box and 4 or 411/16 inch square for non-watertight applications.

#### Accessories

## Closure Caps

Cap assemblies provide watertight sealing to a disconnected male IEC Pin and Sleeve plug or inlet. Manufactured of the same tough non-metallic material as the watertight IEC Pin and Sleeve devices for corrosion and abuse resistance.

Description	Catalog Number
Fits all 16 and 20A, 3 wire plugs and inlets.	PC320
Fits all 16 and 20A, 4 wire plugs and inlets.	PC420
Fits all 16 and 20A, 5 wire plugs and inlets.	PC520
Fits all 30 and 32A, 3 and 4 wire plugs and inlets.	PC3430
Fits all 30 and 32A, 5 wire plugs and inlets.	PC530
Fits all 60 and 63A plugs and inlets.	PC60
Fits all 100 and 125A plugs and inlets.	PC100



PC3430

#### **Cover Assemblies**

Replacement cover assemblies for use with watertight connector bodies and receptacles. Kit contains cover, arm assembly and installation tool.

Description	Catalog Number
Fits all 16 and 20A, 3 wire watertight female devices.	CA320
Fits all 16 and 20A, 4 wire watertight female devices.	CA420
Fits all 16 and 20A, 5 wire watertight female devices.	CA520
Fits all 30 and 32A, 3 and 4 wire watertight female devices.	CA3430
Fits all 30 and 32A, 5 wire watertight female devices.	CA530
Fits all 60 and 63A watertight female devices.	CA60
Fits all 100 and 125A watertight female devices.	CA100



CA3430

## Cord Clamp and Locking Ring

Replacement cord clamp and locking ring for use with IEC plugs, connectors and inlets.

	Cord Clamp and	
Description	Locking Ring	Locking Ring Only
Fits all 16 and 20A, 3 wire plugs, connectors and inlets.	CC320	LR320*
Fits all 16 and 20A, 4 wire plugs, connectors and inlets.	CC420	LR420*
Fits all 16 and 20A, 5 wire plugs, connectors and inlets.	CC520†	LR520*
Fits all 30 and 32A, 3 and 4 wire plugs, connectors and inlets.	CC3430	LR3430*
Fits all 30 and 32A, 5 wire plugs, connectors and inlets.	CC530†	LR530*
Fits all 60 and 63A plugs, connectors and inlets.	CC60	LR60*
Fits all 100 and 125A plugs, connectors and inlets.	CC100	LR100*





Note: \*Locking Ring only for plugs and inlets.

†Consult factory.

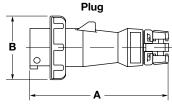
# **Liquidtight Adapters**

Machined aluminum adapters are available to provide a means for attaching flexible liquidtight metal conduit to rear of a Hubbell Pin and Sleeve plug or connector. To install, remove cord grip and two gland cap screws. Use screws to attach adapter. Kellems® liquidtight conduit connectors are available to control arc of bend and to prevent conduit pull-out where vibration, motion or strain is present. These grips interface directly with Hubbell's liquidtight adapters and are available in a wide variety of NPT sizes and configurations. Consult your local code grounding requirements before using liquidtight adapters.

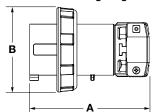
Rating of Hubbell Pin and Sleeve Device	Liquidtiaht	Liquidtight Liquidtight Adapters		Optional Kellems	
	Conduit Size	Aluminum	Non-Metallic	Liquidtight Conduit Grip	
16 and 20 Amp	½" NPT	SAA12	_	074093402	
3 and 4 Wire	34" NPT	SAA34	_	074093403	
16 and 20 Amp 5 wire and 30 and 32 Amp 3 and 4 wire	½" NPT	SAB12	_	074093402	
	34" NPT	SAB34	_	074093403	
	1" NPT	SAB100	_	074093404	
30 and 32 Amp 5 wire and 60 and 63 Amp (all)	½" NPT	SAC12	SAC12NM	074093402	
	34" NPT	SAC34	SAC34NM	074093403	
	1" NPT	SAC100	SAC100NM	074093404	
	11/4" NPT	SAC125	_	074093405	
100 and 125 Amp (all)	11/4" NPT	SAD125	_	074093405	
	1½" NPT	SAD150	_	074093406	







## **Short Housing Plug**



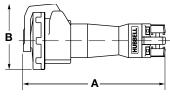
# **Plug Dimensions**

Туре	Α	В	Cord Grip Range
HBL320P	6.61" (167.8)	2.87" (73.0)	.330"830" (8.4-21.1)
HBL420P	7.00" (177.8)	3.19" (81.0)	.330"830" (8.4-21.1)
HBL520P	7.65" (194.3)	3.50" (89.0)	.330"830" (8.4-21.1)
HBL330P	8.05" (204.5)	3.74" (95.0)	.375"-1.250" (9.5-31.8)
HBL430P	8.05" (204.5)	3.74" (95.0)	.375"-1.250" (9.5-31.8)
HBL530P	8.54" (216.9)	4.02" (102.0)	.500"-1.450" (12.7-36.8)
HBL360P, HBL460P, HBL560P	10.15" (257.8)	4.49" (114.0)	.500"-1.450" (12.7-36.8)
HBL3100P, HBL4100P, M4100P, HBL5100P, M5100P	12.63" (320.8	) 4.92" (125.0)	1.065"-1.940" (27.1-49.3)

# **Short Housing Plug Dimensions**

Туре	Α	В	Cord Grip Range
HBL5100P9WSH	8.30" (210.82	2) 4.92" (125.0)	1.065"-1.940" (27.1-49.3)

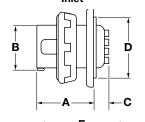
#### **Connector Body**



# **Connector Body Dimensions**

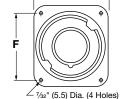
Туре	Α	В	Cord Grip Range
HBL320C	7.49" (190.3)	3.33" (84.6)	.330"830" (8.4-21.1)
HBL420C	7.90" (200.6)	3.66" (93.0)	.330"830" (8.4-21.1)
HBL520C	8.54" (216.9)	3.94" (100.0)	.330"830" (8.4-21.1)
HBL330C	9.05" (229.9)	4.27" (108.5)	.375"-1.250" (9.5-31.8)
HBL430C	9.05" (229.9)	4.27" (108.5)	.375"-1.250" (9.5-31.8)
HBL530C	9.68" (245.8)	4.70" (119.5)	.500"-1.450" (12.7-36.8)
HBL360C, HBL460C, HBL560C	11.15" (283.2)	5.10" (129.5)	.500"-1.450" (12.7-36.8)
HBL3100C, HBL4100C, M4100C, HBL5100C, M5100C	13.57" (344.7)	5.71" (145)	1.065"-1.940" (27.1-49.3)

#### Inlet

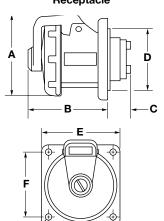


## **Inlet Dimensions**

Туре	Α	В	С	D	Е	F
HBL320B	2.54" (64.5)	1.85" (47.0)	1.14" (29.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL420B	2.54" (64.5)	2.11" (53.6)	1.14" (29.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL520B	2.54" (64.5)	2.41" (61.2)	1.14" (29.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL330B	2.99" (76.0)	2.49" (63.2)	1.04" (26.5)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL430B	2.99" (76.0)	2.49" (63.2)	1.04" (26.5)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL530B	2.99" (76.0)	2.75" (69.9)	1.04" (26.5)	2.80" (71.0)	3.75" (95.3)	3.13" (79.5)
HBL360B, HBL460B, HBL560B	4.04" (102.6)	2.97" (75.5)	1.18" (30.0)	3.46" (88.0)	4.50" (114.3)	3.88" (98.5)
HBL3100B, HBL4100B, M4100B, HBL5100B, M5100B	4.53" (115)	3.44" (87.5)	1.95" (49.5)	3.94" (100.0)	5.50" (139.7)	4.88" (124.0)



## Receptacle



#### **Receptacle Dimensions**

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Туре	Α	В	С	D	E	F
HBL320R	3.33" (84.5)	2.78" (70.6)	1.02" (26.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL420R	3.66" (93.0)	2.78" (70.6)	1.02" (26.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL520R	3.94" (100.0)	2.78" (70.6)	1.02" (26.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL330R	4.27" (108.5)	3.09" (78.5)	1.16" (29.5)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL430R	4.27" (108.5)	3.09" (78.5)	1.16" (29.5)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL530R	4.70" (119.4)	3.09" (78.5)	1.16" (29.5)	2.83" (71.9)	3.75" (95.3)	3.13" (79.5)
HBL360R, HBL460R, HBL560R	5.10" (129.5)	4.07" (103.4)	1.69" (43.0)	3.46" (88.0)	4.50" (114.3)	3.88" (98.6)
HBL3100R, HBL4100R, M4100R, HBL5100R, M5100R	5.71" (145)	4.23" (107.4)	2.46" (62.5)	3.95" (100.3)	5.50" (139.7)	4.88" (123.9)

Note: 20, 30, 60 and 100A devices are dimensionally equivalent to 16, 32, 63 and 125A devices, respectively.

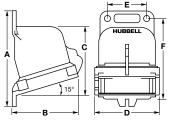
Dimensions in Inches (mm)

∠ ¾2" (5.5) Dia. (4 Holes)

# Non-Metallic 15° Angle Back Box

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
Back box for 16, 20, 30 & 32A devices.	1"	5.67" (144.0)	4.44" (112.8)	4.05" (102.9)	3.91" (99.3)	2.35" (59.7)	4.92" (125.0)	30.00"	BB2030N
Back box for 60 & 63A devices.	1¼"	7.76" (197.0)	5.16" (131.0)	5.87" (149.0)	4.72" (120.0)	2.99" (76.0)	6.94" (176.0)	70.00"	BB60N
Back box for 100 & 125A devices.	1½"	8.21" (209.0)	6.23" (158.0)	6.31" (160.3)	5.71" (145.0)	3.99" (101.0)	7.41" (188.0)	120.00"	BB100N

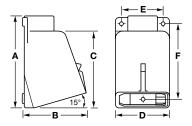
Note: \*Hub is not included; order one of the following Raco® part numbers: 1 inch = 1704, 1¼ inch = 1705, 1½ inch = 1706. These boxes meet IP67 requirement and Type 4X requirements when installed with a watertight conduit hub.



Non-Metallic Angle Box

# Metallic 15° Angle Back Box

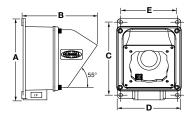
Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
Back box for 16, 20, 30 & 32A devices.	3/4"	5.12" (130.2)	4.00" (101.6)	4.19" (106.4)	3.75" (95.3)	3.00" (76.2)	4.00" (101.6)	30.00"	BB201W
Back box for 16, 20, 30 & 32A devices.	1"	5.12" (130.2)	4.00" (101.6)	4.19" (106.4)	3.75" (95.3)	3.00" (76.2)	4.00" (101.6)	30.00"	BB301W
Back box for 60 & 63A devices.	11⁄4"	7.25" (184.2)	5.25" (133.4)	6.00" (152.4)	4.50" (114.3)	3.75" (95.3)	6.19" (157.2)	80.00"	BB601W
Back box for 60 & 63A devices.	1½"	7.25" (184.2)	5.25" (133.4)	6.00" (152.4)	4.50" (114.3)	3.75" (95.3)	6.19" (157.2)	80.00"	BB602W
Back box for 100 &125A devices.	1½"	8.12" (206.4)	6.75" (171.5)	6.88" (174.6)	5.50" (139.7)	4.75" (120.7)	6.94" (176.2)	130.00"	BB1001W
Back box for 100 & 125A devices.	2"	8.12" (206.4)	6.75" (171.5)	6.88" (174.6)	5.50" (139.7)	4.75" (120.7)	6.94" (176.2)	130.00"	BB1002W



Metallic 15° Angle Box

# Metallic 55° Angle Back Box and Adapter

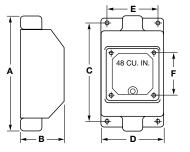
Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
Feed-thru box and angle adapter for 16, 20, 30 & 32A devices.	1"	6.80" (172.4)	6.60" (167.0)	5.63" (142.9)	4.50" (114.3)	3.74" (95.0)	-	42.27"	AB203055
Angle adapter for 16, 20, 30 & 32A devices.	-	4.89" (124.3)	3.33" (84.6)	4.29" (109.0)	3.75" (95.2)	2.50" (63.5)	-	25.00"	AA203055
Back box and angle adapter for 60, 63, 100 & 125A devices.	1½"	8.50" (215.9)	8.00" (202.9)	7.75" (196.8)	6.90" (174.8)	6.00" (152.4)	-	100.00"	FW6010055
Angle adapter for 60, 63, 100 & 125A devices.	-	6.75" (171.4)	4.48" (113.7)	6.00" (152.4)	6.75" (171.4)	6.00" (152.4)	-	79.00"	AA6010055



Metallic 55° Angle Box

#### **Metallic Feed-Thru Back Box**

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
Feed-thru box for 16, 20, 30 & 32A devices.	3/4"	8.25" (209.6)	3.06" (77.8)	7.14" (181.4)	4.50" (114.3)	3.75" (95.3)	3.13" (79.5)	48.00"	FT202W
Feed-thru box for 16, 20, 30 & 32A devices.	1"	8.25" (209.6)	3.06" (77.8)	7.14" (181.4)	4.50" (114.3)	3.75" (95.3)	3.13" (79.5)	48.00"	FT302W

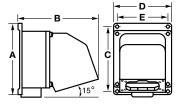


Metallic Feed-Thru Box

## Metallic Four-Way 15° Angle Back Box

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
Four-way box for 60,	1½"	8.75"	9.75"	7.75"	6.75"	6.00"	-	210.00"	FW60100
63, 100 & 125A devices.		(222.3)	(247.7)	(196.9)	(171.5)	(152.4)			

Note: These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.
These boxes withstand a 500-hour salt spray test as well as UL rain tight and external icing test.



Metallic Four-Way Angle Box

Dimensions in Inches (mm)

Watertight Material	Is	
Part	Material	<ul><li>Listed to standard UL1682/CSA C22.2</li></ul>
Plug		No. 182.1-02, Plugs, Receptacles and
Housing	Zytel® ST801 Nylon	cable connectors of the Pin and Sleeve
Locking Ring	Reinforced Thermoplastic Polyester	
Sealing Gasket	Solid Neoprene	Type.
Cord Clamp	Reinforced Thermoplastic Polyester	
Gland Cap	Reinforced Thermoplastic Polyester	UL Classified to IEC Standards 60309
Gland	Solid Neoprene	<ol> <li>Plugs, Socket Outlets, and Couplers</li> </ol>
Cord Clamp Screws	Stainless Steel (300 Series)	for Industrial Purposes) for Series I
Clamp Nut	Nickel-Plated Brass	(European) rated voltages and services
Gland Clamp Screws	Stainless Steel (300 Series)	
Contact Carrier	High-Impact Thermoset	When used with cord, these devices
Retainer	High-Impact Thermoset	require no further investigation by UL
Ground, Phase Pins	Brass (M-Series - Nickel-plated brass)	for equipment Classification to IEC 438
Terminal Screws	Stainless Steel (300 Series)	or IEC 380.
Assembly Screws	Stainless Steel (300 Series)	OF ILO 300.
Connector Body	Ctair 11000 Ctool (Coo Golloo)	_
Housing	Zytel® ST801 Nylon	
Cord Clamps	Reinforced Thermoplastic Polyester	
Glands	Solid Neoprene	
Cover Arms	Reinforced Thermoplastic Polyester	
Arm Springs	Stainless Steel (17-7 type)	
Covers	Reinforced Thermoplastic Polyester	
Cover Screw	Nickel-plated brass	
Rotating Sealing Disc	Polycarbonate	
Gaskets	Solid Neoprene	
Contact Carrier	High-Impact Thermoset	
Retainer	High-Impact Thermoset	
Phase, Ground Sleeves	Brass	
Sleeve Spring		
Sieeve Spring	20A and 30A Stainless Steel (300 Series); others are Beryllium Copper multi-contact inserts with silver plating	
Terminal Screws	Stainless Steel (300 Series)	
Assembly Screws	Stainless Steel (300 Series)	
	Stairliess steer (300 series)	
Inlet	7 . 10	
Housing	Zytel <sup>®</sup> 101 Nylon	
Locking Ring	Reinforced Thermoplastic Polyester	
Mounting Flange	Zytel® 101 Nylon	
Mounting Screws	Stainless Steel (300 Series)	
Contact Carrier	High-Impact Thermoset	
Retainer	High-Impact Thermoset	
Ground, Phase Pins	Brass (M-Series - Nickel-plated brass)	
Terminal Screws	Stainless Steel (300 Series)	
Assembly Screws (2)	Stainless Steel (300 Series)	
Gaskets	Solid Neoprene	
Receptacle		
Housing	Zytel® 101 Nylon	
Mounting Flange	Zytel® 101 Nylon	
Arm Spring	Stainless Steel (17-7 type)	
Cover Arm	Reinforced Thermoplastic Polyester	
Cover	Reinforced Thermoplastic Polyester	
Cover Screw	Nickel-plated brass	
Rotating Sealing Disc	Polycarbonate	
Gaskets	Solid Neoprene	
Mounting Screws	Stainless Steel (300 Series)	
Terminal Screws	Stainless Steel (300 Series)	

## **Specifications**

Sleeve Spring

Phase, Ground Sleeves

Typical Specification

Manufacturer's Identification

Description

Plug, Power Supply 3 Pole + Neutral + Earth Type Rating 20A, 120/208V AC, 3 Phase WYE

Hubbell HBL520P9W

UL 1686 C2, IEC 60309-2, Clock Position 9, Watertight Configuration Certification

UL Listed, File E146032 Receptacles and Inlets, E146033 Plugs and Connectors, UL Standard UL1682 and UL 1686C2, CSA Certified File LR280C for Plugs, Connectors Inlets and LR285C for Receptacle CSA StandardC22.2 No. 182.1,

20A and 30A Stainless Steel (300 Series); others are Beryllium Copper multi-contact inserts with silver plating

UL Classified to IEC 60309-1 IEC 60309-2

® Zytel is registered trademark of E.I. DuPont.

PBT is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



#### **Performance**

Electrical 3000V AC. Dielectric Withstand Voltage Max. Working Voltage 600V RMS (i.e., minimum creepage distance 10 millimeters, minimum clearance 8 millimeters, per IEC 60309-1 for devices rated over 500V). Current Interrupting Certified for current interrupting at full rated current (Except DC rated devices). Temperature Rise Max. 30°C temperature rise at full rated current after 50 cycles of overload at 150% of rated current at a power 5,000 connect and disconnect cycles with load for 16A and 20A, 1,000 cycles with load and 1,000 cycles without **Endurance** load for 30A, 32A, 60A and 63A, and 250 cycles with load and 250 cycles without load for 100A and 125A. Mechanical Impact Resistance Per CSA C22.2 No. 182.1 / UL1682. Cord Grip Cable Retention Per CSA C22.2 No. 182.1 / UL1682. Cord Accommodation Round portable service cords of diameters commensurate with the device rating as defined in UL Standard 62, CSA C22.2 No. 49 and the harmonized <HAR> European Standards. Terminal Identification Terminals identified in accordance with North American and IEC conventions. Product Identification Identification and ratings are a permanent part of the device housing. Environmental Watertight per IEC 60309-1. Moisture Resistance Ingress Protection IP67 Suitability. Flammability HB or better per UL 94 or CSA C22.2 No. 0.17. Maximum Continuous 75°C; Minimum - 40°C without impact Operating Temperatures Materials Housings Nylon. All Other Materials Resistant to corrosion and chemical attack.

Note: Specification sheets for all other Pin and Sleeve catalog numbers are available upon request.

## Horsepower Ratings for Hubbell IEC Pin and Sleeve Devices\*

Singl	е	Pł	١a	se
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	Wire				New HP
Amps	Count	Voltage	Clock	Catalog Number	Rating
20	3	125V	4	HBL320x4W	1
20	3	250V	6	HBL320x6W	2
20	3	480V	7	HBL320x7W	5
20	4	125/250 (208L-L)	12	HBL420x12W	2
20	4	125/250 (250L-L)	12	HBL420x12W	2
20	4	125/250 (125L-N)	12	HBL420x12W	1
30	3	125V	4	HBL330x4W	2
30	3	250V	6	HBL330x6W	3
30	3	480V	7	HBL330x7W	7.5
30	3	550VDC	8	HBL330X8	N/A
30	4	125/250 (208L-L)	12	HBL430x12W	3
30	4	125/250 (250L-L)	12	HBL430x12W	3
30	4	125/250 (125L-N)	12	HBL430x12W	2
60	3	125V	4	HBL360x4W	2
60	3	250V	6	HBL360x6W	3
60	3	480V	7	HBL360x7W	7.5
60	3	250VDC	3	HBL360x3W	N/A
60	3	550VDC	8	HBL360x8W	N/A
60	4	125/250 (208L-L)	12	HBL460x12W	3
60	4	125/250 (250L-L)	12	HBL460x12W	3
60	4	125/250 (125L-N)	12	HBL460x12W	2
100	3	125V	4	HBL3100x4W	5
100	3	250V	6	HBL3100x6W	15
100	3	480V	7	HBL3100x7W	30
100	3	250VDC	3	HBL3100x3W	N/A
100	3	550VDC	8	HBL3100x8W	N/A
100	4	125/250 (208L-L)	12	HBL4100x12W	10
100	4	125/250 (250L-L)	12	HBL4100x12W	15
100	4	125/250 (125L-N)	12	HBL4100x12W	5

#### 3-Phase

	Wire				Present HP	New HP
Amps	Count	Voltage	Clock	Catalog Number	Rating	Rating
20	4	3Ø 250V	9	HBL420x9W	2	5
20	4	3Ø 480V	7	HBL420x7W	5	10
20	4	3Ø 600V	5	HBL420x5W	7.5	10
20	4	3Ø 380-415V	6	HBL420x6W	-	7.5
20	5	3ØY 120/208V	9	HBL520x9W	0.5	3
20	5	3ØY 277/480V	7	HBL520x7W	5	10
20	5	3ØY 347/600V	5	HBL520x5W	7.5	10
20	5	3Ø 240/415V	6	HBL520x6W	-	5
30	4	3Ø 250V	9	HBL430x9W	3	7.5
30	4	3Ø 480V	7	HBL430x7W	7.5	15
30	4	3Ø 600V	5	HBL430x5W	10	20
30	5	3ØY 120/208V	9	HBL530x9W	2	5
30	5	3ØY 277/480V	7	HBL530x7W	7.5	15
30	5	3ØY 347/600V	5	HBL530x5W	10	20
30	4	3Ø 380/415V	6	HBL430x6W	-	10
30	5	3Ø 200/346-240/415	6	HBL530x6W	-	10
60	4	3Ø 250V	9	HBL460x9W	5	7.5
60	4	3Ø 480V	7	HBL460x7W	10	20
60	4	3Ø 600V	5	HBL460x5W	15	25
60	4	3Ø 380-415VAC	6	HBL460x6W	-	10
60	5	3ØY 120/208V	9	HBL560x9W	3	7.5
60	5	3ØY 277/480V	7	HBL560x7W	10	20
60	5	3ØY 347/600V	5	HBL560x5W	15	25
60	5	3Ø 200/346-240/415	6	HBL560x6W	-	10
100	4	3Ø 250V	9	HBL4100x9W	10	15
100	4	3Ø 480V	7	HBL4100x7W	30	40
100	4	3Ø 600V	5	HBL4100x5W	30	50
100	4	3Ø 380-415V	6	HBL4100x6W	-	30
100	5	3ØY 200/346-240/415V	6	HBL5100x6W	-	30
100	5	400VDC	8	HBL5100x8W		N/A
100	5	3ØY 120/208V	9	HBL5100x9W	10	15
100	5	3ØY 277/480V	7	HBL5100x7W	30	40
100	5	3ØY 347/600V	5	HBL5100x5W	30	50
eve mar	nufactur	ers.				

Note: \*Horsepower Ratings are NOT standardized amongst different Pin and Sleeve manufacturers.

#### **Features and Benefits**



#### Unfused Circuit-Lock® Pin and Sleeve Mechanical Interlocks

The National Electrical Code (NEC®) requires a separate disconnect means within sight of all motor loads. The NEC requires the disconnecting means in a motor-circuit be listed as "Suitable as Motor Disconnect" if the motor is rated greater than 2 HP.

Hubbell's revolutionary Circuit-Lock interlock incorporates the disconnect switch and receptacle in one compact, non-metallic and economical unit. Removing the plug and locking it out provides a visual means of verifying equipment has been disconnected. All Circuit-Lock mechanical interlocks can be locked out as a method of compliance with the OSHA Lockout/Tagout regulation.

The switch cannot be turned ON until the plug is completely engaged, and the plug cannot be removed until the switch is turned OFF. At the same time, it eliminates the possibility of making or breaking the circuit under load or making a casual or "lazy" connection. The non-metallic enclosure can be connected to the metallic conduit and not interfere with the ground continuity.

In addition, these horsepower rated units are durable, watertight and easy to install. And they are compatible with IEC 60309-2 plugs. These Circuit-Lock units are available in 20, 30, 60 and 100A models, and in 3, 4 and 5 wire configurations that are designed to the IEC 60309-1 and 60309-2 standards.

Hubbell's Circuit-Lock Mechanical Interlocks are also available in "Reverse Service" versions. These units incorporate the disconnect switch and reverse service receptacle (inlet) in one compact, non-metallic and economical unit. These units are available in 30, 60 and 100A models, 4 wire configurations.



HBL430MI7W



# Housing Design

- Insulated non-metallic housing, super tough, non-conductive and chemical resistant for heavy duty industrial environments
- IEC pin and sleeve devices are color coded by voltage for easy identification
- Self-closing gasketed cover, detents into position to fully close automatically



#### Interior Design

- Large gears enclosed in a gear box assembled on one plane to eliminate possible gear jumping
- Horsepower rated disconnect switch handles large motor loads
- DIN rail mounted switch for easy installation and replacement



#### Safety

- Lockable handle to meet OSHA Lockout/Tagout regulations
- Two-stage interlocking mechanism to help defeat tampering
- Watertight conduit hub and grounding plate for use on metallic conduit (IP67 suitability)



#### Liftcover

- Replaceable spring-loaded liftcover with gasket for a watertight seal
- Pre-wired IEC Pin and Sleeve receptacle
- Reverse service has dependable solid brass pins for longer life and reliable electrical contact



## Identification

 Color coded rating pad and receptacle mount to signify voltage



## Installation

- Comes with brass inserts and stainless steel screws for higher torque and better sealing
- Three molded-in conduit drill points are located on top, bottom and back surface of enclosure
- Adjustable mounting feet are ductile to allow mounting on irregular surfaces





IP67

Enclosure Type 4X, 12

Police								<u>IP67</u> UITABILITY	ciosure Type 4X, 12
Amps         Wine Program         Plug         AC Voltage         Mechanical Interfock         Mating Plug         Mechanical Interfock         Mating Plug           20         3P AW         ②         120/240V         HBL420MIPW         HBL420P12W         —         —           3P AW         ③         30 240V         HBL420MIPW         HBL420P7W         —         —           3P AW         ⑥         30 6800V         HBL420MIPW         HBL420P7W         —         —           3P AW         ⑥         1200         HBL430MIPW         HBL420P5W         —         —           3P AW         ⑥         1200         HBL330MIPW         HBL330P6W         —         —           2P 3W         ⑥         120/240V         HBL330MIPW         HBL330P1W         —         —           3P AW         ⑥         30 240V         HBL430MIPW				Rating		Unfused Circuit	-Lock <sup>®</sup> Devices	Reverse	Service
20   3P AW   3   120/240V			Config	uration					
SP 4W	Amps	Wires	Recep.	Plug	AC Voltage	Mechanical Interlock	Mating Plug	Mechanical Interlock	Mating Plug
SP 4W	20	3P 4W		<u> </u>	120/240V	HBL420MI12W	HBL420P12W	_	_
3P 4W		3P 4W			3Ø 240V	HBL420MI9W	HBL420P9W	_	_
30 2P 3W		3P 4W		<b>©</b>	3Ø 480V	HBL420MI7W	HBL420P7W	_	_
2P 3W         ②         240V         HBL330Mi6W         HBL330P6W         —         —           2P 3W         ③         480V         HBL330Mi7W         HBL330P7W         —         —           3P 4W         ⑥         120/240V         HBL430Mi12W         HBL430P12W         —         —           3P 4W         ⑥         3Ø 480V         HBL430Mi9W         HBL430P7W         HBL430Mi7WR         HBL430P7WR           3P 4W         ⑥         3Ø 480V         HBL430Mi5W         HBL430P5W         HBL430Mi5WR         HBL430P5WR           4P 5W         ⑥         3Ø 600V         HBL430Mi5W         HBL430P5W         HBL430Mi5WR         HBL430P5WR           4P 5W         ⑥         3ØY 120/208V         HBL530Mi5W         HBL530P5W         —         —           4P 5W         ⑥         3ØY 277/480V         HBL530Mi5W         HBL530P5W         —         —           4P 5W         ⑥         3ØY 347/600V         HBL432Mi3W         HBL432P3W         —         —           4P 5W         ⑥         3ØY 347/600V         HBL360Mi6W         HBL360P6W         —         —           2P 3W         ⑥         120/240V         HBL360Mi6W         HBL360P7W         —         —		3P 4W		<u></u>	3Ø 600V	HBL420MI5W	HBL420P5W	_	_
2P 3W	30	2P 3W		<b>©</b>	120V	HBL330MI4W	HBL330P4W	_	_
3P 4W ③ ① 120/240V		2P 3W		<b>©</b>	240V	HBL330MI6W	HBL330P6W	_	_
3P 4W		2P 3W		<b>©</b>	480 <b>V</b>	HBL330MI7W	HBL330P7W	_	_
3P 4W		3P 4W			120/240V	HBL430MI12W	HBL430P12W	_	_
3P 4W		3P 4W		<b>③</b>	3Ø 240V	HBL430MI9W	HBL430P9W	HBL430MI9WR	HBL430P9WR
4P 5W ③ ③ 30Y 120/208V ■ HBL530MI9W HBL530P9W		3P 4W	0	<b>©</b>	3Ø 480V	HBL430MI7W	HBL430P7W	HBL430MI7WR	HBL430P7WR
4P 5W         ③         3ØY 277/480V         HBL530MI7W         HBL530P7W         —		3P 4W		<b>©</b>	3Ø 600V	HBL430MI5W	HBL430P5W	HBL430MI5WR	HBL430P5WR
4P 5W         ③         3ØY 347/600V         ■ HBL530MI5W         HBL530P5W         —         —           32         3P 4W         ⑥         380V 50HZ-440V 60Hz         ■ HBL432MI3W         HBL432P3W         —         —           60         2P 3W         ⑥         120V         HBL360MI4W         HBL360P4W         —         —           2P 3W         ⑥         120V         HBL360MI6W         HBL360P6W         —         —         —           2P 3W         ⑥         480V         HBL360MI6W         HBL360P7W         —         —         —           3P 4W         ⑥         120/240V         HBL460MI12W         HBL460P12W         HBL460MI12WR         HBL460P12WR         HBL460MI9WR         HBL460P9WR         HBL460P9WR </th <th></th> <th>4P 5W</th> <th><b>©</b></th> <th><b>③</b></th> <th>3ØY 120/208V</th> <th>HBL530MI9W</th> <th>HBL530P9W</th> <th>_</th> <th>_</th>		4P 5W	<b>©</b>	<b>③</b>	3ØY 120/208V	HBL530MI9W	HBL530P9W	_	_
32 3P 4W		4P 5W		<b>③</b>	3ØY 277/480V	HBL530MI7W	HBL530P7W	_	_
SP 4W		4P 5W		<u> </u>		HBL530MI5W	HBL530P5W	_	_
2P 3W         ②         240V         HBL360MI6W         HBL360P6W         - </th <th>32</th> <th>3P 4W</th> <th></th> <th><b>©</b></th> <th></th> <th>HBL432MI3W</th> <th>HBL432P3W</th> <th>_</th> <th>_</th>	32	3P 4W		<b>©</b>		HBL432MI3W	HBL432P3W	_	_
2P 3W         ③         480V         ■ HBL360MI7W         HBL360P7W         —	60	2P 3W		<b>©</b>	120V	HBL360MI4W	HBL360P4W	_	_
3P 4W		2P 3W		<b>③</b>	240V	HBL360MI6W	HBL360P6W	_	_
3P 4W		2P 3W		<b>③</b>	480V	HBL360MI7W	HBL360P7W	_	_
3P 4W   4P		3P 4W		<b>③</b>	120/240V	HBL460MI12W	HBL460P12W	HBL460MI12WR	HBL460P12WR
3P 4W		3P 4W		<b>③</b>	3Ø 240V	HBL460MI9W	HBL460P9W	HBL460MI9WR	HBL460P9WR
4P 5W       ③       3ØY 120/208V       HBL560MI9W       HBL560P9W       -       -         4P 5W       ⑥       3ØY 277/480V       HBL560MI7W       HBL560P7W       -       -         4P 5W       ⑥       3ØY 347/600V       HBL560MI5W       HBL560P5W       -       -         100       2P 3W       ⑥       240V       HBL3100MI6W       HBL3100P6W       -       -         3P 4W       ⑥       120/240V       HBL4100MI12W       HBL4100P12W       HBL4100MI12WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI5WR       HBL4100MI5WR       HBL4100MI5WR       HBL4100P5WR		3P 4W		<b>③</b>	3Ø 480V	HBL460MI7W	HBL460P7W	HBL460MI7WR	HBL460P7WR
4P 5W       ③       3ØY 277/480V       HBL560MI7W       HBL560P7W       -       -         4P 5W       ③       3ØY 347/600V       HBL560MI5W       HBL560P5W       -       -         100       2P 3W       ⑥       240V       HBL3100MI6W       HBL3100P6W       -       -         3P 4W       ⑥       120/240V       HBL4100MI12W       HBL4100P12W       HBL4100MI12WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI5WR       HBL4100MI5WR       HBL4100MI5WR       HBL4100MI5WR       HBL4100MI5WR       HBL4100P5WR		3P 4W		<b>©</b>	3Ø 600V	HBL460MI5W	HBL460P5W	HBL460MI5WR	HBL460P5WR
4P 5W       ③       3ØY 347/600V       ■ HBL560MI5W       HBL560P5W       -       -         100       2P 3W       ②       240V       ■ HBL3100MI6W       HBL3100P6W       -       -         3P 4W       ③       ①       120/240V       ■ HBL4100MI12W       HBL4100P12W       HBL4100MI12WR       HBL4100MI12WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI9WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI7WR       HBL4100MI5WR       HBL4100P5WR		4P 5W		<u></u>	3ØY 120/208V	HBL560MI9W	HBL560P9W	_	_
100         2P 3W         ②         240V         HBL3100MI6W         HBL3100P6W         −         −         −           3P 4W         ③         ①         120/240V         HBL4100MI12W         HBL4100P12W         HBL4100MI12WR         HBL4100P12WR           3P 4W         ②         ③         3Ø 240V         HBL4100MI9W         HBL4100P9W         HBL4100MI9WR         HBL4100P9WR           3P 4W         ③         ③         3Ø 480V         HBL4100MI7W         HBL4100P7W         HBL4100MI7WR         HBL4100P7WR           3P 4W         ⑥         ③         3Ø 600V         HBL4100MI5W         HBL4100P5W         HBL4100MI5WR         HBL4100P5WR		4P 5W		<b>©</b>	3ØY 277/480V	HBL560MI7W	HBL560P7W	_	_
3P 4W		4P 5W		<b>©</b>	3ØY 347/600V	HBL560MI5W	HBL560P5W	_	_
3P 4W  3Ø 240V	100	2P 3W		<b>③</b>	240V	HBL3100MI6W	HBL3100P6W	_	_
3P 4W		3P 4W		<b>③</b>	120/240V	HBL4100MI12W	HBL4100P12W	HBL4100MI12WR	HBL4100P12WR
3P 4W 🔞 3Ø 600V ■ HBL4100MI5W HBL4100P5W HBL4100MI5WR HBL4100P5WR		3P 4W		<b>③</b>	3Ø 240V	HBL4100MI9W	HBL4100P9W	HBL4100MI9WR	HBL4100P9WR
		3P 4W		<b>③</b>	3Ø 480V	HBL4100MI7W	HBL4100P7W	HBL4100MI7WR	HBL4100P7WR
4P 5W (3) 3ØY 120/208V HBL5100MI9W HBL5100P9W		3P 4W		<b>©</b>	3Ø 600V	HBL4100MI5W	HBL4100P5W	HBL4100MI5WR	HBL4100P5WR
<u> </u>		4P 5W		<b>③</b>	3ØY 120/208V	HBL5100MI9W	HBL5100P9W	_	

Note: 20, 30 and 32A – 1 inch NPT hub supplied; 60 and 100A – 1¼ inch hub supplied.



HBLAC1



HBLAC2





HBL30RNB

HBL30RGB



MICPK30





HBL30MIRS



**HBLRFT2** 

Dimensions in Inches (mm)

# Auxiliary Contacts for 20, 30, 32, 60 and 100A Switch, NEMA A600 Pilot Duty

• • • • • • • • • • • • • • • • • • • •	•
Description	Catalog Number
"Break After Main Break", 1 set of n/o contacts, 1 set of n/c contacts.	HBLAC1
"Break Before Main Break", 1 set of n/o contacts.	HBLAC2
Ground Block	
Description	Catalog Number
For 20, 30 and 32A switches.	HBL30RGB
For 60 and 100A switches.	HBL60100RGB
Neutral Block	
Description	Catalog Number
For 20, 30 and 32A switches.	HBL30RNB
For 60A switches.	HBL60RNB
For 100A switches.	HBL100RNB
Watertight Closure Plug Kits	
Description	Catalog Number
For 20, 30 and 32A Circuit-Lock Unfused and Fused Pin and Sleeve mechanical interlocks.	MICPK30
For 60 and 100A Circuit-Lock Unfused and Fused Pin and Sleeve mechanical interlocks.	MICPK60
Replacement Flip Covers	
Description	Catalog Number
For 20A mechanical interlocks.	CA420MI
For 30 and 32A, 3 and 4 wire mechanical interlocks.	CA3430MI
For 30A, 5 wire mechanical interlocks.	CA530MI
For 60A mechanical interlocks.	CA60MI
For 100A mechanical interlocks.	CA100MI
Replacement Switches	
Description	Catalog Number
For 20A mechanical interlocks.	HBLDS3RS
For 30 and 32A mechanical interlocks.	HBL30MIRS

#### **Dimensions**

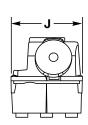
KEY	20A and 30A Inches (mm)	60A Inches (mm)	100A Inches (mm)
A	7.75" (196.9)	7.75" (196.9)	7.75" (196.9)
В	6.87" (174.5)	6.87" (174.5)	6.87" (174.5)
C	4.75" (120.7)	4.75" (120.7)	4.75" (120.7)
D	1.02" (25.9)	1.02" (25.9)	1.02" (25.9)
E	1.60" (40.6)	1.46" (37.1)	1.46" (37.1)
F	11.00" (279.4)	12.75" (323.9)	12.75" (323.9)
G	8.75" (222.3)	8.75" (222.3)	8.75" (222.3)
Н	8.00" (203.2)	9.75" (247.7)	9.75" (247.7)
1	10.12" (257.0)	11.87" (301.5)	11.87" (301.5)
J	6.88" (174.8)	6.88" (174.8)	6.88" (174.8)
K	1.93" (49.0)	2.09" (53.1)	2.09" (53.1)
L	11.25" (285.8)**	13.65" (346.7)	13.65" (346.7)
M	7.75" (196.9)	8.60" (218.4)	9.30" (236.2)
HUB SIZE	1.00" NPT	1.25" NPT	1.25" NPT

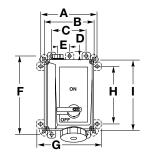
Note: \*Package of 10 feet and 10 screws. \*\*30 and 32A, 3 and 4W = 11.50" (292.1); 30A, 5W = 11.59" (294.4).

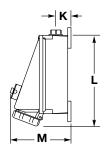
For 60 and 100A mechanical interlocks.

**Replacement Mounting Feet** 

For 20, 30, 32, 60 and 100A mechanical interlocks.







HBLDS60100RS

Catalog Number

HBLRFT2\*

## Typical Specifications

Manufacturer's Identification

Hubbell HBL430MI7W Circuit-Lock® Pin and Sleeve Mechanical Interlock Description

3 Pole + Earth Electrical Type

Rating 30A, 480V AC, 3 Phase

Configuration IEC 60309-2, UL1686 C2, Clock position 7

Enclosure Type Indoor and Outdoor - 4X (Watertight, Washdown); Indoor - 12 (Dust-tight, Falling Dirt and Noncorrosive Liquids)

Ingress Protection

Enclosure Material Non-metallic, enclosure suitable for metallic conduit

UL Listed, CSA Certified

Note: This device provides on/off switched control of a plug connected load and includes an interlocking feature to prevent the plug from being disconnected while the receptacle is energized. The switch cannot be turned "ON" until the plug is inserted properly, and the plug cannot be removed until the switch is turned "OFF."

#### **Materials**

Part	Material	Part	Material	
Base	PBT	Тор	PBT	
Handle	PBT	Conduit Hub	Zinc	
Enclosure Gasket	Neoprene	Shaft	PBT	
Shaft Seal	Neoprene	Ground Plate	Galvanized Steel	
Enclosure Screws	Stainless Steel 300 Series	Enclosure Inserts	Brass	
Hinge Pins	Nickel Plated Brass	Hinge Spring	Stainless Steel 300 Series	

#### **Performance**

Periorillance	
Electrical	
Dielectric Voltage Max. Working Voltage	Withstands 3,000V AC Min. 600V AC RMS.
Current Interrupting Short Circuit Withstand Rating	Certified for current interrupting at full rated current and voltage.  Suitable for use on a circuit capable of delivering not more than 10,000 RMS symmetrical amperes at the voltage rating of the receptacle. 20A and 30A models: Suitable for use on a circuit capable of delivering not more than 65,000 RMS symmetrical amperes, 600V when protected by class "J" fuses rated 30A.
Operations	Mechanical 10,000 cycles, electrical 6,000 cycles.
Mechanical	
Impact Resistance Terminal Identification Product Identification Mounting	In accordance with UL 746C. In accordance with UL, CSA and international conventions. Identification and ratings are part of the external label and molded into the receptacle mount. External adjustable feet.
Environmental	
Moisture Resistance Ingress Protection Flammability Operating Temperature UV Resistance	Indoor and Outdoor - 4X (Watertight, Washdown); Indoor - 12 (Dust-tight, Falling Dirt and Noncorrosive Liquids). IP67 Suitability. UL94-5VA and V-0 Classification. Max. Continuous +75°C; Min. Continuous -40°C. All materials are UV stabilized.

## **Horsepower Ratings**

Amps	AC Voltage Rating	Horsepower	Mechanical Interlock	Mating Plug
20	120/240V AC	2	HBL420MI12W	HBL420P12W
20	3Ø 240V AC	5	HBL420MI9W	HBL420P9W
20	3Ø 480V AC	10	HBL420MI7W	HBL420P7W
20	3Ø 600V AC	10	HBL420MI5W	HBL420P5W
30	120V AC	2	HBL330MI4W	HBL330P4W
30	240V AC	3 (208-240V AC)	HBL330MI6W	HBL330P6W
30	480V AC	7.5	HBL330MI7W	HBL330P7W
30	120/240V AC	3 (208-240V AC)	HBL430MI12W	HBL430P12W
30	3Ø 600V AC	20	HBL430MI5W	HBL430P5W
30	3Ø 480V AC	15	HBL430MI7W	HBL430P7W
30	3Ø 250V AC	7.5	HBL430MI9W	HBL430P9W
30	3ØY 347/600V AC	20	HBL530MI5W	HBL530P5W
30	3ØY 277/480V AC	15	HBL530MI7W	HBL530P7W
30	3ØY 120/208V AC	5	HBL530MI9W	HBL530P9W
32	380V AC 50Hz – 440V AC 60Hz	15 (440V AC 3Ø 60Hz)	HBL432MI3W	HBL432P3W
60	120V AC	3	HBL360MI4W	HBL360P4W
60	240V AC	7.5 (208-240V AC)	HBL360MI6W	HBL360P6W
60	480V AC	20	HBL360MI7W	HBL360P7W
60	120/240V AC	7.5 (208-240V AC)	HBL460MI12W	HBL460P12W
60	3Ø 600V AC	40	HBL460MI5W	HBL460P5W
60	3Ø 480V AC	30	HBL460MI7W	HBL460P7W
60	3Ø 250V AC	15	HBL460MI9W	HBL460P9W
60	3ØY 347/600V AC	40	HBL560MI5W	HBL560P5W
60	3ØY 277/480V AC	30	HBL560MI7W	HBL560P7W
60	3ØY 120/208V AC	15	HBL560MI9W	HBL560P9W
100	240V AC	15 (10 @ 208V AC)	HBL3100MI6W	HBL3100P6W
100	120/240V AC	15	HBL4100MI12W	HBL4100P12W
100	3Ø 600V AC	50	HBL4100MI5W	HBL4100P5W
100	3Ø 480V AC	50	HBL4100MI7W	HBL4100P7W
100	3Ø 250V AC	25 (208-240V AC)	HBL4100MI9W	HBL4100P9W
100	3ØY 120/208V AC	20	HBL5100MI9W	HBL5100P9W

#### **Features and Benefits**

## Fused Circuit-Lock® Pin and Sleeve Mechanical Interlocks

Hubbell Circuit-Lock® Pin and Sleeve Mechanical Interlocks are a revolutionary design that incorporates a disconnect switch and pin and sleeve receptacle in a compact non-metallic unit. These devices offer maximum safety by preventing users from mating or breaking a circuit under load—Hubbell's interlock mechanism detects the presence of a plug and prevents it from being removed when the switch is in the "ON" position.

It features a high visibility red handle that can be locked in the OFF position to meet OSHA lockout/tagout regulations. The enclosure door can be locked to prevent unauthorized access. The rugged, corrosion-resistant Type 4X PBT enclosure features adjustable mounting feet for flexible installation, while the receptacle's spring-loaded cover with gasket is dust tight and provides a watertight seal when turned and locked.

The patented Plug-Check™ mechanism detects the presence of the plug. It operates as a clutch to engage the handle with the switch and captures the plug. This action prevents the plug from being removed until the switch is turned OFF.





# **Housing Design**

- Non-metallic enclosure meets UL 50E Type 4X (watertight), 12 (dust-tight) and IP66 suitability requirements. Enclosure is molded of rugged thermoplastic PBT to resist abuse, corrosion and enhance safety
- Stainless steel ¼ turn door fasteners for quick, easy access to fuses



# Interior Design

- Compact Fused Disconnect Switch accepts Class "J" fuses. Fuse holders are top mounted for easy access
- The switch accepts auxiliary contacts for control circuit applications including the ON/OFF control of remote pilot lights or signal for programmable controllers



#### Safety

- High visibility red handle can be locked in the OFF position as a method of compliance with OSHA lockout requirements. Accepts up to a 5/16 inch padlock shackle
- Replaceable spring-loaded receptacle liftcover with gasket ensures dust tight rating; liftcover provides watertight seal when turned and locked



#### **Contact Carrier**

- Thermoset polyester contact carrier provides resistance to electrical tracking and withstands higher temperatures
- Thermoset properties provide excellent dimensional stability, low moisture absorption and superior dielectric strength



## **Enclosure Door**

- Removable door for ease of wiring and installation
- Enclosure door can be locked to prevent unauthorized access.
   Additionally, if the switch is ON, the door cannot be opened



## Installation

- Three molded-in conduit drill points are located on the top, bottom and back surface of enclosure. Conduit hub provided: 30A 1 in. NPT, 60A 1¼ in. NPT
- Conduit hub and adjustable mounting feet (4) are ductile to allow mounting on irregular surfaces





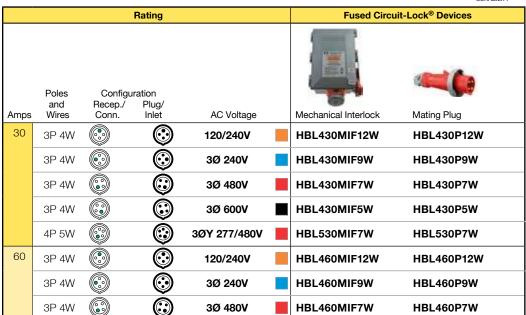
HBL430MIF12W

Gray Style Switch



**HBLACFSNO HBL30MIFRS** 

Black Style Switch



Note: 30A - 1 inch NPT hub supplied; 60A - 11/4 inch hub supplied.

# **Replacement Auxiliary Contacts**

Description	Black Style Switch Catalog Number	Gray Style Switch Catalog Number
Auxiliary contact, normally open, A600 pilot duty, break before break.	ACFSNO	HBLACFSNO
Auxiliary contact, normally closed, A600 pilot duty, break before break.	ACFSNC	HBLACFSNC

HBL460MIF5W

HBL560MIF9W

HBL460P5W

HBL560P9W

Note: Auxiliary contacts are specific to the style switch noted and are NOT interchangeble. All new installations are shipped with gray style switch.

3Ø 600V

3ØY 120/208V





# **Replacement Switches**

3P 4W

4P 5W

Description	Gray Style Switch Catalog Number
For 30A fused switches.	HBL30MIFRS
For 60A fused switches. Gray Style switch will retro fit Black Style switch.	HBL60MIFRS

Watertight Closure Plug Kits

Description	Catalog Number
For 30A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK30
For 60 and 100A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK60

Replacement Flip Covers

Description	Catalog Number
For 30A, 3 and 4 wire mechanical interlocks.	CA3430MI
For 30A, 5 wire mechanical interlocks.	CA530MI
For 60A mechanical interlocks.	CA60MI

Replacement Mounting Feet

riopiacomonicimounting root	
Description	Catalog Number
Replacement mounting feet and screws for 30 and 60A fused mechanical interlocks.	HBLRFT2 <sup>∆</sup>

Note: <sup>A</sup>Package of 10 feet and 10 screws.

www.hubbell-wiring.com



MICPK30





**HBLRFT2** 

## **Specifications**

#### Typical Specifications

Manufacturer's Identification Hubbell HBL460MIF7W

Description Fused Circuit-Lock Pin and Sleeve Mechanical Interlock

Electrical Type 3 Pole + Earth

Rating 60A, 480V AC, 3 Phase

Configuration IEC 60309-2, UL1686C2, Clock Position 7
Enclosure Type Indoor and Outdoor - 4X (Watertight, Washdown)

Indoor - 12 (Dust-tight, Falling dirt)
Certification UL Listed for US and Canada

#### **Materials**

Hinge Spring

Part	Material
Base and Top	PBT
Handle	PBT
Conduit Hub	Zinc, 30A-1", 60A-11/4" NPT
Enclosure Gasket	Neoprene
Shaft	Brass
Shaft Seal	Neoprene
Ground Plate	Galvanized Steel
Enclosure Screws	Stainless Steel
Mounting Inserts	Brass
Hinge Pin	Nickel-Plated Brass

Stainless Steel

Note: This device provides fused switched control of a plug connected load and includes an interlocking feature to prevent the plug from being disconnected or the fuse door opened while the receptacle is energized. The switch cannot be turned on until the plug is inserted properly.

#### **Performance**

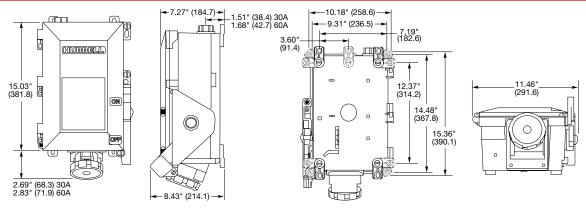
Electrical	
Dielectric Voltage	Withstands 3,000V AC Min.
Max. Working Voltage	600V AC.
Current Interrupting	Certified for current interrupting at full rated current and voltage.
Short Circuit Withstand Rating	Suitable for use on a circuit capable of delivering not more than 200,000 RMS symmetrical amperes
	at the voltage rating of receptacle.
Operations	Mechanical 10,000 cycles minimum.
Mechanical	
Impact Resistance	In accordance with UL 746C.
Terminal Identification	In accordance with UL, CSA and international conventions.
Product Ratings	Ratings are part of the external label and molded into the receptacle mount and color-coded.
Mounting	External adjustment feet.
Environmental	
Moisture Resistance	Indoor and Outdoor - 4X (Watertight, Washdown); Indoor - 12 (Dust-tight, Falling dirt).
Ingress Protection	IP66 Suitability.
Flammability	UL94-5VA and V-0 Classification.
Operating Temperatures	Max. Continuous +75°C; Min. Continuous -40°C.
UV Resistance	All materials are UV stabilized.
Fuse Types	UL Listed Class "J". CSA Certified HRCI-J.

**Horsepower Ratings** 

Amps	AC Voltage Rating	Standard	Maximum**	Mechanical Interlock	Use Pin and Sleeve Plug
30	3Ø 600V AC	7.5	20	HBL430MIF5W	HBL430P5W
30	3Ø 480V AC	5	15	HBL430MIF7W	HBL430P7W
30	3Ø 240V	3	7.5	HBL430MIF9W	HBL430P9W
30	120/240V AC	1.5*	3*	HBL430MIF12W	HBL430P12W
30	3ØY 277/480V	5	15	HBL530MIF7W	HBL530P7W
60	3Ø 600V AC	15	50	HBL460MIF5W	HBL460P5W
60	3Ø 480V AC	15	30	HBL460MIF7W	HBL460P7W
60	3Ø 240V AC	7.5	15	HBL460MIF9W	HBL460P9W
60	120/240V AC	3*	10*	HBL460MIF12W	HBL460P12W
60	3ØY 120/208V	7.5	15	HBL560MIF9W	HBL560P9W

Note: \*208-240V AC L-L.

## **Dimensions**



Dimensions in Inches (mm)

<sup>\*\*</sup>Requires time delay fuses.







#### **Features and Benefits**

## 20 and 30 Amps Low Profile

Hubbell's Low Profile Pin and Sleeve devices were designed to save space without sacrificing pin and sleeve strength, safety and convenience. The small compact design of these plugs is ideal for indoor applications where space is at a premium.

These devices are fully interchangeable with standard IEC 60309 pin and sleeve. They are a perfect fit for tight situations frequently found in hotels, restaurants, convention centers, warehouses, assembly benches and offices.





**Housing Design** 

- Nylon construction, both interior and exterior are made of tough, durable nylon
- Shrouded, recessed pins are protected from impact and abuse



# Cord Grip

• Integrated cord grip limits strain on terminals, keeps cord connected



#### Safety

- Large markings for easy recognition results in ease of wiring on the assembly line or in the field
- Shroud protects personnel from exposure to arcing



#### **Brass Box Terminal**

- Permits high clamping pressure on conductors without damaging wire strands for best electrical conductivity
- Solid one-piece pins construction, for long life, reliable electrical contact and maximum conductivity



## Identification

- Color coding for quick, easy visual identification of mating devices
- Ratings and certification are molded into the nylon housing for easy identification and reordering



## Split Sleeves

- Self-adjusting stainless steel springs assure constant contact pressure (20A and 30A). On 60A devices, Beryllium copper insert with multiple contact points assures easy insertion and a tight fit
- Stainless steel terminal screws resist rust and corrosion



## **Low Profile Devices**

		Rating		Devices	5	Cord Diameter
Amps	Poles and Wires	Configuration Recep./ Plug/ Conn. Inlet	AC Voltage	Plug	Receptacle	Min. Max. Inches (mm)
20	3P 4W		3Ø 250V	-	L420R9	.350"710" (8.3 - 15.9)
30	3P 4W		125/250V	L430P12	L430R12	.390"775" (9.9 - 19.7)
30	3P 4W		3Ø 250V	L430P9	L430R9	.390"775" (9.9 - 19.7)
Amps	Poles and Wires	Configuration Recep./ Plug/ Conn. Inlet	AC Voltage	Plug	Receptacle	Min. Max. Inches (mm)
60	3P 4W		3Ø 250V	A460P9 With Cover:	A460R9 A460R9KIT	.75" - 1.25" (19.1 - 31.8)
Amps	Poles and Wires	Configuration Recep./ Plug/ Conn. Inlet	AC Voltage	Plug	Receptacle	O-O Min. Max. Inches (mm)
60	4P 5W		3ØY 120/208V	A560P9	HBL560R9W	.89" - 1.42" (22.6 - 36.1)
100	4P 5W		3ØY 120/208V	A5100P9	HBL5100R9W	1.34" - 1.50" (34.0 - 38.1)

Specifications	
Electrical	
Dielectric Withstand Voltage	3000V AC
Max. Working Voltage	250V RMS
Current Interrupting Temperature Rise	Certified for current interruption at full rated current. Max. 30°C temperature rise at full rated current after 50 cycles of overload at 150% of rated current at a power factor of 75%.
Endurance	Up to 5,000 connect and disconnect cycles at full rated current and voltage.
Mechanical	
Impact Resistance	Per CSA C22.2 No. 182.1 / UL1682
Cord Grip Cable Retention	Per CSA C22.2 No. 182.1 / UL1682
Cord Accommodation	Round portable service cords of diameters commensurate with the device rating as defined in UL standard 62, CSA C22.2 No. 49 and the <a href="HAR">HAR</a> > European Standards.
Terminal Identification	Terminals identified in accordance with North American convention.
Product Identification	Ratings are a permanent part of the device housing
Environmental	
Flammability Ingress Protection	HB or better per UL94 or CSA C22.2 No. 0.17 IP22 Suitability
Operating Temperatures	Maximum Continuous 75° C; Minimum -40°C without impact

# **Application Guide**

Application dulue	<del>-</del>
Agriculture	Indoor location and maintenance.
Chemical Processing	Indoor location and maintenance.
Construction	Indoors for added safety and abuse
	resistance.
Entertainment	Indoor location and maintenance.
Food Service	Food service areas where aesthetics
	and space are concerns.
Light Manufacturing	Indoor locations and maintenance.
Manufacturing	Light assembly areas, stamping
	operations and maintenance areas.
Military	Warehouse and maintenance areas.

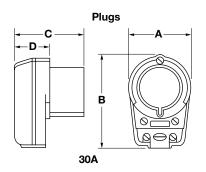
## **Materials**

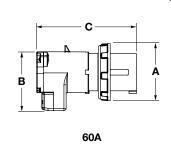
Plug	Material
Case	Zytel <sup>®</sup> 101 Nylon
Shroud	Zytel <sup>®</sup> 101 Nylon
Pin Carrier 20 & 30A	Zytel <sup>®</sup> 101 Nylon
Pin and Carrier 60A	High-Impact Thermoset
Pins	Brass CDA#360
Assembly Screws	Stainless Steel (300 series)
Terminal Screws	Stainless Steel (300 series)
Receptacle	
Body	Zytel <sup>®</sup> 101 Nylon
Sleeve Carrier 20 & 30A	Zytel <sup>®</sup> 101 Nylon
Sleeve Carrier 60A	High-Impact Thermoset
Sleeves	Brass CDA #360
Assembly Screws	Stainless Steel (300 series)
Terminal Screws	Stainless Steel (300 series)
Adapter Plate 20 & 30A	Galvanized Steel
Adapter Plate 60A	Aluminum
Wall Trim Plate	Zytel <sup>®</sup> 101 Nylon
Panel Mount Trim Plate	Stainless Steel (300 series)
Note: See page G-29 for pro	, ,

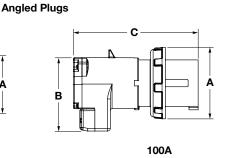
Note: See page G-29 for product dimensions.

# **Plug Dimensions**

Туре	Α	В	С	D	Cord Range Diameter	
L430P12	2.97"	4.18"	3.50"	1.71"	.390"775"	
	(75.4)	(106.2)	(88.9)	(43.4)	(9.9-19.7)	
A460P9	3.38"	4.25"	7.00"	_	.75"-1.25"	
	(85.9)	(108.0)	(177.8)		(19.1- 31.8)	
A5100P9	4.92"	5.07"	8.60"	_	1.34"-1.50"	
	(125.00)	(128.81)	(218.35)		(34.0- 38.1)	



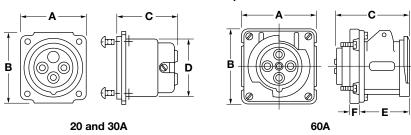




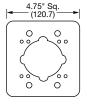
# **Wall Mount Receptacle Dimensions**

Туре	А	В	С	D	E	F
L420R9	2.60" (66.0)	2.81" (71.4)	2.28" (57.9)	2.38" (60.5)	-	-
L430R12	3.12" (79.2)	3.12" (79.2)	2.77" (70.4)	2.76" (70.1)	-	_
A460R9	4.50" (114.3)	4.50" (114.3)	4.48" (113.8)	-	3.62" (91.9)	.50" (12.7)

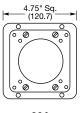
#### **Wall Mount Receptacles**



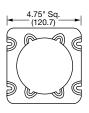
## Adapter Plate (Included with "L" and "A" series receptacles)



**20A**Mounting
2-gang box



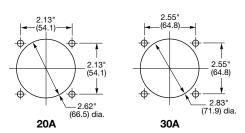
**30A**Mounting
2-gang box



60A

Mounting
2-gang box
and 411/16" box

# Panel Cutout



Dimensions in Inches (mm)

# **IEC Pin and Sleeve Terminal Identification - Rear View**

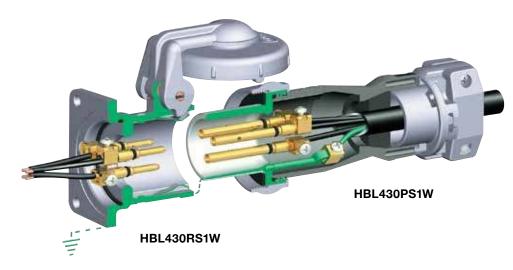
			Terminal Marking Pattern*					
		Rating	Recep	otacle and Connector	F	Plug and Inlet		
Description	Domestic	International	Domestic	International	Domestic	International		
3 Wire	125V AC 277V AC	100-130V	White	Green	White	Green		
3 Wire	250V AC 480V AC 600V AC	200-250V 380-415V AC	Green		(Green			
4 Wire	125/250V AC 1ØY 120/208V	_	White		White Company of the			
4 Wire	(3Ø Δ) 250V AC 480V AC 600V AC	380-415V AC	*Pilot		*Pilot			
5 Wire	(3ØY) 120/208V AC 277/480V AC 347/600V AC	220/380V 50Hz 250/440V 60Hz 200/346V to 240/415V 50 and 60Hz	White *Pilot		*Pilot V	/hite		

Note: \*Location of grounding contact position will change as clock positions assigned to specific voltages change.

\*Pilot contacts supplied on 4 and 5 wire, 63 and 125 Amp international rated devices.

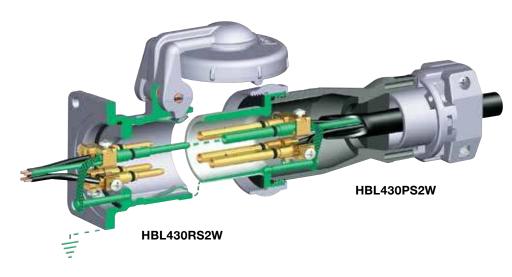
## **Ground Path**

To reduce the likelihood of electrical shock, the National Electrical Code requires that non-current carrying metallic components be grounded. Insulgrip Pin and Sleeve wiring devices offer two styles of grounding.



## Style I

Receptacles achieve grounding by attaching the ground conductor to the ground screw inside the back box and utilizing the metallic receptacle shell as a ground source (see 3P 4W Style I illustration). Plugs and connectors establish grounding by means of connecting the flexible cable ground conductor to a ground terminal within each device, which, in turn, is grounded through the metallic plug or connector shroud. Any exposed metallic components are suitably grounded in the Style I offering.



# Style II

The Style II ground path offers two means of achieving the proper ground path. In addition to utilizing the same grounding method as in the Style I product, the Style II version incorporates a separate ground pin and sleeve (see 3P 4W Style II illustration). This provides a second ground path. The ground pin on Style II devices is longer than other pins, meaning that they "make first" and "break last," assuring protection for people and equipment.

## **New Pole and Wire Terminology**

	Style I			Style II	
New	Old	No. of Contacts	New	Old	No. of Contacts
2P 3W	2W 2P	2	2P 3W	2W 3P	3
3P 4W	3W 3P	3	3P 4W	3W 4P	4
4P 5W	4W 4P	4			



TYPE 4X

**Features and Benefits** 

# UL 1686 C1 Insulgrip® Pin and Sleeve Devices

UL standard 1686-C1 configurations are uniform throughout the industry. That means Hubbell-the name that sets the standard for pin and sleeve performance, reliability, durability, innovation and ease of use should be your standard.

Hubbell's line of heavy duty Insulgrip® Pin and Sleeve wiring devices not only offers complete interchangeability, it delivers the goods when it comes to superior design and construction. Hubbell Insulgrip Pin and Sleeve devices are engineered and built to handle today's most demanding work environments, making Hubbell the unsurpassed heavyweight in the heavy duty market.





# Housing Design

- Thermoplastic housing provides excellent insulating, impact, corrosion, and UV resistant properties. Protects users and internal components in the roughest of environments
- Spring-loaded, gasketed cover provides a UL Type 4X watertight, dust-tight seal on connectors and receptacles



# Liquidtight Conduit Adapters

• Machined aluminum adapters are available to provide a means for attaching flexible liquidtight metal conduit to rear of Hubbell Pin and Sleeve plug or connector



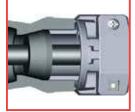
#### Powerful Mechanical Cord Grip

- Hubbell's design incorporates two molded-in teeth to securely grip the outer cable jacket, and internal conductors to prevent slippage and strain on terminations
- Captive barrel nuts ease assembly and allow higher tightening torque for maximum cord retention



## **Terminal Entrance Holes**

- Large, square funneled entrance holes isolate each conductor to protect against shorts due to stray conductor strands
- Tapered hole provides a fast and easy guide into the termination chamber
- Pin chamber confines arcing within the interior chamber during make and break cycle of mating devices, minimizes arc tracking



#### Watertight Cord Entrance

- The tapered bore entrance creates high compression forces on sealing gland, providing a watertight seal around cord
- Individual solid neoprene glands are supplied to match a full range of cord sizes and assure watertight performance



#### Anti-Vibration Box Terminals

- Interlocking box terminals ensure that terminal screws remain secure and cannot loosen
- The floating box is designed to obtain high-torque values without damaging stranded conductors



Features and Benefits

TYPE 4

# UL 1686 C1 Insulgrip® Pin and Sleeve Devices

Metallic where you want It, non-metallic where you need it. Different from traditional all-metallic devices, Hubbell Pin and Sleeve wiring devices are designed to provide metallic shrouding where you want it and a non-metallic housing where you need it.

What's more, Hubbell's watertight Insulgrip Pin and Sleeve wiring devices are designed with safety first and foremost. We created the line with plant facility maintenance personnel and a safer industrial work environment in mind. To greatly reduce the likelihood of electrical shock, we developed our exclusive nonmetallic watertight system, meaning that with Hubbell on the job, the mix of electricity and water isn't the threat it once was. So, whether the job calls for a welding outlet in a dry location or a motor disconnect in a wet location, step up to Hubbell Pin and Sleeve wiring devices.





# **Housing Design**

- Thermoplastic housing provides excellent insulating, impact, corrosion, and UV resistant properties. Protects users and internal components in the roughest of environments
- Locking ring provides a UL Type 4X watertight and dust-tight seal when the male and female devices are connected



# **Shrouded Sleeves**

- Housing seal provides a watertight and dust-tight seal when mated with receptacle or connector
- Protects the user from the possibility of touching live contacts during insertion and withdrawal of mating parts
- Shroud protects contact sleeves from deforming from physical abuse



#### Interior Design

- Sleeve O-ring seal provides a watertight and dust-tight seal around the sleeves. Assures that contamination will not enter wire chamber
- All-brass sleeve contacts provide reliable electrical contact with mating pins, also with minimum heat build-up over time



#### **Thermoset Polyester Contact Carrier**

- Molded thermoset polyester provides high resistance to electrical tracking
- Withstands higher temperatures which may result from overload or arcing
- Thermoset properties provide dimensional stability for this critical assembly



## **Product Marking**

 Catalog number and rating visible while in use. Markings are color coded differentiating Style I and Style II devices



# Beryllium Copper Spring-Pin Design (Patented)

 Maintains high unit pressure on mating sleeves. Ensures reliable electrical contact while minimizing heat rise due to normal pin wear over time



TYPF 4X\*\*

		Rating			Style I Devices		Penlacem	ent Interiors
		Hamiy		20	Style i Devices	-0	періасенн	and interiors
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Receptacle	Plug	Connector	Connector & Receptacle	Plug
30	2P 3W		600/250	HBL330RS1W	HBL330PS1W	HBL330CS1W	IN330FS1	IN330MS1
	3P 4W		600/250	HBL430RS1W	HBL430PS1W	HBL430CS1W	IN430FS1	IN430MS1
	4P 5W		600/250	HBL530RS1W	HBL530PS1W	HBL530CS1W	IN530FS1	IN530MS1
60	2P 3W		600/250	HBL360RS1W	HBL360PS1W	HBL360CS1W	IN360FS1	IN360MS1
	3P 4W		600/250	HBL460RS1W	HBL460PS1W	HBL460CS1W	IN460FS1	IN460MS1
	4P 5W		600/250	HBL560RS1W	HBL560PS1W	HBL560CS1W	IN560FS1	IN560MS1
100	2P 3W		600/250	HBL3100RS1W	HBL3100PS1W	HBL3100CS1W	IN3100FS1	IN3100MS1
	3P 4W		600/250	HBL4100RS1W	HBL4100PS1W	HBL4100CS1W	IN4100FS1	IN4100MS1
	4P 5W		600/250	HBL5100RS1W	HBL5100PS1W	HBL5100CS1W	IN5100FS1	IN5100MS1
200	3P 4W		600/250	HBL4200RS1W	HBL4200PS1W	HBL4200CS1W	IN4200FS1 <sup>†</sup>	IN4200MS1 <sup>†</sup>
	4P 5W		600/250	HBL5200RS1W	HBL5200PS1W	HBL5200CS1W	IN5200FS1 <sup>†</sup>	IN5200MS1 <sup>†</sup>
		Rating			Style II Devices		Replaceme	ent Interiors
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Receptacle	Plug	Connector	Connector & Receptacle	Plug
30	2P 3W		600/250	HBL330RS2W	HBL330PS2W	HBL330CS2W	IN330FS2	IN330MS2
	3P 4W		600/250	HBL430RS2W	HBL430PS2W	HBL430CS2W	IN430FS2	IN430MS2
60	2P 3W		600/250	HBL360RS2W	HBL360PS2W	HBL360CS2W	IN360FS2	IN360MS2
	3P 4W		600/250	HBL460RS2W	HBL460PS2W	HBL460CS2W	IN460FS2	IN460MS2
100	2P 3W		600/250	HBL3100RS2W	HBL3100PS2W	HBL3100CS2W	IN3100FS2	IN3100MS2
	3P 4W		600/250	HBL4100RS2W	HBL4100PS2W	HBL4100CS2W	IN4100FS2	IN4100MS2
200	2P 3W	<b>•</b>	600/250	HBL3200RS2W	HBL3200PS2W	HBL3200CS2W	IN3200FS2 <sup>†</sup>	IN3200MS2 <sup>†</sup>
	3P 4W		600/250	HBL4200RS2W	HBL4200PS2W	HBL4200CS2W	IN4200FS2 <sup>†</sup>	IN4200MS2 <sup>†</sup>

	Rating			Corrosion Resistant Devices			Accessories	
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Receptacle	Plug	Connector	Back Boxes	Angle Adapter
200	4P 5W		600/250	M5200RS1	M5200PS1	M5200CS1	MB2003W MB2004W	AA20045

Note: \*CAUTION: To avoid electrical shock, review premises carefully and DO NOT use if Pin and Sleeve configuration (design) is already in a circuit having a rating differing from the rating of this device.

<sup>\*\*</sup>While in use or with cover closed.

<sup>†</sup>Consult factory.

See page AA-19 for corrosion resistant cord sets.



YPF 4X\*\*

		Rating		"Reve	rsed Service" Style I	Devices	Renlaceme	ent Interiors
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Receptacle	Plug	Connector	Connector & Receptacle	Plug
30	2P 3W		600/250	HBL330RS1WR	HBL330PS1WR	HBL330CS1WR	IN330MS1	IN330FS1
	3P 4W		600/250	HBL430RS1WR	HBL430PS1WR	HBL430CS1WR	IN430MS1	IN430FS1
	4P 5W		600/250	HBL530RS1WR	HBL530PS1WR	HBL530CS1WR	IN530MS1	IN530FS1
60	2P 3W		600/250	HBL360RS1WR	HBL360PS1WR	HBL360CS1WR	IN360MS1	IN360FS1
	3P 4W		600/250	HBL460RS1WR	HBL460PS1WR	HBL460CS1WR	IN460MS1	IN460FS1
	4P 5W		600/250	HBL560RS1WR	HBL560PS1WR	HBL560CS1WR	IN560MS1	IN560FS1
100	2P 3W		600/250	HBL3100RS1WR	HBL3100PS1WR	HBL3100CS1WR	IN3100MS1	IN3100FS1
	3P 4W	<b>(3)</b>	600/250	HBL4100RS1WR	HBL4100PS1WR	HBL4100CS1WR	IN4100MS1	IN4100FS1
	4P 5W		600/250	HBL5100RS1WR	HBL5100PS1WR	HBL5100CS1WR	IN5100MS1	IN5100FS1
200	3P 4W		600/250	HBL4200RS1WR	HBL4200PS1WR	HBL4200CS1WR	IN4200MS1 <sup>†</sup>	IN4200FS1 <sup>†</sup>
	4P 5W		600/250	HBL5200RS1WR	HBL5200PS1WR	HBL5200CS1WR	IN5200MS1 <sup>†</sup>	IN5200FS1†
		Rating		"Rever	sed Service" Style II	Devices	Replaceme	ent Interiors
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Receptacle	Plug	Connector	Connector & Receptacle	Plug
30	2P 3W		600/250	HBL330RS2WR	HBL330PS2WR	HBL330CS2WR	IN330MS2	IN330FS2
	3P 4W		600/250	HBL430RS2WR	HBL430PS2WR	HBL430CS2WR	IN430MS2	IN430FS2
60	2P 3W		600/250	HBL360RS2WR	HBL360PS2WR	HBL360CS2WR	IN360MS2	IN360FS2
	3P 4W		600/250	HBL460RS2WR	HBL460PS2WR	HBL460CS2WR	IN460MS2	IN460FS2
100	2P 3W		600/250	HBL3100RS2WR	HBL3100PS2WR	HBL3100CS2WR	IN3100MS2	IN3100FS2
	3P 4W		600/250	HBL4100RS2WR	HBL4100PS2WR	HBL4100CS2WR	IN4100MS2	IN4100FS2
200	2P 3W	•	600/250	HBL3200RS2WR	HBL3200PS2WR	HBL3200CS2WR	IN3200MS2 <sup>†</sup>	IN3200FS2 <sup>†</sup>
	3P 4W		600/250	HBL4200RS2WR	HBL4200PS2WR	HBL4200CS2WR	IN4200MS2 <sup>†</sup>	IN4200FS2 <sup>†</sup>

	Rating			"Reversed Service" Corrosion Resistant Devices			Accessories	
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Receptacle	Plug	Connector	Back Boxes	Angle Adapter
200	4P 5W		600/250	M5200BS1R	M5200CS1R	_	MB2003W MB2004W	AA20045

Note: \*CAUTION: To avoid electrical shock, review premises carefully and DO NOT use if Pin and Sleeve configuration (design) is already in a circuit having a rating differing from the rating of this device.

†Consult factory.

<sup>\*\*</sup>While in use or with cover closed.

See page AA-19 for corrosion resistant cord sets.





MB601003W



MB601006W



MB2003W





# **Insulgrip Pin and Sleeve Metallic Back Boxes**

Hubbell manufactures an extensive line of back boxes for use with UL 1686 Pin and Sleeve devices. Each back box is designed to give the user the maximum amount of wiring room while achieving grounding to metallic conduit.

Metallic 30° Angle Back Box\*

Description	Amps	NPT Hub Size	Catalog Number
Back box for 30A devices.	30	3/4"	MB301W
	30	1"	MB302W

Metallic 15° Angle Back Box\*

Description	Amps	NPT Hub Size	Catalog Number
Back box for 60A devices.	60	1"	MB601W
	60	11⁄4"	MB602W
	60	1½"	MB603W

Metallic Feed-Thru Back Box\*

Description	Amps	NPT Hub Size	Catalog Number
Straight feed-thru box for	30	3/4"	MB303W
30A devices.	30	1"	MB304W
Straight feed-thru box for	60	1"	MB604W
60A devices.	60	11⁄4"	MB605W
	60	1½"	MB606W

Metallic Four-Way Angle Back Box\*

Description	Amps	NPT Hub Size	Catalog Number
Four-way 15° angle box for	60/100	11/4"	MB601002W
60 and 100A devices.	60/100	11/2"	MB601003W
	60/100	2"	MB601004W
Four-way 45° angle box for	200	2"	MB2003W
200A devices.	200	2½"	MB2004W
45° Angle adapter only for 200A devices.	200	-	AA20045

Metallic Four-Way Feed-Thru 15° Angle Back Box\*

Description	Amps	NPT Hub Size	Catalog Number
Four-way feed-thru, 15° angle	60/100	11⁄4"	MB601006W
for 60 and 100A devices.	60/100	1½"	MB601007W
	60/100	2"	MB601008W

Note: \*These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

**Replacement Cord Clamp and Locking Ring** 

Description	Used on	Cord Clamp Catalog Number	Locking Ring Catalog Number
Fits all 30A plugs and connectors.	All 3, 4, 5 wire	CC3430	ILR1**
Fits all 60A plugs and connectors.	4 wire (Style 2) and all 5 wire	CC60	ILR2**
	All 3 wire and 4 wire (Style 1)	CC60	ILR3**
Fits all 100A plugs and connectors.	4 wire (Style 2) and all 5 wire	CC100	ILR4**
	All 3 wire and 4 wire (Style 1)	CC100	ILR5**
Fits all 200A plugs and connectors.	All 3, 4, 5 wire	CC201	_
Note: **Locking Ring only.			

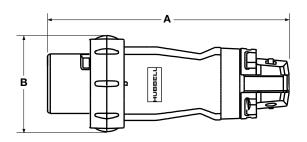
Liquidtight Adapters	i		
Rating of Hubbell Pin and Sleeve Device	Liquidtight Conduit Size	Hubbell Liquidtight Adapter	Optional Kellems Liquidtight Conduit Grip
30 Amp	½" NPT	SAB12	074093402
	¾" NPT	SAB34	074093403
	1" NPT	SAB100	074093404
60 Amp	1" NPT	SAC100	074093404
	11/4" NPT	SAC125	074093405
100 Amp	11/4" NPT	SAD125	074093405
	11/2" NPT	SAD150	074093406

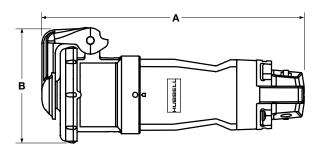
# **Plug Dimensions**

# **Connector Body Dimensions**

			Α		В		Ī
Amps	Туре	Style I	Style II	Style I	Style II	Cord Grip Range	7
30	330P	7.53" (191)	7.53" (191)	3.00" (76)	3.00" (76)	.375-1.20" (9.5-30.5)	
	430P	7.53" (191)	7.53" (191)	3.00" (76)	3.00" (76)	.375-1.20" (9.5-30.5)	
	530P	7.53" (191)		3.00" (76)		.375-1.20" (9.5-30.5)	
60	360P	9.40" (239)	9.40" (239)	3.40" (86)	3.40" (86)	.500-1.45" (12.7-36.8)	
	460P	9.40" (239)	9.40" (239)	3.40" (86)	3.70" (94)	.500-1.45" (12.7-36.8)	
	560P	9.40" (239)		3.70" (94)		.500-1.45" (12.7-36.8)	
100	3100P	10.70" (272)	10.70" (272)	3.70" (94)	3.70" (94)	.925-1.94" (27.0-49.3)	
	4100P	10.70" (272)	10.90" (277)	3.70" (94)	4.00" (102)	.925-1.94" (27.0-49.3)	
	5100P	10.90" (277)		4.00" (102)		.925-1.94" (27.0-49.3)	_
200	3200F	)	11.13" (282)		6.35" (161)	1.00-2.50" (25.4-63.5)	
	4200F	11.13" (282)	11.13" (282)	6.35" (161)	6.70" (170)	1.00-2.50" (25.4-63.5)	
	5200F	11.13" (282)		6.70" (170)		1.00-2.50" (25.4-63.5)	

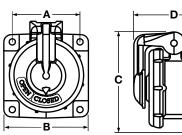
			Α		В	
Amps	Type	Style I	Style II	Style I	Style II	Cord Grip Range
30	330C	8.38" (213)	8.38" (213)	3.74" (95)	3.74" (95)	.375-1.20" (9.5-30.5)
-	430C	8.38" (213)	8.38" (213)	3.74" (95)	3.74" (95)	.375-1.20" (9.5-30.5)
-	530C	8.38" (213)		3.74" (95)		.375-1.20" (9.5-30.5)
60	360C	9.90" (251)	9.90" (251)	3.50" (89)	3.50" (89)	.500-1.45" (12.7-36.8)
-	460C	9.90" (251)	10.10" (256)	3.50" (89)	3.80" (96)	.500-1.45" (12.7-36.8)
	560C	10.10" (256)		3.80" (96)		.500-1.45" (12.7-36.8)
100	3100C	11.70" (297)	11.70" (297)	4.50" (114	)4.50" (114)	.925-1.94" (27.0-49.3)
	4100C	11.70" (297)	11.90" (302)	4.50" (114	)4.70" (119)	.925-1.94" (27.0-49.3)
-	5100C	11.90" (302)		4.70" (119	)	.925-1.94" (27.0-49.3)
200	3200C	;	13.65" (346)		7.00 (177)	1.00-2.50" (25.4-63.5)
)	4200C	13.65" (346)	13.65" (346)	7.00" (177	7.39 (187)	1.00-2.50" (25.4-63.5)
-	5200C	13.65" (346)		7.39" (187	)	1.00-2.50" (25.4-63.5)



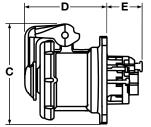


# **Receptacle Dimensions**

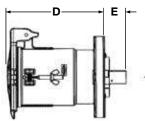
			Α		В		С		D		E
Amps	Туре	Style I	Style II	Style I	Style II						
30	330R	2.72" (69)	2.72" (69)	3.40" (86)	3.40" (86)	3.89" (99)	3.89" (99)	3.19" (81)	3.19" (81)	1.37" (35)	1.37" (35)
	430R	2.72" (69)	2.72" (69)	3.40" (86)	3.40" (86)	3.89" (99)	3.89" (99)	3.19" (81)	3.19" (81)	1.37" (35)	1.37" (35)
	530R	2.72" (69)		3.40" (86)		3.89" (99)		3.19" (81)		1.37" (35)	
60	360R	3.50" (89)	3.50" (89)	4.25" (108)	4.25" (108)	4.66" (118)	4.66" (118)	4.42" (112)	4.42" (112)	1.54" (39)	1.54" (39)
-	460R	3.50" (89)	3.50" (89)	4.25" (108)	4.25" (108)	4.66" (118)	4.66" (118)	4.42" (112)	4.42" (112)	1.54" (39)	1.54" (39)
-	560R	3.50" (89)		4.25" (108)		4.66" (118)		4.42" (112)		1.54" (39)	
100	3100R	3.50" (89)	3.50" (89)	4.25" (108)	4.25" (108)	4.66" (118)	4.70" (119)	5.30" (135)	5.30" (135)	1.54" (39)	1.54" (39)
-	4100R	3.50" (89)	3.50" (89)	4.25" (108)	4.25" (108)	4.66" (118)	4.70" (119)	5.30" (135)	5.30" (135)	1.54" (39)	1.54" (39)
-	5100R	3.50" (89)		4.25" (108)		4.66" (118)		5.30" (135)		1.54" (39)	
200	3200R		6.50" (165)		7.00" (177)		5.63" (143)		7.76" (197)		.99" (25)
-	4200R	6.50" (165)	6.90" (170)	7.00" (177)	7.39" (187)	5.63" (143)	5.63" (143)	7.76" (197)	7.76" (197)	.99" (25)	.99" (25)
-	5200R	6.90" (170)		7.39" (187)		5.63" (143)		7.76" (197)		.99" (25)	

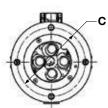


30, 60 and 100 Amp



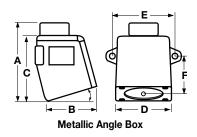
B (\*\*)





200 Amp

Dimensions in Inches (mm)



## **Metallic Angle Back Box**

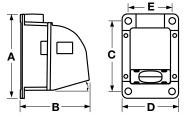
Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Catalog Number
30° Angle back box for 30A	3/4"	4.87" (124.0)	2.94" (75.0)	4.02" (102.0)	3.40" (86.0)	4.25" (108.0)	2.12" (54.0)	MB301W
devices.	1"	4.87" (124.0)	2.94" (75.0)	4.02" (102.0)	3.40" (86.0)	4.25" (108.0)	2.12" (54.0)	MB302W
15° Angle back box for 60A	1"	-	4.80" (121.9)	-	-	5.25" (133.4)	2.69" (68.3)	MB601W
devices.	11/4"	_	4.80" (121.9)	-	-	5.25" (133.4)	2.69" (68.3)	MB602W
	1½"	-	4.80" (121.9)	-	-	5.25" (133.4)	2.69" (68.3)	MB603W

# A C O O

Metallic Feed-Thru Box

# **Metallic Feed-Thru Back Box**

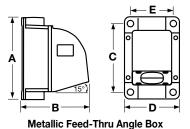
Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Catalog Number
Back box for 30A devices.	3/4"	5.35" (136.0)	2.91" (74.0)	4.53" (115.0)	3.59" (91.0)	2.62" (67.0)	_	MB303W
	1"	5.35" (136.0)	2.91" (74.0)	4.53" (115.0)	3.59" (91.0)	2.62" (67.0)	_	MB304W
Back box for 60A devices.	1"	6.50" (165.1)	3.80" (97.0)	5.75" (146.1)	4.50" (114.3)	3.50" (88.9)	_	MB604W
	11/4"	6.50" (165.1)	3.80" (97.0)	5.75" (146.1)	4.50" (114.3)	3.50" (88.9)	_	MB605W
	1½"	6.50" (165.1)	3.80" (97.0)	5.75" (146.1)	4.50" (114.3)	3.50" (88.9)	_	MB606W



#### Metallic Four-Way Angle Box

# Metallic Four-Way Angle Back Box

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Catalog Number
15° Angle four- way box for	11/4"	7.92" (201.0)	8.52" (216.0)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	-	MB601002W
60 and 100A devices.	1½"	7.92" (201.0)	8.52" (216.0)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	-	MB601003W
	2"	7.92" (201.0)	8.52" (216.0)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	-	MB601004W
45° Angle four- way box for	2"	10.82" (274.8)	9.86" (250.4)	9.50" (241.3)	8.17" (207.5)	6.75" (171.5)	-	MB2003W
200A devices.	2½"	10.82" (274.8)	9.86" (250.4)	9.50" (241.3)	8.17" (207.5)	6.75" (171.5)	-	MB2004W
45° Angle adapter only for 200A devices.	-	8.00" (203.2)	6.00" (152.4)	7.00" (178.0)	8.00" (203.2)	7.00" (178.0)	-	AA20045



# Metallic Four-Way Feed-Thru 15° Angle Back Box

Description	NPT Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Catalog Number
Four-way Feed-thru box	11/4"	7.98" (202.7)	8.55" (217.2)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	-	MB601006W
for 60 and 100A devices.	1½"	7.98" (202.7)	8.55" (217.2)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	-	MB601007W
	2"	7.98" (202.7)	8.55" (217.2)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	-	MB601008W

Note: These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

Dimensions in Inches (mm)

### Materials (30, 60, 100, and 200 Amp)

Materials (30, 60, 100, and	200 Amp)
Plug	Material
Housing	PBT 357 (200A Aluminum)
Plug Shroud	Aluminum
Cord Clamps	Rynite® SST35 (200A Aluminum)
Clamp Nut	Nickel Plated Brass
Gland Cap	Rynite® SST35
Gland	Neoprene
O-Rings, Gaskets & Seals	Neoprene
Contact Carrier	Thermoset Polyester
Retainer	Thermoset Polyester
Sleeves	Brass (M-Series - Nickel-plated
0.00000	tellurium copper)
Box Terminal	Heat Treated & Zinc Plated Steel
Screws (Terminal, Assembly & Set)	Stainless Steel (300 Series)
Ground Standoff	Brass
Ground Bracket	Nickel Plated Spring Bronze
Locking Ring	Epoxy Painted Aluminum
Connector Body	_poxy : antoa / tarimari
Housing	PBT 357 (200 Amp Aluminum)
Connector Shroud	Epoxy Painted Aluminum
Cord Clamps	Rynite® SST35
Clamp Nut	Nickel Plated Brass
Gland Cap Gland	Rynite® SST35 (200A Aluminum)
	Neoprene
O-Rings, Gaskets & Seals	Neoprene
Contact Carrier	Thermoset Polyester
Retainer	Thermoset Polyester
Pin	Brass (M-Series - Nickel-plated
Pin Spring	tellurium copper)  Beryllium Copper
Box Terminal	Heat Treated & Zinc Plated Steel
Screws (Terminal, Assembly & Set) Ground Standoff	Stainless Steel (300 Series)
	Brass
Ground Bracket	Nickel Plated Spring Bronze
Cover	Epoxy Painted Aluminum
Cover Arm	Epoxy Painted Aluminum
Spring Guide	Stainless Steel (300 Series)
Springs (Arm & Wave)	Stainless Steel (300 Series)
Spring Washer	Stainless Steel (300 Series)
Hinge Bushing	Aluminum
Rivet	Aluminum
Receptacle	
Housing/Flange	Epoxy Painted Aluminum
O-Rings, Gaskets & Seals	Neoprene
Contact Carrier	Thermoset Polyester
Retainer	Thermoset Polyester
Pin	Brass (M-Series - Nickel-plated
Di O i	tellurium copper)
Pin Spring	Beryllium Copper
Box Terminal	Heat Treated & Zinc Plated Steel
Screws (Terminal, Assembly & Set)	Stainless Steel (300 Series)
Ground Standoff	Brass
Ground Bracket	Steel
Cover	Epoxy Painted Aluminum
Cover Arm	Epoxy Painted Aluminum
Spring Guide	Stainless Steel (300 Series)
Springs (Arm & Wave)	Stainless Steel (300 Series)
Spring Washer	Stainless Steel (300 Series)
Hinge Bushing	Aluminum
Rivet	Aluminum

### **Typical Specification**

Manufacturer's ID	Hubbell HBL430PS2W
Description	Plug, Power Supply
Electrical Type	3 Pole + Earth
Max. Rating	30 Amp, 600V AC, 250V DC, 50-400Hz
Configuration	UL 1686, Watertight, C1 Configuration
Certification	UL Listed, UL Standard 1682, UL 50, and
	UL 1010 (plugs only), CSA Certified to CSA
	Spec. C22.2 No. 182.1, No. 94 and No. 159
	(plugs only), UL Listed and CSA Certified Type 4X

### **Performance**

Performance	
Electrical	
Dielectric Voltage	Withstands 3,000V AC.
Max. Working Voltage	600V AC RMS (i.e., minimum creepage and clearance distance of 6.4 millimeters, per UL 1682).
Current Interrupting	Certified for current interrupting at full rated current.
Temperature Rise	Max. 30°C temperature rise at full rated current after 50 cycles of overload at 150% of rated current.
Endurance	Up to 1,000 connect and disconnect cycles at full rated current and voltage.
Mechanical	
Impact Resistance	Per CSA C22.2, No. 182.1, UL 1682.
Cord Grip Cable Retention	Per CSA C22.2, No. 182.1, UL 1682.
Cord Accommodation	Round portable service cords of diameters commensurate with the device rating as defined in UL. Standard 62, CSA C22.2 No. 49 and the harmonized <har> European Standards.</har>
Terminal Identification	Terminals identified in accordance with UL 1686 (1, 2, 3, Green).
Product Identification	Identification and ratings are permanently fastened to the device housing.
Environmental	
Hose Down & Moisture Resistance	Type 3, 4, 4X per UL 50E and CSA 22.2, No. 94.
Flammability (Enclosure)	UL 94V-0 and CSA C22.2 No. 0.17.
Operating Temperatures	Maximum Continuous 75°C; Minimum -40°C without impact -25° with impact.
Hazardous Location (30, 60 & 100A) (plug only)	Class I, Division I & II, Groups B, C & D and Class II, Division I & II, Groups F & G per UL 1010 & CSA 22.2, No. 159.
Materials	
Housings	PBT 357 (200A Aluminum).
All Other Materials	Resistant to corrosion and chemical attack.

### **Watertight Application Guide**

Industry	Watertight.
Agriculture	Outdoor for fans, heaters, pumps, etc.
Chemical Processing	Where subject to water, corrosion.
Construction	Outdoors subject to severe weather conditions.
Entertainment	Outdoors subject to severe weather.
Food Processing	Where subject to water, corrosion.
Food Service	Areas subject to wash downs & heavy cleaning.
Light Manufacturing	Subjected to cleaning, solvents & chemicals.
Manufacturing	Where subject to water, corrosion.
Military	Outdoor construction or maintenance.

Rynite® is a registered trademark of E.I. DuPont Corp.

### **Features and Benefits**

### Style II Insulgrip® Mechanical Interlocks

Hubbell Circuit-Lock® Pin and Sleeve Mechanical Interlocks are a revolutionary design that incorporates a disconnect switch and pin and sleeve receptacle in a compact non-metallic unit. These devices offer maximum safety by preventing users from mating or breaking a circuit under load—Hubbell's interlock mechanism detects the presence of a plug and prevents it from being removed when the switch is in the "ON" position.

It features a high visibility red handle that can be locked to meet OSHA lockout/tagout regulations, and the enclosure door can be locked to prevent unauthorized access. The rugged, corrosion-resistant Type 4X PBT enclosure features adjustable mounting feet for flexible installation, while the receptacle's spring-loaded cover with gasket is dust tight and provides a watertight seal when turned and locked.

The patented Plug-Check™ mechanism detects the presence of the plug. It operates as a clutch to engage the handle with the switch and captures the plug. This action prevents the plug from being removed until the switch is turned OFF.





### Housing Design

- Non-metallic enclosure meets UL 50E Type 4X (watertight), 12 (dust-tight) and IP66 suitability requirements.
   Enclosure is molded of rugged thermoplastic PBT to resist abuse, corrosion and enhance safety. All external hardware is stainless steel
- Stainless steel ¼ turn door fasteners for quick, easy access to fuses



### Interior Design

- Compact Fused Disconnect Switch accepts Class "J" fuses. Fuse holders are top mounted for easy access
- The switch accepts auxiliary contacts for control circuit applications including the ON/OFF control of remote pilot lights or signal for programmable controllers



### Safety

- High visibility red handle can be locked in the OFF position as a method of compliance with OSHA lockout requirements. Accepts up to a 5/16 inch padlock shackle
- Replaceable spring-loaded receptacle liftcover with gasket ensures dust tight rating; liftcover provides watertight seal when turned and locked



### **Contact Carrier**

- Thermoset polyester contact carrier provides resistance to electrical tracking and withstands higher temperatures
- Thermoset properties provide excellent dimensional stability, low moisture absorption and superior dielectric strength



### **Enclosure Door**

- Removable door for ease of wiring and installation
- Enclosure door can be locked to prevent unauthorized access.
   Additionally, if the switch is ON, the door cannot be opened



### Installation

- Three molded-in conduit drill points are located on the top, bottom and back surface of enclosure. Conduit hub provided: 30A 1 in. NPT, 60A 1¼ in. NPT
- Conduit hub and adjustable mounting feet (4) are ductile to allow mounting on irregular surfaces



TYPE 4X\*\*

Style II - Fused

		Rating		Fused Insulgrip® M	Mechanical Interlocks
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Mechanical Interlock	Mating Plug
30	3P 4W		600/250	HBL430MIFS2W	HBL430PS2W
60	3P 4W		600/250	HBL460MIFS2W	HBL460PS2W

HBL430MIFS2W

### Style II - Unfused

		Rating		Unfused Insulgrip®	Mechanical Interlocks
Amps	Poles and Wires	Receptacle/ Connector Configuration*	Maximum Voltage AC/DC	Mechanical Interlock	Mating Plug
30	3P 4W		600/250	HBL430MIS2W	HBL430PS2W
60	3P 4W		600/250	HBL460MIS2W	HBL460PS2W

Note: 30A - 1 inch NPT hub supplied; 60A - 11/4 inch hub supplied.

\*CAUTION: To avoid electrical shock, review premises carefully and DO NOT use if Pin and Sleeve configuration (design) is already in a circuit having a rating differing from the rating of this device. \*\*While in use or with cover closed.

### **Replacement Auxiliary Contacts**

- iopiacomonici i animai y contracto		
Description	Black Style Switch	Gray Style Switch
Auxiliary contact, normally open, A600 pilot duty, break before break.	ACFSNO	HBLACFSNO
Auxiliary contact, normally closed, A600 pilot duty, break before break.	ACFSNC	HBLACFSNC

Note: Auxiliary contacts are specific to the style switch noted and are NOT interchangeble. All new installations are shipped with gray style switch.

### **Replacement Switches**

Description	Gray Style Switch
For 30A fused switches.	HBL30MIFRS
For 60A fused switches. Gray Style switch will retro fit Black Style switch.	HBL60MIFRS
For 30A unfused switches.	HBL30MISRS
For 60A unfused switches. Grav Style switch will retro fit Black Style switch.	HBL60MISRS

### Watertight Closure Plug Kits

Description	Catalog Number
For 30A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK30
For 60 and 100A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK60

### **Replacement Mounting Feet**

Description	Catalog Number
Replacement mounting feet and screws for 30 and 60A fused mechanical interlocks.	HBLRFT2 <sup>∆</sup>
Note: <sup>△</sup> Package of 10 feet and 10 screws.	

Gray Style Switch



**HBLACFSNO HBL30MIFRS** 

Black Style Switch



**ACFSNO** 





**HBLRFT2** 

### **Typical Specifications**

### **Performance**

Typical Specification	115	Periorillance	
Manufacturer's Identification	Hubbell HBL460MIFS2W	Electrical	
Description	Fused Insulgrip® Pin and Sleeve Mechanical Interlock	Dielectric Voltage Max. Working Voltage	Withstands 3,000VAC Min. 250VDC/600VAC.
Electrical Type	3 Pole + Earth 60A, 250VDC/600VAC	Current Interrupting	Certified for current interrupting at full rated
Rating Configuration	Per UL 1686 C1	Short Circuit	current and voltage.
Enclosure Type (UL 50E)	Indoor & Outdoor - 4X (Watertight, Washdown)		Suitable for use on a circuit capable of delivering not more than 200,000 RMS
2	Indoor - 12 (Dust Tight, Falling Dirt)	Will island haling	symmetrical amperes at the voltage rating
Ingress Protection	IP66 Suitability		of receptacle.
Certification	UL Listed for US and Canada	_Operations	Mechanical 10,000 cycles minimum.
	ed switched control of a plug connected load and feature to prevent the plug from being disconnected	Mechanical	
	while the receptacle is energized. The switch	Impact Resistance	In accordance with UL 746C.
cannot be turned on until	I the plug is fully inserted.	Terminal Identification	In accordance with UL, CSA and
		D 1 1 D 1	international conventions.
		Product Ratings	Ratings are part of the external label and
Materials		Mounting	molded into the receptacle housing.  External adjustable feet.
			External adjustable leet.
Part	Material	Environmental	
Base, Door and Handle	PBT	Moisture Resistance	Indoor & Outdoor - 4X (Watertight, Washdown);
Conduit Hub	Zinc, 30A – 1 in., 60A – 1¼ in. NPT		Indoor - 12 (Dust-tight, Falling dirt).
Enclosure Gasket	Neoprene	Ingress Protection	IP66 Suitability.
and Shaft Seal		Flammability	UL94-5VA and V-0 Classification.
Shaft and Mounting Inserts		Operating Temperatures	Max. Continuous +60°C;
Ground Plate	Galvanized Steel		Min. Continuous -40°C w/o impact.
Enclosure Screws	Stainless Steel	UV Resistance	All exposed insulating materials are
and Hinge Spring	All I Div I D	F . T .	UV stabilized.

### **Horsepower Ratings**

Nickel-Plated Brass

Thermoset Polyester

Hinge Pin

Contact Carrier

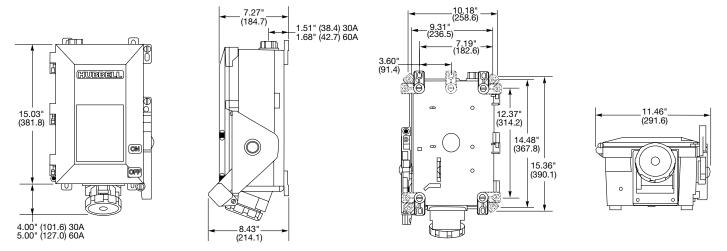
30A Horsep	ower Ratino	gs	60A Horsep	60A Horsepower Ratings	
3 Phase A.C.	Standard	Maximum*	3 Phase A.C.	Standard	Maximum*
200-240V	3	7.5	200-240V	7.5	15
480V	5	15	480V	15	30
600V	7.5	20	600V	15	50

Fuse Types

UL Listed Class "J". CSA Certified HRCI-J.

Note: \*Requires time delay fuses.

### **Dimensions**



Note: 30A – 1 inch NPT hub supplied; 60A – 11/4 inch hub supplied.

Dimensions in Inches (mm)

### **Features and Benefits**

### Hazardous Location Non-Fused Mechanical Interlocks and Plugs

Hubbell's Hazardous Location Line of Non-Fused UL 1686 Mechanical Interlock Disconnect Switches are typically used for applications with the presence of flammable gasses or vapors, ignitable dusts and fibers. They are also suitable for use in outdoor or indoor damp, wet and dirty locations or in areas where frequent wash downs, heavy rain, or water spray routinely occurs.

These switches are compact in size to reduce cost and make it easier to position on the wall or piece of equipment. The enclosures are made of copper-free aluminum and have a polyester/epoxy finish to prevent corrosion. The high visibility handles can be locked out to comply with OSHA lock out/tag out regulations.

VSQ Hazardous Location Ratings Class I, Div. 1 & 2, Groups B,C,D Class I, Zones I & 2, Groups IIB+H2, IIA Class II, Div. 1 & 2, Groups F & G Class III NEMA 3, 4, 4X, 7 (B,C,D), 9 (F,G)



HBLVP3485



HBLVSQ3034



### **Housing Design**

- Copper-free aluminum construction with electrostatically applied polyester/ epoxy finish to prevent corrosion
- Compact NEMA 4X enclosure and footfrint allows easy installation in tight locations
- Feed-through construction



### Internal Design

- Auxiliary contact (late-make early-break) contact rated 10 amp, 1/3 HP at 125/250V AC can be used for operating pilot lights or starter coils
- Internal switch horsepower rated as "suitable as a motor disconnect"



### Safety

- Lockable handle to meet OSHA Lockout/Tagout regulations
- Large visible rotary handle with ON/OFF indicator allows a quick means of disconnecting power
- Handle mechanism is chemical resistant PBT thermoplastic



### Plug Locking Ring

 NEMA 4X environmental rating with cover engaged or when mated with a 4X plug



### Mechanism

- Plug and switch are interlocked.
   Switch cannot be turned ON without fully inserted plug Plug cannot be removed with switch in ON position
- Plug held in place when switch is OFF for convenience. Pull operated release mechanism



### Fully Interchangeable

 Product is UL1686 and is fully interchangeable with other UL1686 configured and listed devices



### 30 and 60 Amp Non-Fused UL1686 Mechanical Interlocks and Plugs



Amp	Circuit	Mechanical Interlock	Metallic Plug	Insulgrip Plug
30 Amp	2W 3P	HBLVSQ3023	HBLVP3385	HBL330PS2W
600V AC	3W 4P	HBLVSQ3034	HBLVP3485	HBL430PS2W
60 AMP	2W 3P	HBLVSQ6023	HBLVP6385	HBL360PS2W
600V AC	3W 4P	HBLVSQ6034	HBLVP6485	HBL460PS2W

Note: Early break contact comes standard with mechanical interlocks. HBLVSQ 30 Amp models come standard with 1 inch drilled and tapped conduit openings top and bottom plus two 1 inch x % inch reducers and one % inch close-up plug for maximum flexibility. 60 amp models come with one 11/2 inch opening on top and bottom and one 11/2 inch close-up plug.

HBLVSQ3034



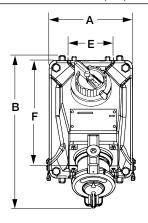
Horsepower Ratings (VAC)\*

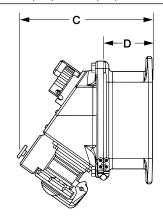
Amp	Circuit	120	240	480	600	Catalog Number
30 Amp	1Ø	2	5	10	15	HBLVSQ3023
	3Ø	3	7.5	15	20	HBLVSQ3034
60 Amp	1Ø	_	10	15	20	HBLVSQ6023
_	3Ø	_	10	25	30	HBLVSQ6034

Note: \*Internal switch only.

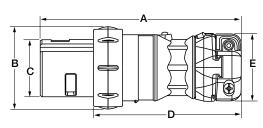
### **Dimensions**

Mechanical Interlocks	Α	В	С	D	E	F
30A	5.75 (146)	10.50 (267)	9.75 (248)	3.75 (95)	3.13 (79)	8.13 (206)
60A	8.13 (206)	14.16 (360)	11.28 (287)	4.03 (102)	2.50 (64)	11.38 (289)





Plugs	Α	В	С	D	E	
30A Both	6.69 (170)	3.00 (76)	1.88 (48)	5.38 (137)	2.53 (64)	
60A, 3 Pole	8.81 (224)	3.38 (86)	2.25 (57)	6.50 (165)	3.00 (76)	
60A, 4 Pole	8.81 (224)	3.69 (94)	2.53 (64)	6.50 (165)	3.00 (76)	



Wire Range	30A	60A
Reg. Stranded	#10 – #6	#6 – #4
Extra Flex	#10 – #8	#6 – #4
Grip Range	.55–1.2 (14–30)	.65–1.5 (16–38)

# SECTION H

### **Table of Contents**





Single Pole Plugs and Receptacles



Spider® II Temporary Power Boxes

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### Temporary Lighting and Maintenance Worklights



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Specifications and Dimensions

### **Features and Benefits**

Series 15 and 16 - 150, 300 and 400 Ampere, 600V AC/250V DC

Hubbell Wiring Device–Kellems offers a full line of innovative, high quality, Series 15 and Series 16 single pole plugs, receptacles and accessories for the most demanding environments.

Single pole devices are the right choice for supplying temporary electrical power distribution for entertainment, theme parks, carnival equipment, concerts, movie making and numerous other applications requiring temporary power.

Single pole devices have been designed with ease of assembly and disassembly in mind, no special tools are required. A high strength non-conductive retaining screw is all that is needed to securely lock the contacts to the insulated sleeve.

UL Enclosure Types 3R, 4X and 12 Rating suitable for use in almost any environment.





### **Housing Design**

- Insulgrip® style housing for superior gripping, conforms to the user's hand making it easy to connect and disconnect, even with gloves on
- Easily identifiable cable, cut off points for secure fit allows you to easily customize and cut the housing to the required/correct cable size
- Accommodates wide range of cables



### Contacts

- Provides high contact pressure and vibration resistant connection, which helps reduce operating temperatures and extends product life
- High conductivity brass contact provides improved performance by helping to reduce operating temperatures and extends life



### Safety

- Rounded corners reduce the possibility of catching or snagging on structures or equipment
- Non-conductive retaining screw locks contacts in place and allows for easy installation; prevents contact movement within housing
- Recessed mounting screw minimizes screwdriver slippage



### Assembly

- Special screw thread requires fewer turns than most competitors and reduces the risk of a conductive screw being substituted
- Extra long non-conductive inner sleeve reduces force required to install housing over contacts; easier to rotate contact in body for installing retaining screw



### Identification

- Lock symbol aids in the mating of devices and provides a clear indication that the devices are properly connected
- With lock indicator symbol making mating clear and simple; devices can lock 180° to prevent unintended disconnects



### Installation

- Engineered body design makes installation simple with no need for additional tools and the non-metallic retaining screw helps to make operation safe for all involved
- Strip gauge molded into every plug and receptacle housing; simplifies installation and saves time



Series 15 - 150 Ampere, 600V AC/250V DC

**Enclosure Types** 3R, 4X, 12



### Plugs, Male

Description	Color	Male Plug
150 amp, thermoplastic elastomer, cable size #8 - #2 AWG.	Black White Green Red Blue Brown Orange Yellow Gray	HBL15MBK HBL15MW HBL15MGN HBL15MR HBL15MBL HBL15MBN HBL15MO HBL15MY HBL15MY



### Plugs, Female

Description	Color	Female Plug
150 amp,	Black	HBL15FBK
thermoplastic	White	HBL15FW
elastomer,	Green	HBL15FGN
cable size	Red	HBL15FR
#8 - #2 AWG.	Blue	HBL15FBL
	Brown	HBL15FBN
	Orange	HBL15FO
	Yellow	HBL15FY
	Grav	HBL15FGY

### Receptacles, **Stud Type**





Receptacles,
<b>Double Set Screw</b>





Description	Color	Female Receptacles	Male Receptacles
150 amp, Panel Mount, thermoplastic, cable size #8 - #2 AWG.	Black White Green Red Blue Brown Orange Yellow Gray*	HBL15FRSBK HBL15FRSW HBL15FRSGN HBL15FRSR HBL15FRSBL HBL15FRSBN HBL15FRSO HBL15FRSY	HBL15MRSBK HBL15MRSW HBL15MRSGN HBL15MRSR HBL15MRSBL HBL15MRSBN HBL15MRSO HBL15MRSY

Note: \*Gray is available upon request. Contact factory.

Description	Color	Female Receptacles	Male Receptacles
150 amp, Panel Mount, thermoplastic, cable size #8 - #2 AWG.	Black White Green Red Blue Brown Orange Yellow Gray	HBL15FRBK HBL15FRW HBL15FRR HBL15FRBL HBL15FRBN HBL15FRO HBL15FRY HBL15FRGY	HBL15MRBK HBL15MRW HBL15MRR HBL15MRR HBL15MRBL HBL15MRO HBL15MRO HBL15MRY HBL15MRGY











Description	Color	Fits Female Devices	Fits Male Devices
Fits 150 amp plugs and receptacles.	Black White Green Red Blue	HBL15FCAPBK HBL15FCAPW HBL15FCAPGN HBL15FCAPR HBL15FCAPBL —	HBL15MCAPBK HBL15MCAPW HBL15MCAPGN HBL15MCAPR HBL15MCAPBL

Note: \*\*Additional colors are available upon request. Contact factory.

Description	Color	Catalog Number
Use with stud type or double set screw receptacles.	Clear Black White Green Red Blue	HBL15NCC HBL15NCBK HBL15NCW HBL15NCGN HBL15NCR HBL15NCBL



### Series 15 - 150 Ampere, 600V AC/250V DC

Enclosure Types 3R, 4X, 12



Gender Reversing Devices		( )
Color	Double Male (Male-Male)	Double Female (Female-Female)
Black White Green Red Blue	HBL15DMBK* HBL15DMW HBL15DMGN HBL15DMR* HBL15DMBL*	HBL15DFBK* HBL15DFW HBL15DFGN HBL15DFR* HBL15DFBL*

Note: \*UL 1691 restricts the use of male-to-male or female-to-female devices to Grounding (Green) or Neutral (White) conductors. Consult factory for availability of other non UL listed colors.

# Replacement Bodies (25 Pack) Color Male Body Female Body Black White HBL15MBBK HBL15FBBK HBL15FBW

Color	Male Body	Female Body
Black	HBL15MBBK	HBL15FBBK
White	HBL15MBW	HBL15FBW
Green	HBL15MBGN	HBL15FBGN
Red	HBL15MBR	HBL15FBR
Blue	HBL15MBBL	HBL15FBBL
**	_	_

Note: \*\*Additional colors are available upon request. Contact factory.

# Replacement Contacts (25 Pack) Description Male Pin Female Sleeve Contact, 150 amp HBL15RCM HBL15RCF

### **Accessories**

Description	Catalog Number
Accessory Kit, retaining screw, copper foil, terminal screws and brass wire.	HBL15PK
Replacement retaining screw (100 pack).	HBL15RS
Copper foil (100 pack).	HBL15CF
Brass wire (100 pack).	HBL15BW
Terminal screw - inline (100 pack).	HBL15TS25
Terminal screw - panel mount (100 pack).	HBL15TS375
Ferrule #2 AWG (100 pack).	HBL15F2
Ferrule #4 AWG (100 pack).	HBL15F4





### Series 15 - 150 Ampere, 600V AC/250V DC

### **Specifications**

Electrical	
Voltage Ratings	600V AC Maximum
	250V DC Maximum
Amperage Rating	150A Maximum
Mechanical	
Terminal	Plug: #8 AWG to #2 AWG
Accommodation	Receptacle: #8 AWG to #2 AWG
Product ID	Ratings are a permanent part of device
Base Compound	Plug: Thermoplastic Elastomer (TPE)
	Receptacle: Polybutylene Terephthalate (PBT)
Contact Material	Brass
Retaining Screw Material	Nylon

### Certification / Environmental

UL and cUL Listed

UL Enclosure Types 3R, 4X, 12

UL1691 standard for single pole locking-type separable connectors

National Electric Code (NEC®), ANSI/NFPA 70 Flammability: HB per UL94 or CSA 22.2. 0.17

### Conductor Ampacity Chart (Type SC/PPC Wire)

Cable Size	Ampacity•	
#8	80	
#6	105	
#4	140	
#2	190	

Note: 90°C column NEC Table 400.5(A)(2).

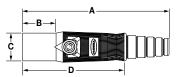
### **Dimensions**

### In Line Plugs Male 1.04" .86" (115.3) (26.4) (21.8)(81.7)Female 4.60" .68" 3.28" 1.11" (116.8) (28.2) (17.3)(83.2)

### Weatherproof Cover

	Α	В	С
Series 15	2.03"	1.14"	1.49"
	( 51.5)	(29.0)	(37.9)

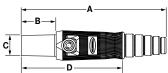
### Male In Line Plug



### **Panel Mount Receptacles**

Threaded Stud	Α	В	С	D	E	F	Mounting Hole	Termination
Male	1.86" (47.2)	1.37" (34.8)	2.82" (71.6)	.86" (22.0)	.80" (20.4)	1.20" (30.5)	Through 3x Ø .20"	5/16-18 Threaded Stud
Female	1.86" (47.2)	1.37" (34.8)	2.88" (73.1)	.86" (22.0)	.80" (20.4)	1.26" (32.0)	Through 3x Ø .20"	5/16-18 Threaded Stud
Double Set Screw	Α	В	С	D	E	F	Mounting Hole	Termination
Male	1.86" (47.2)	1.37" (34.8)	2.90" (73.6)	.86" (22.0)	.88" (22.2)	1.20" (30.5)	Through 3x Ø .20"	(2) 5/32 Socket Head Set Screws

### Female In Line Plug



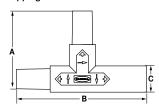
### Tees

	Α	В	С
Tapping Tee		4.28" (108.7)	
Paralleling Tee		4.22" (107.2)	





### **Tapping Tee**

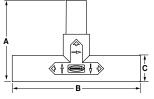


Gender Reversing - Double Male

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### Paralleling Tee

Double Male



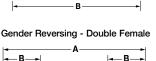
**Gender Reversing Devices** 

(107.2) (21.8)

1.05" (107.2) (26.7)

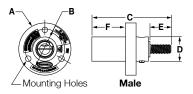
(17.3)

Double Female

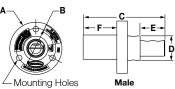


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Threaded Stud (Male Shown)



### Double Set Screw (Male Shown)



### NEC® is a registered trademark of the National Fire Protection Association (NFPA).

В

Dimensions in Inches (mm)

С



### Series 16 - 300 and 400 Ampere, 600V AC/250V DC

**Enclosure Types** 3R, 4X, 12



		Ρ	ı	u	g	,
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Description	Color	Male Plug	Female Plug
300 amp,	Black	HBL300MBK	HBL300FBK
thermoplastic	White	HBL300MW	HBL300FW
elastomer,	Green	HBL300MGN	HBL300FGN
cable size	Red	HBL300MR	HBL300FR
#6 - 2/0 AWG.	Blue	HBL300MBL	HBL300FBL
	Brown	HBL300MBN	HBL300FBN
	Orange	HBL300MO	HBL300FO
	Yellow	HBL300MY	HBL300FY
	Gray*	_	_

Note: \*Gray is available upon request. Contact factory.



Plugs		The state of the s	
Description	Color	Male Plug	Female Plug
400 amp,	Black	HBL400MBK	HBL400FBK
thermoplastic	White	HBL400MW	HBL400FW
elastomer,	Green	HBL400MGN	HBL400FGN
cable size	Red	HBL400MR	HBL400FR
2/0 - 4/0 AWG.	Blue	HBL400MBL	HBL400FBL
	Brown	HBL400MBN	HBL400FBN
	Orange	HBL400MO	HBL400FO
	Yellow	HBL400MY	HBL400FY
	Gray	HBL400MGY	HBL400FGY













Receptacies
Stud Type

		Through Hole Mounting		
Description	Color	Female Receptacles	Male Receptacles	
400 amp	Black	HBLFRSBK	HBLMRSBK	
Panel Mount,	White	HBLFRSW	HBLMRSW	
thermoplastic	Green	HBLFRSGN	HBLMRSGN	
elastomer,	Red	HBLFRSR	HBLMRSR	
mates with 300	Blue	HBLFRSBL	HBLMRSBL	
and 400 amp	Brown	HBLFRSBN	HBLMRSBN	
plugs.	Orange	HBLFRSO	HBLMRSO	
	Yellow	HBLFRSY	HBLMRSY	



Threaded Hole Mounting					
Female Receptacles	Male Receptacles				
HBLFRSCBK	HBLMRSCBK				
HBLFRSCW	HBLMRSCW				
HBLFRSCGN	HBLMRSCGN				
HBLFRSCR	HBLMRSCR				
HBLFRSCBL	HBLMRSCBL				
HBLFRSCBN	HBLMRSCBN				
HBLFRSCO	HBLMRSCO				
HBLFRSCY	HBLMRSCY				

Angled Receptacles

Angled I	ieceptacies
Female Receptacles	Male Receptacles
HBLFRASBK	<b>HBLMRASBK</b>
HBLFRASW	HBLMRASW
HBLFRASGN	HBLMRASGN
HBLFRASR	HBLMRASR
HBLFRASBL	HBLMRASBL
HBLFRASBN	HBLMRASBN
HBLFRASO	<b>HBLMRASO</b>
HBLFRASY	HBLMRASY

### Receptacles, **Double Set Screw**











Description	Color	Female Receptacles	Male Receptacles
400 amp, Panel Mount, thermoplastic elastomer, cable size #4 - 4/0 AWG, mates with 300 and 400 amp plugs.	Black White Green Red Blue Brown Orange Yellow Gray	HBLFRBK HBLFRGN HBLFRR HBLFRBL HBLFRBN HBLFRO HBLFRY HBLFRGY	HBLMRBK HBLMRGN HBLMRR HBLMRBL HBLMRBN HBLMRO HBLMRY HBLMRGY

Note: \*Gray is available upon request. Contact factory.

Description	Color	Female Receptacles	Male Receptacles
Panel Mount, thermoplastic elastomer, cable size #4 - 4/0 AWG, mates with 300 and 400 amp	Black White Green Red Blue Brown Orange Yellow	HBLFRABK HBLFRAW HBLFRAGN HBLFRAR HBLFRABL HBLFRABN HBLFRAO HBLFRAY	HBLMRABK HBLMRAW HBLMRAGN HBLMRAR HBLMRABL HBLMRABN HBLMRAO HBLMRAY



Series 16 - 300 and 400 Ampere, 600V AC/250V DC

**Enclosure Types** 3R, 4X, 12

**HBLMRABO** 

**HBLMRABY** 





### Receptacles, **Bus Bar Mount**

Description	Color	Female Receptacles	Male Receptacles
400 amp	Black	HBLFRBBK	HBLMRBBK
Panel Mount,	White	HBLFRBW	HBLMRBW
thermoplastic	Green	HBLFRBGN	HBLMRBGN
elastomer, mates	Red	HBLFRBR	HBLMRBR
with 300 and 400	Blue	HBLFRBBL	HBLMRBBL
amp plugs.	Brown	HBLFRBBN	HBLMRBBN
	Orange	HBLFRBO	HBLMRBO
	Yellow	HBLFRBY	HBLMRBY

# Bu

Orange

Yellow

Bus Bar Moun			
Description	Color	Female Receptacles	Male Receptacles
400 amp	Black	HBLFRABBK	HBLMRABBK
Panel Mount,	White	<b>HBLFRABW</b>	HBLMRABW
thermoplastic	Green	HBLFRABGN	HBLMRABGN
elastomer, mates	Red	HBLFRABR	HBLMRABR
with 300 and 400	Blue	HBLFRABBL	HBLMRABBL
amp plugs.	Brown	HBLFRABN	HBLMRABN

**HBLFRABO** 

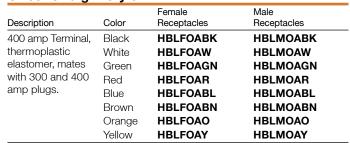
**HBLFRABY** 

### Terminals, Offset Straight Style



Note: Terminals are UL Type 1 only.

### **Angled Terminals, Offset Straight Style**



Note: Angled terminals are UL Type 1 only.





### Protective Cans

FIOLECTI	ve Caps	
Color	Fits Female Devices	Fits Male Devices
Black	HBLFCAPBK	HBLMCAPBK
	HBLFCAPW	HBLMCAPW
White		
Green	HBLFCAPGN	HBLMCAPGN
Red	HBLFCAPR	HBLMCAPR
3lue	HBLFCAPBL	HBLMCAPBL
Brown	HBLFCAPBN	HBLMCAPBN
Orange	HBLFCAPO	HBLMCAPO
Yellow	HBLFCAPY	HBLMCAPY

### Weather **Protective**

Lift Covers		
Color	Catalog Number	All One Color Caps and Bodies
Clear	_	HBLNCC
Black	HBLNCBK	HBLNCABK
White	HBLNCW	HBLNCAW
Green	HBLNCGN	HBLNCAGN
Red	HBLNCR	HBLNCAR
Blue	HBLNCBL	HBLNCABL
Brown	HBLNCBN	HBLNCABN
Orange	HBLNCO	HBLNCAO
Yellow	HBLNCY	HBLNCAY



### Series 16 - 300 and 400 Ampere, 600V AC/250V DC

**Enclosure Types** 3R, 4X, 12











### Tees and 3-Fers

Color	Tapping Tee (Female-Female-Male)	Paralleling Tee (Female-Male-Male)	3-Fer (Male-Female- Female-Female)	3-Fer (Female-Male- Male-Male)	Soft 3-Fer (Male-Female- Female-Female)	Soft 3-Fer (Female- Male-Male-Male)
Black	HBLTBK	HBLPTBK	HBLM3FBK	HBLF3MBK	HBLM3FSBK	_
White	HBLTW	HBLPTW	<b>HBLM3FW</b>	HBLF3MW	-	_
Green	HBLTGN	HBLPTGN	<b>HBLM3FGN</b>	HBLF3MGN	_	HBLF3MSGN
Red	HBLTR	HBLPTR	HBLM3FR	HBLF3MR	-	_
Blue	HBLTBL	HBLPTBL	HBLM3FBL	HBLF3MBL	_	_
Brown	HBLTBN	HBLPTBN	<b>HBLM3FBN</b>	HBLF3MBN	-	_
Orange	HBLTO	HBLPTO	HBLM3FO	HBLF3MO	_	_
Yellow	HBLTY	HBLPTY	HBLM3FY	HBLF3MY	_	_

### Gender Reversing **Devices**





Distribution	Block
Color	(1-Male, 6-Fem



Color	Double Male (Male-Male)	Double Female (Female-Female)
Black	HBLDMBK	HBLDFBK
White	HBLDMW	HBLDFW
Green	HBLDMGN	HBLDFGN
Red	HBLDMR	HBLDFR
Blue	HBLDMBL	HBLDFBL
Brown	HBLDMBN	HBLDFBN
Orange	HBLDMO	HBLDFO
Yellow	HBLDMY	HBLDFY

Color	(1-Male, 6-Females)
Black	HBL7DBBK
White	HBL7DBW
Green	HBL7DBGN
Red	HBL7DBR
Blue	HBL7DBBL
Brown	HBL7DBBN
Orange	HBL7DBO
Yellow	HBL7DBY

### Replacement Bodies (10 Pack)



Color	Male Body	Female Body
Black	HBLMBBK	HBLFBBK
White	HBLMBW	HBLFBW
Green	HBLMBGN	HBLFBGN
Red	HBLMBR	HBLFBR
Blue	HBLMBBL	HBLFBBL
Brown	HBLMBBN	HBLFBBN
Orange	HBLMBO	HBLFBO
Vellow	HRI MRY	HRI FRY

### Replacement Contacts (20 Pack)





Description	Male Pin	Female Sleeve
Contact, 300 amp	HBL300RCM	HBL300RCF
Contact, 400 amp	HBL400RCM	HBL400RCF

### **Snap Back Covers** (3R Only)



(0)		
Color	Through Hole Mounting	Threaded Mounting Holes
Black White	HBLSCBK HBLSCW	HBLSCCBK HBLSCCW
Green	HBLSCGN	HBLSCCGN
Red Blue	HBLSCR HBLSCBL	HBLSCCR HBLSCCBL
Brown	HBLSCBN	HBLSCCBN
Orange	HBLSCO	HBLSCCO
Yellow	HBLSCY	HBLSCCY

Accessories	
Description	Catalog Number
Accessory Kit, retaining screw, copper foil, terminal screws and brass wire.	НВІРК
Replacement retaining screw (500 pack).	HBLRS
Copper foil (500 pack).	HBLCF
Brass wire (500 pack).	HBLBW
Terminal screw - inline (500 pack).	HBLTS
Terminal screw - panel mount (500 pack).	HBLTSR

### Series 16 - 300 and 400 Ampere, 600V AC/250V DC

### **Specifications**

Electrical	Series 16			
Voltage Ratings	600V AC Maximum			
	250V DC Maximum			
Amperage Rating	400A Maximum			
Mechanical	300A	400A		
Terminal	Plug: #6 to 2/0 AWG	Plug: 2/0 to 4/0 AWG		
Accommodation		Recept.: #4 to 4/0 AWG		
Product ID	Ratings are a permane	ent part of device		
Base Compound	Thermoplastic Elaston	ner (TPE)		
Contact Material	Brass			
Retaining Screw Material	Nylon			

(27.0)

(121.3)

### Certification / Environmental

UL and cUL Listed

UL Enclosure Types 3R, 4X, 12

UL1691 standard for single pole locking-type separable connectors National Electric Code (NEC), ANSI/NFPA 70

Flammability: HB per UL94 or CSA 22.2. 0.17

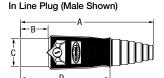
### Conductor Ampacity Chart (Type SC/PPC Wire)

Cable Size	Ampacity•	Cable Size	Ampacity•
#6	105	2/0	300
#4	140	4/0	405
#2	190		

Note: •90°C column NEC Table 400.5(A)(2).

### **Dimensions**

### In Line Plugs Description Male 7.01" 1.38" 1.48" 4.78" (178.0) (35.1) (37.6)(121.4)Female 1.44" 1.06" 4.90"





Snap Back Cover

# Threaded Stud (Male Shown)

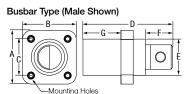
### **Panel Mount Receptacles**

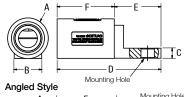
i dilci Modili il	cocpiu	oico							
Threaded Stud	Α	В	С	D	Е	F	G	Mounting Hole	Termination
Male & Female with through hole mounting	2.20" (55.9)	2.20" (55.9)	1.50" (38.1)	4.10" (104.3)	1.48" (47.4)	1.25" (31.7)	1.74" (44.2)	Through 4x Ø .20"	1/2-13 UNC-2A Threaded Stud
Male & Female with threaded mounting holes	2.20" (55.9)	2.20" (55.9)	1.50" (38.1)	3.67" (93.2)	1.48" (47.4)	1.11" (28.2)	1.55" (39.4)	Threaded 4x #10-32	1/2-13 UNC-2A Threaded Stud
Double Set Screw	Α	В	С	D	Е	F	G	Mounting Hole	Termination
Male & Female with threaded mounting holes	2.20" (55.9)	2.20" (55.9)	1.50" (38.1)	4.10" (104.3)	1.48" (47.4)	1.36 (34.5)	1.74" (44.2)	Threaded 4x #10-32	(2) 7/32 Socket Head Set Screws
Busbar Type	Α	В	С	D	Е	F	G	Mounting Hole	Termination
Male & Female with threaded mounting holes	2.20" (55.9)	2.20" (55.9)	1.50" (38.1)	3.57" (90.7)	1.48" (37.6)	1.01" (25.7)	1.55" (39.4)	Threaded 4x #10-32	(1) 5/16-18 UNC-2B Threaded Hole
Offset Terminals	Α	В	С	D	Е	F		Mounting Hole	Termination
Male terminal straight style	Ø1.48" [37.6]	1.00" (25.4)	.38" (9.5)	3.89" (98.8)	1.75" (44.5)	2.14" (54.4)		Through .50" (12.7)	-
Female terminal straight style	Ø1.48" [37.6]	1.00" (25.4)	.38" (9.5)	3.68" (93.3)	1.75" (44.5)	1.93" (48.9)		Through .50" (12.7)	_
Male terminal angled style	Ø1.48" [37.6]	1.00" (25.4)	.38" (9.5)	3.98" (101.1)	2.06" (52.2)	2.14" (54.4)		Through .50" (12.7)	<u> </u>
Female terminal angled style	Ø1.48" [37.6]	1.00" (25.4)	.38" (9.5)	3.76" (95.6)	2.06" (52.2)	1.93" (48.9)		Through .50" (12.7)	_



Mounting Holes

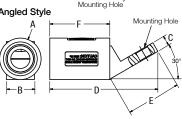
Offset Terminals (Male Shown)





Angled	Sty	/le
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Straight Style



## Covers

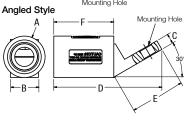
Description	Α	В	С
Weatherproof Cover	2.20" (55.88)	1.16" (29.44)	2.03" (51.5)
Snap Back Cover to be used with receptacles	2.26" (57.4)	2.37" (60.2)	_

### **Gender Reversing Devices**

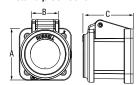
Description	Α	В	С
Double	4.65"	1.48"	_
Male	(118.1)	(37.6)	
Double	4.84"	1.44"	1.06"
Female	(122.9)	(36.6)	(27.0)

# Tees and 3-Fers

Description	1A	В	C
Tapping	3.18"	4.74"	1.48"
Tee	(80.8)	(120.4)	(37.6)
Paralleling	3.18"	4.65"	1.48"
Tee	(80.8)	(118.1)	(37.6)
3-Fer	5.88"	5.78"	1.48"
	(149.3)	(146.9)	(37.6)



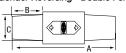
### Weatherproof Cover

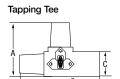


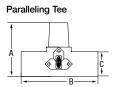
# 

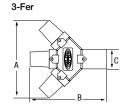
Gender Reversing - Double Female

Gender Reversing - Double Male









NEC® is a registered trademark of the National Fire Protection Association (NFPA).

Dimensions in Inches (mm)



### Series 18 - 300 and 400 Ampere, 600V AC/250V DC

Enclosure Types 3R, 4X, 12

- Enclosure Types 3R, 4X, 12
- Non-metallic safety retaining screw
- Easy to grip body design
- Accepts #2 to 4/0 AWG wire
- Replacement bodies available
- UL and cULus listed







### 300A Plugs

Description	Color	Male Plug	Female Plug
Thermoplastic	Black	HBL18300MBK	HBL18300FBK
elastomer,	White	HBL18300MW	HBL18300FW
cable size	Green	HBL18300MGN	HBL18300FGN
#2 - 2/0 AWG.	Red	HBL18300MR	HBL18300FR
	Blue	HBL18300MBL	HBL18300FBL
	Brown	HBL18300MBN	HBL18300FBN
	Orange	HBL18300MO	HBL18300FO
	Yellow	HBL18300MY	HBL18300FY





### 400A Plugs

Description	Color	Male Plug	Female Plug
Thermoplastic	Black	HBL18400MBK	HBL18400FBK
elastomer,	White	HBL18400MW	HBL18400FW
cable size	Green	HBL18400MGN	HBL18400FGN
3/0 - 4/0 AWG.	Red	HBL18400MR	HBL18400FR
	Blue	HBL18400MBL	HBL18400FBL
	Brown	HBL18400MBN	HBL18400FBN
	Orange	HBL18400MO	HBL18400FO
	Yellow	HBL18400MY	HBL18400FY

### Replacement Bodies (10 Pack)





Description	Color	Male Plug	Female Plug
Thermoplastic	Black	HBL18MBBK	HBL18FBBK
elastomer.	White	HBL18MBW	HBL18FBW
	Green	HBL18MBGN	HBL18FBGN
	Red	HBL18MBR	HBL18FBR
	Blue	HBL18MBBL	HBL18FBBL
	Brown	HBL18MBBN	HBL18FBBN
	Orange	HBL18MBO	HBL18FBO
	Yellow	HBL18MBY	HBL18FBY
		The state of the s	





Catalog Number

**HBLBW** 

Daniel de la constitución de la		
Description		

Series 18, replacement retaining screw (500 pack).	HBL18RS
Copper foil (500 pack).	HBLCF

### **Specifications**

Electrical	Series 18
Voltage Ratings	600V AC Maximum
	250V DC Maximum
Amperage Rating	400A Maximum

Mechanical	300A	400A			
Terminal Accommodation	Plug: #2 to 2/0 AWG	Plug: 3/0 to 4/0 AWG			
Product ID	Ratings are a permanent part of device				
Base Compound	Thermoplastic Elastomer (TPE)				
Contact Material	Brass				
Retaining Screw Material	Nylon				

### **Certification / Environmental**

### Series 18

UL and cULus listed

Brass wire (500 pack).

UL Enclosure Types 3R, 4X, 12

UL 1691 standard for single pole locking-type separable connectors National Electric Code (NEC), ANSI/NFPA 70

Flammability: HB per UL94 or CSA 22.2. 0.17

### Conductor Ampacity Chart (Type SC/PPC Wire)

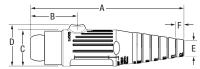
Cable Size	Ampacity•	
#2	190	
2/0	300	
3/0	350	
4/0	405	

Note: •90°C column NEC Table 400.5(A)(2).

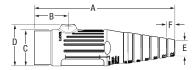
### **Dimensions**

In Line Plugs						
Description	Α	В	С	D	E	F
Male	6.77" (172.0)	2.06" (52.3)	1.61" (40.9)	1.85" (47.0)	.73" (18.5)	.38" (TYP) (9.7)
Female	6.21"	1.50"	1.61"	1.85"	.73"	.38" (TYP)

In Line Plug (Male)



In Line Plug (Female)



Dimensions in Inches (mm)

### **Features and Benefits**

### Spider® II Temporary Power Boxes

Hubbell's Spider<sup>®</sup> II temporary power distribution system sets the safety and performance standard for temporary power needs. Construction sites and outdoor events place more demands on electrical power than ever before. Hubbell's Spider box steps up to the challenge by offering advanced electrical and safety features. The Spider II box incorporates the most advanced ground fault module technology available in the industry today, ensuring safe and reliable distribution of electrical power for a wide variety of temporary power applications.

Breadth of line and durability, Hubbell manufactures a variety of Spider<sup>®</sup> II Boxes and temporary power products for both indoor and outdoor power and lighting applications. Hubbell's Spider products incorporate the most innovative wiring devices in the Hubbell Safety-Shroud<sup>®</sup> Twist-Lock<sup>®</sup> system. The shrouded Twist-Lock design extends the life of the plug by protecting the blades from abuse and more importantly, the shroud protects the user from arcing.





### **Housing Design**

- Individual GFCI modules
- Gasketed latching receptacle lift covers
- Replaceable legs



### Receptacles

- Six 20 amp straight blade or Twist-Lock® watertight receptacles, individually GFCI protected
- All Pin and Sleeve, Twist-Lock® and straight blade receptacles on each Spider box are protected when not in use by a gasketed, spring loaded flip lid



### Safety

- Standard stab termination circuit breakers with gasketed lift cover
- Compact electronic supervisory circuit
- Detailed wiring diagram



### Inlets

 Available with flush 50 amp Twist-Lock<sup>®</sup> inlet or 60 amp IEC reversed service Pin and Sleeve receptacle



### **Environmental Protection**

- Spider<sup>®</sup> II boxes have earned a Type 3R metallic enclosure rating and heavy duty, abuse resistant legs for outdoor rainproof applications
- Provides UL Type 4X rating when the receptacles are used with Watertight Safety-Shroud® Twist-Lock® plugs



### Certifications

 Hubbell's Spider® II Boxes meet NEC® requirements for personal protection against electrical shock on job sites and are listed to the latest UL1640 standard for portable power distribution equipment

NEC® is a registered trademark of the National Fire Protection Association (NFPA).

### 50A and 60A Spider® II Boxes







50A Spider® II

60A Spider® II

60A Class "L" Spider® II

### Spider® II Temporary Power Boxes

				Receptacle	Protect	ion	
Rating	Type	Qty	Receptacle Ratings	Components	Overload	GFI	Catalog Number
30A, 120/240V AC	Straight Blade	7	20A, 125V	HBL53R61	Yes	Yes	SDSB1A
(Maximum)	Twist-Lock® (inlet)	1	30A, 120/240V	HBL2715SWR	No	No	
	Twist-Lock® (outlet)	1	30A, 120/240V	HBL2710	No	No	
50A, 120/240V AC	Straight Blade	7	20A, 125V	HBL53R61	Yes	Yes	SBSB1A
(Maximum)	Twist-Lock® (inlet)	1	50A, 125/250V	HBL6375S	No	No	
	Twist-Lock® (outlet)	1	50A, 125/250V	CS6369	No	No	
50A, 120/240V AC	Straight Blade	6	20A, 125V	HBL53R61	Yes	Yes	SBSB2
(Maximum)	Twist-Lock®	1	30A, 250V	HBL2620SW	Yes	Yes	
	Twist-Lock® (inlet)	1	50A, 125/250V	HBL6375S	No	No	
	Twist-Lock® (outlet)	1	50A, 125/250V	CS6369	No	No	
50A, 120/240V AC	Twist-Lock®	7	20A, 125V	HBL2310SW	Yes	Yes	SBTL1A
(Maximum)	Twist-Lock® (inlet)	1	50A, 125/250V	HBL6375S	No	No	
	Twist-Lock® (outlet)	1	50A, 125/250V	CS6369	No	No	
50A, 120/240V AC	Twist-Lock®	6	20A, 125V	HBL2310SW	Yes	Yes	SBTL2
(Maximum)	Twist-Lock®	1	30A, 250V	HBL2620SW	Yes	Yes	
	Twist-Lock® (inlet)	1	50A, 125/250V	HBL6375S	No	No	
	Twist-Lock® (outlet)	1	50A, 125/250V	CS6369	No	No	
60A, 3Ø 120/208V AC	Straight Blade	6	20A, 125V	HBL53R61	Yes	Yes	SCSB0*
(Maximum)	Pin and Sleeve (inlet)	1	60A, 3ØY 120/208V	HBL560B9R	No	No	
	Pin and Sleeve (outlet)	1	60A, 3ØY 120/208V	HBL560R9W	No	No	
60A, 3Ø 120/208V AC	Twist-Lock®	6	20A, 125V	HBL2310SW	Yes	Yes	SCTL0*
(Maximum)	Pin and Sleeve (inlet)	1	60A, 3ØY 120/208V	HBL560B9R	No	No	
•	Pin and Sleeve (outlet)	1	60A, 3ØY 120/208V	HBL560R9W	No	No	

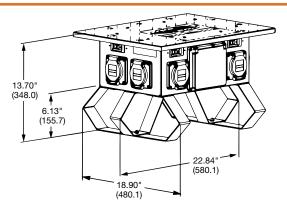
### Class "L" Spider® II Temporary Power Boxes

				Receptacle	Protec	tion	
Rating	Type	Qty	Receptacle Ratings	Components	Overload	GFI	Catalog Number
60A, 3Ø 120/208V AC	Straight Blade	6	20A, 125V	HBL53R61	Yes	Yes**	SCSB0M2
(Maximum)	Class "L" (inlet)	1	60A, 3ØY, 120/208V	_	No	No	
	Class "L" (outlet)	1	60A, 3ØY, 120/208V	_	No	No	
60A, 3Ø 120/208V AC	Twist-Lock®	6	20A, 125V	HBL2310SW	Yes	Yes**	SCTL0M2
(Maximum)	Class "L" (inlet)	1	60A, 3ØY, 120/208V	_	No	No	
	Class "L" (outlet)	1	60A, 3ØY, 120/208V	_	No	No	

Note: \*60A units are UL and cUL only.

\*\*GFCI protection on 4 devices only.

### **Dimensions**



### Dimensions in Inches (mm)

### **Specifications**

# Spider® II Listing/Certification Environment Enclosure Type Code Compliance UL1640 cUL and CSA, UL943 Indoor and outdoor wet and dry locations 3R, rainproof, suitable for use in damp locations NEC®, ANSI/NFPA 70

NEC® is a registered trademark of the National Fire Protection Association (NFPA).

### **Features and Benefits**

### **Temporary Power Accessories**

Hubbell's SR50 is comprised of a pre-wired 50A receptacle, mounted in a fully non-metallic watertight FD wall box.

This weather resistant, UL listed, assembly provides significant labor savings for the contractor, because it's pre-wired with a 50A Twist-Lock® receptacle, installation time is significantly reduced. The 4 hole mounting pattern of the new FD box also provides added security for the device.



### **Cable Sets and Receptacles**

Description	Catalog Number
50A pre-wired wall mounted receptacle, with 2 ft. wire leads.	SR50
50A cord set - 50 ft. cable (input/output).	SCB50
50A cord set - 100 ft. cable (input/output).	SCB100
60A cord set - 6 ft. cable (input/output).	SCC06
60A cord set - 50 ft. cable (input/output).	SCC50
60A, 3Ø 120/208V Pin and Sleeve wall mounted receptacle.	HBL560R9W
11/4" hub 15 deg. non-metallic angle back box for 60A receptacle.	BB601W
11/2" hub 15 deg. metallic 4-way angle back box for 60A receptacle.	FW60100

Note: Consult factory for alternate cable lengths.



SR50

### **Replacement Parts**

Description	Catalog Number
20A, 125V straight blade receptacle.	HBL53R61
20A, 125V Safety-Shroud Twist-Lock® receptacle.	HBL2310SW
30A, 250V Safety-Shroud Twist-Lock® receptacle.	HBL2620SW
30A, 125/250V Reverse Service Safety-Shroud connector.	HBL2713SR
30A, 125/250V Reverse Service inlet.	HBL2715SWR
50A, 125/250V Twist-Lock® receptacle.	CS6369
50A, 125/250V Twist-Lock® inlet.	HBL6375S
60A, 3Ø 120/208V Pin and Sleeve reversed service receptacle (inlet).	HBL560B9R
60A, 3Ø 120/208V Pin and Sleeve receptacle (outlet).	HBL560R9W
60A, 3Ø 120/208V Pin and Sleeve reversed service plug (female).	HBL560P9WR
60A, 3Ø 120/208V Pin and Sleeve plug (male).	HBL560P9W
GFCI module.	GFM20
50A Spider supervisory kit.	SSK
60A Spider supervisory kit.	SSK60
Spider circuit breaker cover.	SCBC
Spider leg kit.	SLK
Spider leg kit, green.	SLKG
50A receptacle cover plate.	HBL77CM74WO



SCB50



HBL560R9W



**HBL2310SW** 













CS6369

HBL2713SR

### **Features and Benefits**

# **Temporary Power Distribution Boxes** and **Temporary Power Cables**

- Durable hi-visibility yellow powder coated steel construction
- Hubbell 50 amp Twist-Lock® receptacle and inlet
- Six 20 amp straight blade or Twist-Lock® covered receptacles
- Individual GFCI modules
- NEMA 3R enclosure
- Nesting leg design saves space in the warehouse and on the truck



TPC50 - 50' Cable TPC100 - 100' Cable

### **Temporary Power Distribution Boxes**

		Receptacle		Protecti	Protection	
Rating	Type	Qty	Rating	Overload	GFI	Catalog Number
50A, 120/240V AC	Twist-Lock®	6	20A, 125V	Yes	Yes	TPDL
(Maximum)	Twist-Lock®	1	30A, 250V	Yes	No	
,	Twist-Lock® (Inlet)	1	50A, 125/250V	No	No	
	Twist-Lock® (Outlet)	1	50A, 125/250V	No	No	
50A, 120/240V AC	Straight Blade	6	20A, 125V	Yes	Yes	TPDS
(Maximum)	Twist-Lock®	1	30A, 250V	Yes	No	
,	Twist-Lock® (Inlet)	1	50A, 125/250V	No	No	
	Twist-Lock® (Outlet)	1	50A, 125/250V	No	No	
Replacement GFCI mo	dule.					HBLCGFM20

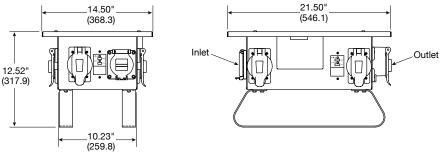
### **Temporary Power Cables**

				Weatherproof	
Rating	CableType	Length Male Device	Female Device	Boot	Catalog Number
50A, 125/250V	6/3, 8/1	50 ft. CS6365L	CS6364L	No	TPC50
50A, 125/250V	6/3, 8/1	100 ft. CS6365L	CS6364L	No	TPC100

### **Specifications**

-poomounomo					
Boxes		Cables			
Listings/Certifications Operation	UL1640, UL943 Indoor and outdoor wet and dry locations	Listings/Certifications Operation	Connectors: UL/CSA; Cable: MSHA Indoor and outdoor wet and dry locations		
Enclosure Type Code Compliance	3R, rainproof, suitable for use in damp locations				

### **Dimensions**



Dimensions in Inches (mm)

NEC® is a registered trademark of the National Fire Protection Association (NFPA).



**Heavy-Duty Portable Outlet Boxes and Cover Plates** 

Description	Catalog Number
Box with cord strain relief, with one blank cover plate.	HBLPOB1
Box with cord strain relief, with one blank cover plate, black.	HBLPOB1BK
Box with cord strain relief, with two duplex (indoor) cover plates.	HBLPOB1D
Box with cord strain relief, with two duplex (indoor), yellow cover plates.	HBLPOB1DY
Blank, non-metallic FS cover plate with foam gasket, gray.	HBLP14FS
Duplex, non-metallic FS cover plate, gray.	HBLP8FS
Duplex, non-metallic FS cover plate, yellow.	HBLP8FSY
Single receptacle (1.39"), non-metallic FS cover plate, gray.	HBLP7FS
Single receptacle (1.56"), non-metallic FS cover plate, gray.	HBLP720FS
Rectangular opening, non-metallic FS cover plate, gray.	HBLP26FS



HBLPOB1

### Other Cover Plates and Devices

which may be used with Heavy-Duty Portable Outlet Boxes

Description	Catalog Number
Duplex cover plate, weatherproof. Single receptacle (1.39") cover plate, weatherproof. Single receptacle (1.56") cover plate, weatherproof. Safety-Shroud Twist-Lock® surface receptacles.	HBL5221, HBL52CM21 HBL7423WO, HBL74CM23WO HBL7425WOA, HBL74CM25WOA HBL2310SR, HBL2320SR, HBL2330SR, HBL2610SR, HBL2620SR



**Cover Plates** 

Note: Standard product gray, CM yellow.

### **Deluxe Cord Grips Straight Male Thread**

Nylon Fittings, Stainless Steel Mesh, Liquidtight, for Insulated Cables

Grip Diameter Range Inches (mm)	Thread Size NPT (inches)	Form Size	Catalog Number
.375"500" (9.5-12.7)	3/4"	F3	074011335
.500"625" (12.7-15.9)	3/4"	F3	074011336
.625"750" (15.9-19.0)	3/4"	F3	074011337



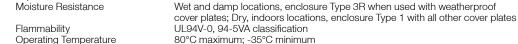
Deluxe Cord Grips (purchased separately)

### **Gray Nylon Cord Connector Straight Male Thread**

Grip Diameter	r Range	Thread Size	Form	
Inches	(mm)	NPT (inches)	Size	Catalog Number
.375"500"	(9.5-12.7)	3/4"	F3	SHC1035CR
.500"625"	(12.7-15.9)	3/4"	F3	SHC1036CR
.625"750"	(15.9-19.0)	3/4"	F3	SHC1037CR

### Specifications for Heavy-Duty Portable Outlet Boxes and Cover Plates

UL Listed CSA Certified	UL514C, UL467 and UL50 Enclosures Types 1, 3R. C22.2 No. 18 and C22.2 No. 94 Enclosures Types 1, 3R and C22.2 No. 0.4 (Impedance).
Box Specifications:	



All materials are UV stabilized In accordance with UL514C, UL50, C22.2 No. 18 and C22.2 No. 94

Material Valox® rd Connector Materials Nylon nut; nylon Gotcha® ring; neoprene grommet

Cord Connector Materials Nylon nut; nylon Gotcha® ring; neoprene grommet Cord Diameter Range .38" to .75" diameter

Bonding Strap Material Brass
Threaded Inserts Brass
Grounding Screw Material Brass
Indoor Cover Plate Screws Material Outdoor Cover Plate Screws Material Stainless steel
Cover Plate Gasket Material UL recognized c

UL recognized closed-cell foam (aging and oil resistant)

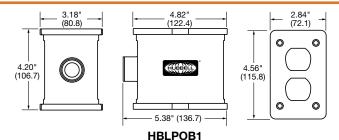


Gray Nylon Cord Connector

### **Dimensions**

UV Resistance

Impact and Crush Resistance



Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Dimensions in Inches (mm)

### **Construction Site Lighting**

Hubbell's outdoor approved construction site lighting line includes both heavy duty metal halide lights and light strings for working in rugged environments. The metal halide fixtures feature extremely strong and compact heads with bulbs rated to last 10,000 hours. All frames are powder-coated yellow for safety and are constructed of a durable 1.25 inch, 12 gauge steel tube.

We have light strings for all applications in a variety of models as well as a choice of metal or plastic guards. Light sockets are spaced 10 feet apart and all sockets, plugs, and connectors are molded for added durability. In addition, the highly impact-resistant material makes for easy transportation and storage when not in use. Bulbs can be incandescent, fluorescent or LED. Consider choosing LED lighting for a durable bulb that saves energy, provides instant illumination and are rated to last 50,000 hours.





# Metal Halide and LED Lights

			Lumen	Cord	
Description	Rating	Watts	Output	Length	Catalog Number
5 -10 ft. metal halide cart light with portable detachable ballast.	15A 125V	1,000	110,000	-	HBLMH1000
6 -12 ft. metal halide cart light.	15A 125V	2,000	220,000	_	HBLMH2000
High bay metal halide light with wire guard.	15A 125V	400	29,000	3 ft.	HBLMHHB400
High bay LED light with wire guard.	15A 125V	120	14,000	5 ft.	HBLLEDHB120

**LED Stringer Lights** 



HBLMHHB400

LED Stringer Lights						
Description	No. of Fixtures	Rating	Cord Type	Lumen Output	Cord Length	Catalog Number
90 LEDs per fixture, light string with magnetic base included.	1	15A 125V	#18/2 SJTW	450*	20 ft.	HBL182S20LED
90 LEDs per fixture, light string.	5	15A 125V	#18/2 SJTW	450*	50 ft.	HBL182S50LED
	10	15A 125V	#18/2 SJTW	450*	100 ft.	HBL182S100LED
60 LEDs per fixture, light string with magnetic	1	15A 125V	#18/2 SJTW	1,100*	20 ft.	HBL182S20LEDH
base included.	5	15A 125V	#18/2 SJTW	1,100*	50 ft.	HBL182S50LEDH
28W High power LED light string with inline ON/OFF switch.	_	15A 125V	#16 AWG SJTOW	2,928	6 ft.	HBLLS2834
Magnetic clip bracket for LED.	_	_	_	_	_	HBLSTMC
Note: *Lumens per fixture.						

A Type (Edison) Twist-Lock® and Straight Blade Light Strings



HBLLEDHB120

Description	Max Watts**	Rating	Cord Type	Fixtures	Cord Length	Catalog Number
·				rixtures		
Twist-Lock® light string; plastic guards.	150	20A 125V	#12/3 STW	10	100 ft.	HBL123S100PT
	150	20A 125V	#12/3 STJW	10	100 ft.	HBL123SJ100PT
Twist-Lock® light string; metal guards.	150	20A 125V	#12/3 STW	10	100 ft.	HBL123S100MT
Straight Blade light string; plastic guards.	150	15A 125V	#14/2 STJW	10	100 ft.	HBL142SJ100PS
	150	15A 125V	#14/3 STJW	10	100 ft.	HBL143SJ100PS
	150	15A 125V	#12/3 STW	10	100 ft.	HBL123S100PS
	150	15A 125V	#12/3 STJW	10	100 ft.	HBL123SJ100PS
Straight Blade light string; metal guards.	150	15A 125V	#12/3 STW	10	100 ft.	HBL123S100MS
Straight Blade light string; plastic guards.	150	15A 125V	#12/3 STW	5	50 ft.	HBL123S50PS
Straight Blade light string; metal guards.	150	15A 125V	#12/3 STW	5	50 ft.	HBL123S50MS
Replacement plastic guard for temporary light strings.	_	_	_	_	_	HBLSTPG
Replacement heavy duty metal guard for temporary light strings.	_	_	_	_	_	HBLSTMG
ALL **AL	, .	1 10 40751	A/ 11 1 1 TI 1 1			



HBL182S50LEDH



HBL143SJ100PS

Note: \*\*Max watts per fixture. **HBL143SJ100PS** light strings are rated for 1875 Watts total. The total wattage must be considered when daisy chaining lights strings to each other.



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		<b>.</b>	0.17	Lumen	Cord	0
Description	Wattage	Rating	Cord Type	Output	Length	Catalog Number
Fluorescent light string, 34.5" single fixture with hanging straps	50	15A 125V	#16 AWG SJTOW	3,750	6 ft.	HBLFS5035
Fluorescent light string, 48.5" single fixture with hanging straps	25	15A 125V	#16 AWG SJTOW	2,125	6 ft.	HBLFS2549

### **LED Maintenance Worklights**

Description	Outlet Rating	Rating	Wattage	Lumen Output	Cord Type	Cord Length	Catalog Number
LED Industrial maintenance light, 1 vertical hanging hook included.	N/A	15A 125V	20	2400	#16/3 SJEOW	25 ft.	HBLML2825L
LED worklight with end light feature.	N/A	15A 125V	9	920/120	#18/2 SJTOW	25 ft.	HBLWL25LED
LED worklight with end light feature and tool tap.	12 Amp	15A 125V	9	920/120	#16/3 SJTOW	25 ft.	HBLWL25LEDT



**Fluorescent Maintenance Worklights** 

Description	Outlet Rating	Rating	Wattage	Lumen Output	Cord Type	Cord Length	Catalog Number
Fluorescent worklight with straight blade plug.	N/A	15A 125V	13	825	#16/3 SJTOW	25 ft.	TW25F1
Fluorescent worklight with Twist-Lock® plug and tool tap.	12 Amp	20A 125V	13	825	#16/3 SJTOW	25 ft.	TW25F2
Fluorescent maintenance light, 34.5 in., one vertical hanging hook included.	N/A	15A 125V	50	3750	#16/3 SJEOW	25 ft.	HBLML5025
Fluorescent maintenance light, 48.5 in.	N/A	15A 125V	25	2125	#16/3 SJEOW	25 ft.	HBLML2525
Fluorescent worklight, 45 in., 2 horizontal plastic hangers, 1 attached metal hanging hook included.	N/A	15A 125V	25	2125	#16/3 SJTOW	25 ft.	HBLWL2525





**Accessories and Replacement Items** 

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Description	Catalog Number
Magnetic mounting bracket for ML style lights, 82 lb. capacity.	HBLMLMM
Magnetic mounting bracket for WL style lights, 58 lb. capacity.	HBLWLMM
Replacement rough service fluorescent bulb for 13 watt style lamps.	HBLREPPFB
Metal halide replacement bulb, 400 watts.	HBLREP400MH
Metal halide replacement bulb, 1,000 watts.	HBLREP1000MH
Replacement LED panel fixture, 90 LEDs, 450 lumen.	HBLREP450LED
5 base LED string only, 50 ft., 18/2.	HBLREP182S50
10 base LED string only, 100 ft., 18/2.	HBLREP182S100
9 ,, ,	









**HBLSTMC** 







HBLXF6012V

### **Explosion Proof/Confined Space Lighting**

### **Hazardous Location Lights**

Description	Wattage	Lumen Output	Cord Type	Cord Length	Catalog Number
Fluorescent, Class 1, Div 1 Groups C & D, Class 2, Div 1 Groups F & G, 12V, inline transformer.	26	1800	#16/3 SOW	60 ft.	HBLXF6012V
Incandescent, Class 1, Div 1, Groups C & D, 12V, inline transformer.	75	720	#16/3 SOW	60 ft.	HBLXI6012V
Fluorescent, Class 1, Div 1 Groups C & D, Class 2, Div 1 Groups F & G, 120V, less plug.	26	1800	#16/3 SOW	50 ft.	HBLXF50120V
Incandescent, Class 1, Div 1 Groups C & D, 120V less plug.	100	1230	#16/3 SOW	50 ft.	HBLXI50120V
Fluorescent, non-explosion proof, wet location, 12V, inline transformer.	13	825	#18/2 SJTOW	60 ft.	HBLWT6012V





### Pre-Wired Portable Outlet Boxes, Worklights and Accessories



SPB1

### **Pre-Wired Portable Outlet Boxes**

Description	Catalog Number
25 ft. with 2-15A, 125V, straight blade single receptacles and 1-15A, 125V straight blade plug and boot.	SPB1
25 ft. with 2-20A, 125V, Twist-Lock® single receptacles and 1-20A, 125V Twist-Lock® plug and boot.	SPB2

### **Worklights and Accessories**

Description	Catalog Number
Temporary low voltage worklight with cigarette lighter plug, 20 ft. cord.	TWLV20F
Non-metallic temporary worklight hook.	TWH





TWLV20F

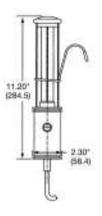
### **Specifications**

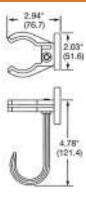
Temporary Worklights	
Listing/Certification Environment Fluorescent Lamp	UL 298 and cUL portable electric hand lamps Dry, indoor locations 13 watt twin tube only
Battery Pack and Charger	10 Mate time table only
Environment	Indoor and outdoor dry locations
Fluorescent Lamp Life	Fully charged-5 hour approx
Charge Time	Fully charged-16 hours approx
Battery Rating	12 volt



### **Light Fixture**

### **Worklight Hook**





# **SECTION I**

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RFID Enabled Insulgrip® Twist-Lock® and Straight Blade Kits



RFID Enabled
Pin and Sleeve Kits



Series 16 RFID Enabled Single Pole Devices



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# **Asset Monitoring Devices**

### **Features and Benefits**

### **RFID Enabled Wiring Devices**

Hubbell's RFID enabled wiring devices allows quick and easy scannig of an entire container without having to handle Individual cable sets.

The unique RFID technology is incredibly powerful and accurate. As well, it is integral to the wiring device so it can't easily fall off, get damaged, or be removed.

Combined with a Hubbell recommended middleware solution, integration into inventory management systems is seamless.

# Securely Manage and Control Assets with Ease





### **Housing Design**

- Industrial duty, molded-in RFID tags
- Retrofitable to existing wiring devices
- Tags are virtually hidden inside the device



### **Existing Devices**

 Tags are over molded into strain reliefs that can easily be added to existing devices



### **RFID Technology**

- Tag is powerful enough to read through full baskets of cable
- Works with fixed or portable reader options
- Tags cannot fall off or be easily removed



### **Tracking Software**

- Recommended middleware package available
- Track specific attributes, i.e. color and cable length per asset
- Edit asset conditions and other attributes
- Send alerts when asset leaves inventory location



### **Cord Clamp Kits**

• Kits will include cord clamps, screws and inserts where applicable



### Series 16 RFID Enabled

 Available as complete devices or replacement bodies

# **Asset Monitoring Devices**

### **RFID Enabled Wiring Devices**

RFID Tags are available as a cord clamp kit for Straight Blade, Twist-Lock® and Pin and Sleeve devices. Series 16 Single Pole devices have the RFID tag molded into the body.

- Series 16 Single Pole inline devices (complete device)
- Series 16 replacement bodies
- 15A Insulgrip Straight Blade or Twist-Lock® (cord clamp kit)
- 20A, 30A and 50A Insulgrip® Twist-Lock® (cord clamp kit)
- 60A Pin & Sleeve (cord clamp kit)
- 100A Pin & Sleeve (cord clamp kit)



Colored Cord Clamps available for visible phase and cable length identification

\*Other colors available upon request



### Insulgrip® Twist-Lock® Kits

Description	Color	Catalog Number
15A & 20A Straight Blade 15A Twist-Lock®	Natural	HBLRFKIT1
3 Wire Twist-Lock®	Natural Blue Green Brown	HBLRFKIT2 HBLRFKIT2BL HBLRFKIT2GN HBLRFKIT2BN
4 & 5 Wire Twist-Lock®	Natural Blue Green Brown Orange	HBLRFKIT3 HBLRFKIT3BL HBLRFKIT3GN HBLRFKIT3BN HBLRFKIT3O
50 Amp Cord Clamp	Natural	CSRFKIT



### Pin and Sleeve Kits

Description	Catalog Number
60A	HBL60RFKIT
100A	HBL100RFKIT

Note: Kits will include cord clamps, screws and inserts where applicable.

### **Series 16 RFID Enabled Single Pole Devices**

Description	Color	Male	Female
300A	Black White Green Blue Red Brown Orange Yellow	HBLRF300MBK HBLRF300MW HBLRF300MGN HBLRF300MBL HBLRF300MR HBLRF300MBN HBLRF300MO HBLRF300MY	HBLRF300FBK HBLRF300FW HBLRF300FGN HBLRF300FBL HBLRF300FR HBLRF300FBN HBLRF300FO HBLRF300FY
400A	Black White Green Blue Red Brown Orange Yellow	HBLRF400MBK HBLRF400MW HBLRF400MGN HBLRF400MBL HBLRF400MR HBLRF400MBN HBLRF400MO HBLRF400MY	HBLRF400FBK HBLRF400FW HBLRF400FGN HBLRF400FBL HBLRF400FR HBLRF400FBN HBLRF400FO HBLRF400FY



### **Series 16 Replacement Bodies**

Description	Color	Male	Female
300A or 400A	Black White Green Blue Red Brown Orange Yellow	HBLRFMBBK HBLRFMBW HBLRFMBGN HBLRFMBBL HBLRFMBR HBLRFMBR HBLRFMBBN HBLRFMBO HBLRFMBY	HBLRFFBBK HBLRFFBBW HBLRFFBBL HBLRFFBR HBLRFFBBN HBLRFFBO HBLRFFBY

# **Asset Monitoring Devices**

### **Additional Information**

### **Fixed or Portable Reader Options**

- Fixed antenna can scan through full baskets of cable sets
- Handheld reader allows for individual or bulk scanning
- Pre-programmed screens allow easy data collection
  - Receive items into inventory
  - Check out items for specific jobs or rental locations
  - Check in items to ensure all assets are accounted for
  - Change status and condition of each asset
- Upload asset information to existing inventory management systems





Note: Reader hardware and software are not sold by Hubbell, but can be purchased by a third party. Please contact a Hubbell representative for more information.

### **RFID Tags**

Hubbell utilizes an industrial grade, passive RFID tag. Passive RFID tags do not require a battery. Radio waves from the reader activate the RFID tag, thus inducing a current in the RFID's antenna. Typical read range can go up to 4 feet from a handheld, to 10 feet from a fixed antenna.

# **SECTION J**

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### **Cables and Receptacles - Power Components**

Device Type	Ratings	Wires	Conductor Colors**	Length (FT)
	<b>20</b> = 20A up to 600V	02 03 04 05	<b>PA</b> = Green/Yellow	<b>001</b> = 1'
PH = Double Ended Cable with Male/Female Straight PM = Male Single Ended Straight PN = Male Single Ended 90° PF = Female Single Ended Straight PG = Female Single Ended 90°	20A up to 600V Specialty construction (Includes isolated ground 23 = on 6 wire and #10 AWG super neutral conductor on 5 and 6 wire devices, PB color code only)	03 04 05 06	Black (all others)  PB = Green/Yellow White Black (all others)	005 = 5' 010 = 10' 015 = 15' 020 = 20' 025 = 25' 030 = 30' 035 = 35'
PQ = Double Ended Cable with Female 90° PR = Double Ended Cable with Male 90° PS = Double Ended Cable with (2) 90° Connectors  RF = Female Receptacle*	<b>30</b> = 30A up to 600V	04	PE = All Blue***	<b>040</b> = 40' <b>045</b> = 45' <b>050</b> = 50'
RM = Male Receptacle (Inlet)*  Example: PH	23	06	PB	005

**Tees** 

**Closure Caps** 

### Configurations (Male face view shown, female view is opposite)

20 AMP			
20A SNIG (with super neutral and IG)	•••		
30 AMP			



TX2304002304T00

Description	Catalog Number
LINKOSITY® M/F/F Tee, 20A, 2P	TX2002002002T00
LINKOSITY® M/F/F Tee, 20A, 3P	TX2003002003T00
LINKOSITY® M/F/F Tee, 20A, 4P	TX2004002004T00
LINKOSITY® M/F/F Tee, 20A, 5P	TX2005002005T00
LINKOSITY® M/F/F Tee, 20A SNIG, 4P	TX2304002304T00
LINKOSITY® M/F/F Tee, 20A SNIG, 6P	TX2306002306T00
LINKOSITY® M/F/F Tee, 20A SNIG, A Phase Tap	TX2306002304A00
LINKOSITY® M/F/F Tee, 20A SNIG, B Phase Tap	TX2306002304B00
LINKOSITY® M/F/F Tee, 20A SNIG, C Phase Tap	TX2306002304C00
LINKOSITY® M/F/F Tee, 30A, 4P	TX3004003004T00



ССМВС

Description	For use with Female Receptacle	Male Inlet
20A and 30A Receptacle Closure Cap	ССМВС	CCFBC

Note: \*1/2" NPT rear thread.

\*\*Other color codes available upon request.

<sup>\*\*\*</sup>Two wire only.





### **Cables and Receptacles - Control Integration Components**

Device Type	Ratings	Wires	Conductor Colors**	Length (FT)
PH = Double Ended Cable with Male/Female Straight PM = Male Single Ended Straight PN = Male Single Ended 90° PF = Female Single Ended Straight PG = Female Single Ended 90°	3A - 2W, 3W 03 = 3A - 4W up to 300V	02 03 04	<b>PA</b> = Green/Yellow	<b>001</b> = 1'
	3A - 2W, 3W  R3 = 3A - 4W  up to 300V  Black (all  02  03  04  PB = Green/Ye  White	Black (all others)  PB = Green/Yellow White Black (all others)	005 = 5' 010 = 10' 015 = 15' 020 = 20' 025 = 25' 030 = 30' 035 = 35'	
PQ = Double Ended Cable with Female 90° PR = Double Ended Cable with Male 90° PS = Double Ended Cable with (2) 90° Connectors  RF = Female Receptacle*  RM = Male Receptacle (Inlet)*	10A - 2W, 3W 10A - 4W 10 = 10A - 5W, 6W, 7W 10A - 8W, 9W 7A - 10W, 12W up to 600V	02 03 04 05 06 07 08 09 10	PE = All Blue***	<b>040</b> = 40' <b>045</b> = 45' <b>050</b> = 50'
Example: PH	10	06	PB	005

Note: \*1/2" NPT rear thread.

### Configurations (Male face view shown, female view is opposite)

03	Typically used for inputs in DC control circuits
R3*	Typically used for outputs in DC control circuits
10	

Note: \*Reverse key.

### Splitters/Tees

opiitters/ rees	
Description	Catalog Number
LINKOSITY® M/F/F Splitter, 3A/4W	TX0304000304T00
LINKOSITY® M/F/F Tee, 10A, 2 Pole	TX1002001002T00
LINKOSITY® M/F/F Tee, 10A, 3 Pole	TX1003001003T00
LINKOSITY® M/F/F Tee, 10A, 4 Pole	TX1004001004T00
LINKOSITY® M/F/F Tee, 10A, 5 Pole	TX1005001005T00
LINKOSITY® M/F/F Tee, 10A, 6 Pole	TX1006001006T00



TX1004001004T00

### **Closure Caps**

Description	For use with Female Receptacle	Male Inlet
3A Closure Cap	CCM1C	CCF1C
10A Closure Cap, 2, 3, 4, 4, 5 and 6 Pole	CCMAC	CCFAC
10A Closure Cap, 7 and 8 Pole	CCMBC	CCFBC
10A Closure Cap, 9, 10, 12 Pole	CCMCC	CCFCC



<sup>\*\*</sup>Other color codes available upon request.
\*\*\*Two wire only.



### **Features and Benefits**



### **Power System Distribution Assemblies**

- Available with up to 5 receptacles, wide variety of NEMA 5-20 receptacle grades
- Power pass thru option
- 16 gauge sheet metal enclosure ANSI 61 gray powder coat NEMA 1
- Device identification marking
- Versatile mounting provision
- Local or master switch
- LINKOSITY® connection

Note: Accepts PH2304 series cables.



### Straight Blade - UL Type 1

Device Type	Switch Types	# Receps	Receptacle Type	Receptacle Feature	Pass-thru	Custom Configurations*
М	SL = Switch Local SM = Switch Master 00 = No Switch	1 2 3 4 5	SG = Spec Grade HG = Hospital Grade CR = Corrosion Resistant	IG = Isolated Ground GF = Ground Fault SS = Surge Suppression 00 = Standard	P = Pass-thru** 0 = No Pass-thru	<ul> <li>D = 2 Circuit</li> <li>A = A Phase</li> <li>B = B Phase</li> <li>C = C Phase</li> </ul>
Example: M	SL	1	SG	00	Р	

### Twist-Lock® - UL Type 1

Device Type	Switch Types	# Receps	Receptacle Type	Receptacle Feature	Pass-thru	Custom Configurations*
М	SL = Switch Local SM = Switch Master 00 = No Switch	1 2 3 4 5	<b>L1</b> = 15A <b>L2</b> = 20A	IG = Isolated Ground 00 = Standard	P = Pass-thru 0 = No Pass-thru	<b>6</b> = 250V
Example: M	00	3	L1	IG	0	

Note: Local switches control all receptacles in a box. Master switches control local and downstream receptacles. Consult factory for alternate wiring schemes.

### Switch Only (ON/OFF) - UL Type 1

Device Type	Switch Types	Switch Style	Poles
s	1 = 1 Gang 2 = 2 Gang 3 = 3 Gang	2W = ON/OFF	1P = Single Pole DP = Two Pole
Example: S	1	2W	1P

### Switch Only (3-Way) - UL Type 1

Device Type	Switch Types	Switch Style	Position
s	<b>1</b> = 1 Gang	<b>3W</b> = 3 Way	M = Main R = Remote LM = Line to Main LR = Load to Remote
Example: S	1	3W	M

Note: For use with Px2304PBxxx series cables.

### Switch Only (4-Way) - UL Type 1

Device Type	Switch Types	Switch Style
s	<b>1</b> = 1 Gang	<b>4W</b> = 4 Way
Fyample: S	1	4W

### **Features**

Recep	tacle Types	CR	HG	SG	L1
00	Standard	HBL53CM62	HBL8300GY	5362G	HBL4700
IG	Isolated Ground	<del>-</del>	<del>-</del>	CR5352IGGY	IG4700A
GF	Ground Fault	_	GFRST83GY	GFRST20GY	_
SS	Surge Suppression	_	HBL8362GYSA	HBL5362GYSA	_
Switc	h Types	CR	HG	SG	L1
SL	Local ON/OFF	=	-	HBL1221PL	_
SM	Master ON/OFF	_	_	HBL1221PL	_

<sup>\*</sup>Consult factory for wiring specifications and connecting cables.

<sup>\*\*</sup>Pass-thru on phase tap boxes are 3Ø.





### LINKOSITY® Feed - UL Type 3R Rated\*

### 3R Rated Standard Items

Description	Catalog Number
20A 125V Ground Fault	M3R002SGGF0
20A 125V Switched, Spec Grade	M3RSL1SG000
20A 125V Switched, Ground Fault	M3RSL1SGGF0
20A 125V Spec Grade	M3R002SG000
20A 125V Ground Fault, Pass-Thru	M3R002SGGFP
20A 125V Switched, Spec Grade,	M3RSL1SG00P
Pass-Thru	
20A 125V Switched, Ground Fault	M3RSL1SGGFP
Pass-Thru	
Spec Grade, Pass-Thru	M3R002SG00P

Note: \*When cover closed. Accepts PH2304 series cables.

4X Rated NEMA Standard Items

20A 125V WTSSTL, Pass-Thru



Description	Catalog Number
20A 125V Straight Blade	MLWF2010
20A 125V WTSSTL	MLWF2020
20A 125V Straight Blade, Pass-Thru	MLWF201P

Note: \*Watertight Safety-Shroud® Twist-Lock® Plug required

\*\*Straight Blade are UL Type 4X when not in use only. WTSSTL is an abbreviation for Watertight Safety-Shroud® Twist-Lock®.

MLWF202P

Accepts PH2304 series cables.



					0		· O	0
Device Type	Style	Туре	No. of Devices	Device	• Туре	Devic	ce Feature	Pass-Thru
М	<b>3R</b> - 3R Lids	SL - Switch	1	SG -	Spec Grade	IG -	Isolated	P - Pass-Thru
	<b>3D</b> - 3R Deep	Local	2	HG -	Hospital		Ground	0 - No Pass-Thru
	Cover				Grade	GF -	Ground	
		SM - Switch		CR -	Corrosion		Fault	
		Master			Resistant	SI -	Surge/IG	
				L1 -	15A Locking	SS -	Surge	
		<b>00</b> - None				00 -	Standard	





Device			No. of		
Type	Style	Туре	Devices	Device Type	Pass-Thru
М	L - LINKOSITY	WF - Watertight	2	01 - 20A 125V Straight Blade**	P - Pass-Thru
		Safety-Shroud		02 - 20A 125V Twist-Lock	0 - No Pass-Thru
		Receptacle		03 - 20A 250V Twist-Lock	
				<b>04</b> - 20A 277V Twist-Lock	
		WM - Watertight		05 - 30A 125V Twist-Lock	
		Safety-Shroud		06 - 30A 250V Twist-Lock	
		Inlet		<b>07</b> - 20A 125/250V Twist-Lock	
				08 - 20A 3Ø 250V Twist-Lock	
				09 - 20A 3Ø 480V Twist-Lock	
				<b>10</b> - 30A125/250V Twist-Lock	
				11 - 30A 3Ø 250V Twist-Lock	
				12 - 30A 3Ø 480V Twist-Lock	
				13 - 30A 3Ø 600V Twist-Lock	





### All LINKOSITY® - UL Type 4X Rated\*

4X	Rated	LINKOSITY	Standard	Items

Description	Catalog Number
20A 3W up to 600V, 4 Port	M4L2003PB0
20A 3W up to 600V, 4 Port Pass-Thru	M4L2003PBP

Note: \*Closure Cap required when not in use. Accepts PH2304 series cables.

Device			No. of		
Type	Style	Туре	Poles	Conductor Colors	Pass - Thru
М	4L -	<b>20</b> - 20A	02	PA - Green/Yellow	P - Pass-Thru
	LINKOSITY		03	Black (all others)	0 - No Pass-Thru
		<b>23</b> - 20A	04		
		Super Neutral	05	PB - Green/Yellow	
		Isolated Ground	06	White	
				Black (all others)	
		<b>30</b> - 30A			

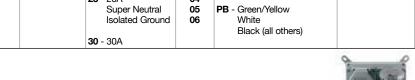
### Conduit Feed - UL Type 4X Rated\*

### Conduit Feed Standard Items

Description	Catalog Number
20A 125V Straight Blade	MCWF2010
20A 125V WTSSTL	MCWF2020
20A 250V WTSSTL	MCWF2030
20A 277V WTSSTL	MCWF2040
30A 125V WTSSTL	MCWF2050
30A 250V WTSSTL	MCWF2060
20A 125/250V WTSSTL	MCWF2070
20A 3Ø, 250V WTSSTL	MCWF2080
20A 3Ø, 480V WTSSTL	MCWF2090
30A 125/250V WTSSTL	MCWF2100
30A 3Ø 250V WTSSTL	MCWF2110
30A 3Ø 480V WTSSTL	MCWF2120
30A 3Ø 600V WTSSTL	MCWF2130

Note: \*Watertight Safety-Shroud® Twist-Lock® Plug required

WTSSTL is an abbreviation for Watertight Safety-Shroud® Twist-Lock®.



Device Type	Style	Туре	No. of Devices	NEMA Device Type	Pass-Thru
М	C - Conduit	WF - Watertight	2	01 - 20A 125V Straight Blade	0 - No Pass-Thru
	Feed	Safety-Shroud		02 - 20A 125V Twist-Lock	
		Receptacles		03 - 20A 250V Twist-Lock	
				<b>04</b> - 20A 277V Twist-Lock	
				<b>05</b> - 30A 125V Twist-Lock	
				06 - 30A 250V Twist-Lock	
				<b>07</b> - 20A 125/250V Twist-Lock	
		WM - Watertight		08 - 20A 3Ø 250V Twist-Lock	
		Safety-Shroud		09 - 20A 3Ø 480V Twist-Lock	
		Inlet		<b>10</b> - 30A125/250V Twist-Lock	
				11 - 30A 3Ø 250V Twist-Lock	
				12 - 30A 3Ø 480V Twist-Lock	
				13 - 30A 3Ø 600V Twist-Lock	

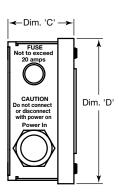


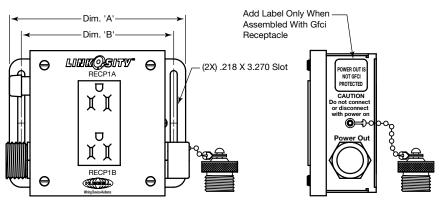
### **Replacement Mounting Feet**

Description	Catalog Number
For Power Distribution Assemblies.	HBLRFT1 <sup>∆</sup>

Note: <sup>A</sup> Package of 10 mounting feet and 10 screws.







Catalog Number M001\*\*\*\*P Shown

Catalog Number	Gangs	Dimension 'A'	Dimension 'B'	Dimension 'C'	Dimension 'D'
M001****P	1	5.50 (139.7)	4.75 (120.7)	2.25 (57.2)	4.53 (115.1)
M002****P	2	7.50 (190.5)	6.75 (171.5)	2.25 (57.2)	4.53 (115.1)
M003****P	3	9.50 (241.3)	8.75 (222.3)	2.25 (57.2)	4.53 (115.1)
M004***P	4	11.50 (292.1)	10.75 (273.1)	2.25 (57.2)	4.53 (115.1)
M005****P	5	13.50 (342.9)	12.75 (323.9)	2.25 (57.2)	4.53 (115.1)

### LINKOSITY® Specifications

Certifications		
System Level	ETL Classified to NEC	
Component Assemblies (PSDA)	UL Listed	
Connecting Components	Listed to UL2238 and UL 50	
Cable (Up to #22 AWG)	UL 300V Type ITC/PLTC 105°C	
Cable (#16 AWG and Up)	UL 600V Type TC-ER, MTW 90°C or STOOW 600V 105°C	

### **Cable Diameter**

Amps	Wires	O.D.
20	3	.595 (15.1)
20	4	.645 (16.4)
20	5	.710 (18.0)
20	6	.760 (19.3)
30	4	.710 (18.0)

### **Performance**

Electrical		
Voltage	Up to 600V	
Amperage	Up to 30A	

### **Environmental**

Littii Oliili Cittai	
Connectivity System Components	
Moisture Resistance	UL Type 4, 4X, 12 and 13
Ingress Protection	IP66 Suitability
Flammability	UL94HB Cables/UL94V-0 receptacles
Power System Distribution Assemblies	
Moisture Resistance	NEMA Type 1, Type 3R, Type 4X

Dimensions in Inches (mm)





### **Housing Design**

• Thermoplastic Cover on Plated Steel Base

- NEMA 1 Enclosure
- Pre-wired with LINKOSITY® Components
- Crush and Impact Resistance of MC Cable





### **Housing Design**

- High Impact Valox® Enclosure
- Type 4X Enclosure
- Permanent Labelless Marking
- Lockable Handle to Meet OSHA Lockout/Tagout Regulations
- Cable Ratings: TC-ER, MTW, STOOW



Type 1 Non-Metallic Enclosure 30A 3 Pole 600V AC		Catalog Number
HBL1389D with one pre-wired LINKOSITY® female receptacle (load side).		HBL1389MQR
HBL1389D with 5 foot pre-wired LINKOSITY® female cable (load side).		HBL1389MQ5
HBL1389D with one pre-wired LINKOSITY® male receptacle (line side)		HBL1389MQR2
and one pre-wired LINKOSITY® female receptacle (load side).		
Type 4X Non-Metallic Labelless Enclosure 30A 3 Pole 600V AC		
HBLDS3 with one pre-wired LINKOSITY® female receptacle (load side).		HBLDS3MQR
HBLDS3 with 5 foot pre-wired LINKOSITY® female cable (load side).		HBLDS3MQ5
HBLDS3 with one pre-wired LINKOSITY® male receptacle (line side)		HBLDS3MQR2
and one pre-wired LINKOSITY® female receptacle (load side).		
Type 4X Stainless Steel Enclosure 30A 3 Pole 600V AC	Sloped Top	Square Top
HBLDS3SS with one pre-wired LINKOSITY® female receptacle (load side).	HBLDS3SSRMQR	HBLDS3SSMQR
HBLDS3SS with 5 foot pre-wired LINKOSITY® female cable (load side).	HBLDS3SSRMQ5	HBLDS3SSMQ5
HBLDS3SS with one pre-wired LINKOSITY® male receptacle (line side)	HBLDS3SSRMQR2	HBLDS3SSMQR2
and one pre-wired LINKOSITY® female receptacle (load side).		



HBL1389MQR2



HBLDS3MQR

### **Accessories**

Description	Catalog Number
3P 4W LINKOSITY® male receptacle for installation on motor.	RM3004PA001
3P 4W LINKOSITY® female receptacle for installation in switch.	RF3004PA001
3P 4W LINKOSITY® double ended (male/female) 5-50 foot cable.	PH3004PAxxx*
3P 4W LINKOSITY® single ended (female) 5-50 foot cable.	PF3004PAxxx*
Cord connector, ¾ in. NPT .6375 in. (16.0-19.1) diameter.	SHC1037CR
Lock-on cover for LINKOSITY® connections.	PH2030C

Note: \*Cables available from 5-50 feet in 5 foot increments. To purchase larger cable, replace the XXX with the required length in feet. (Examples: **PH3004PA**005 = 5 foot cable, **PH3004PA**050 = 50 foot cable.)

Sample Set Up (1) HBLDS3MQR + (1) PH3004PAxxx



+ (1) RM3004PA001





HBLDS3SSMQR

PH2030C

HBLDS3SSRMQR

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Note: \*\* Retrofit parts available for pre-existing disconnect switch installations. Please consult factory for availability.



### **Features and Benefits**

### Mini-Quick® Control Connectors

- Nickel plated brass coupling nuts and receptacle shells
- · Black overmold and cable
- Insulgrip connector body design
- UL Listed cable assemblies and receptacles
- Plating resists corrosion in high abuse environments
- Cable assembly resists dirt and blends with environment giving a clean look to the installation
- Third party certified for electrical, mechanical and environmental performance
- Ergonomic connector body has an industrial look





### **Housing Design**

 Gated strain relief with graduated window sizes improves flexibility, strength and protects wire terminations; superior arc of bend control



### Internal Design

- Leaded nickel copper sleeved contact extendes contact life and continuity
- O-rings for moisture protection
- Anti-vibration coupling nut prevents conection from loosening under harsh vibration conditions
- Indicator ring ensures proper mating

### **Material Specifications**

Insulator Materials Nylon 6/6, White Contact Materials Pins - Brass, Sockets

Leaded nickel copper w/ stainless

steel sleeve

Contact Plating Hard gold over palladium/nickel
Overmold Material Polyurethane, Black
Coupling Nut, Metallic Nickel plated brass

Coupling Nut, Nylon Nylon 6/6, Black
Receptacle Shell Nickel plated brass,
SST consult factory
Receptacle Shell, Nylon Nylon 6/6, Black

Nickel plated zinc alloy die cast,

SST consult factory

### Cable

#16 AWG SEOOW - TPE jacket, Black, PVC conductor

insulation, Stranding - 65/34

#18 AWG SEOOW - TPE jacket, Black, PVC conductor

insulation, Stranding - 41/34

Strain Relief

#16 AWG and #18 AWG - 30 pounds min per UL2238

### **Electrical Specifications**

Receptacle Shell, Right Angle

Voltage Rating 600V DC/600V AC

Amperage #16 AWG - 283P=15A, 4P=12A, 586P=10A

7P=10A, 8&9P=9A, 10&12P=8A #18 AWG - 2&3P=11A, 4P=8A, 5&6P=7A

Contact Resistance  $\leq 5 \text{ m}\Omega$ Isolation Resistance  $\geq 1000 \text{ M}\Omega$ 

### **Environmental Specifications**

Moisture Protection UL Type 4, 4X, 12 and 13 Ingress Protection IP66 Suitability

Operating Temperature SEOOW cable: -40°C to 105° C

Corrosion Resistance 500 hours salt spray per MIL-STD-1344, Method 1001 Vibration Resistance 10 - 2,000 Hz @15g per MIL-STD-1344, Method 2005

### Certifications

UL 2238 and UL50E, File No. E192071

CSA Certified, C22.2 No. 182.3 and CSA C22.2 No. 94.2-07

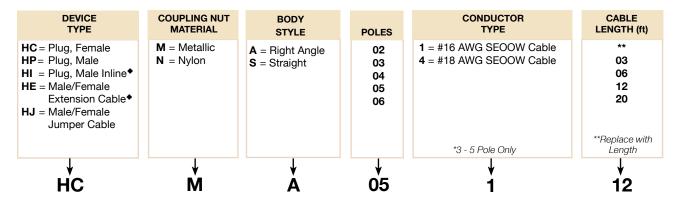


#### Mini-Quick® 2 - 6 Pole Plugs

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number **HCMA05112** is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Consult the factory for additional cable lengths or cable types.

• Available with metallic coupling nut only.

#### Mini-Quick® 2 - 6 Pole Plugs

Catalog numbers using #16 AWG SEOOW cable are listed below. For #18 AWG SEOOW cable, change the conductor type per the Hubbell Logic chart above.

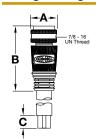
	Male Face Shown Female - mirror		Fema	ale Plugs	Mal	e Plugs	Male/Female JumperCables
Poles	image	Cable Length	Straight	Right Angle	Straight	Right Angle	Straight
2	0 2	3 ft (0.91m) 6 ft (1.83m) 12 ft (3.66m) All other lengths.▲	HCMS02103 HCMS02106 HCMS02112 HCMS021**	HCMA02103 HCMA02106 HCMA02112 HCMA021**	HPMS02103 HPMS02106 HPMS02112 HPMS021**	HPMA02103 HPMA02106 HPMA02112 HPMA021**	HJMS02103 HJMS02106 HJMS02112 HJMS021**
3	(1) (2) (3)	3 ft (0.91m) 6 ft (1.83m) 12 ft (3.66m) All other lengths▲	HCMS03103 HCMS03106 HCMS03112 HCMS031**	HCMA03103 HCMA03106 HCMA03112 HCMA031**	HPMS03103 HPMS03106 HPMS03112 HPMS031**	HPMA03103 HPMA03106 HPMA03112 HPMA031**	HJMS03103 HJMS03106 HJMS03112 HJMS031**
4	(1) (a) (2) (3)	3 ft (0.91m) 6 ft (1.83m) 12 ft (3.66m) All other lengths.▲	HCMS04103 HCMS04106 HCMS04112 HCMS041**	HCMA04103 HCMA04106 HCMA04112 HCMA041**	HPMS04103 HPMS04106 HPMS04112 HPMS041**	HPMA04103 HPMA04106 HPMA04112 HPMA041**	HJMS04103 HJMS04106 HJMS04112 HJMS041**
5	(1) (5) (2) (3)	3 ft (0.91m) 6 ft (1.83m) 12 ft/3.66m) All other lengths.▲	HCMS05103 HCMS05106 HCMS05112 HCMS051**	HCMA05103 HCMA05106 HCMA05112 HCMA051**	HPMS05103 HPMS05106 HPMS05112 HPMS051**	HPMA05103 HPMA05106 HPMA05112 HPMA051**	HJMS05103 HJMS05106 HJMS05112 HJMS051**
6	(0 6 6) (2 3 4)	3 ft/0.91m) 6 ft/1.83m) 12 ft/3.66m) All other lengths.▲	HCMS06103 HCMS06106 HCMS06112 HCMS061**	HCMA06103 HCMA06106 HCMA06112 HCMA061**	HPMS06103 HPMS06106 HPMS06112 HPMS061**	HPMA06103 HPMA06106 HPMA06112 HPMA061**	HJMS06103 HJMS06106 HJMS06112 HJMS061**

Note: ▲Replace \*\* with length required in feet. For nylon coupling nuts, replace "M" with "N" per the ordering chart above. Example: change HP<u>M</u>A05106 to HP<u>N</u>A05106.



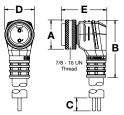
### Mini-Quick® 2 - 6 Pole Plugs

#### **Straight Plug**



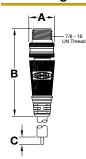
	MALE	FEMALE
Α	0.99" (25.2)	0.99 (25.2)
В	2.44" (62.0)	2.40 (61.0)
С	2.75" (69.9)	2.75 (69.9)

### Right Angle Plug



	MALE	FEMALE
Α	0.99" (25.2)	0.99" (25.2)
В	2.14" (54.4)	2.14" (54.4)
С	2.75" (69.9)	2.75" (69.9)
D	1.03" (26.2)	1.03" (26.2)
Е	1.64" (40.6)	1.60" (40.6)

#### **Inline Plug**



	MALE
Α	0.99" (25.2)
В	2.47" (62.8)
С	2.75" (69.9)

Right Angle version also available.

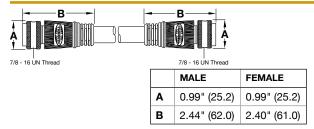
#### **Accessories**

Closure caps protect plugs and receptacles when not in use. Adapter rings allow the mating of male and female plugs for in-line applications. Shell size is 1, and the thread is 7/8-16 UN.

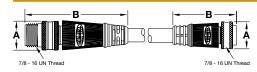
Description	Catalog Number	
Closure Cap	HPCAP1	6.00° (152.4) 0.56° (14.2)
Closure Cap	HRCAP1	6.00° (152.4) 0.58° (14.7) 1.13° (28.6)
Adapter Ring	HMQAR1	0.48" (12.3) (12.3) (25.4)

Dimensions in Inches (mm)

#### **Jumper Cable**



#### **Male/Female Extension Cable**



	MALE	FEMALE
Α	0.99" (25.2)	0.99" (25.2)
В	2.47" (62.7)	2.40" (61.0)

#### **Cable Diameters By Cable Type**

Number of Conductors	#16 AWG SEOOW	#18 AWG SEOOW	
2	0.37" (9.4)	0.35" (8.9)	
3	0.39" (9.9)	0.37" (9.4)	
4	0.42" (10.7)	0.39" (9.9)	
5	0.50" (12.7)	0.47" (11.9)	
6	0.52" (13.2)	0.48" (12.2)	

#### **Conductor Color Code**

#16 AWG	#16 AWG SEOOW Plugs						
Contact Number	2 Pole	3 Pole	4 Pole	5 Pole	6 Pole		
1	White	Green	Black	White	White		
2	Black	Black	White	Red	Red		
3		White	Red	Green	Green		
4			Green	Orange	Orange		
5				Black	Black		
6					Blue		

#### #18 AWG SEOOW Plugs

Contact Number	3 Pole	4 Pole	5 Pole	
1	Green	Black	White	
2	Black	White	Red	
3	White	Red	Green	
4		Green	Orange	
5			Black	

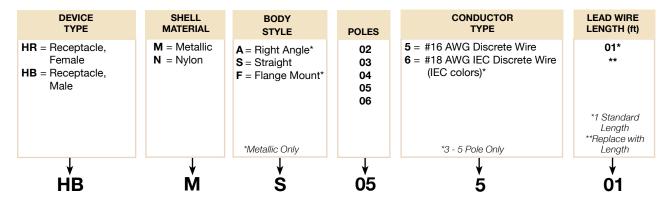


### Mini-Quick® 2 - 6 Pole Receptacles

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number **HBMS05501** is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Use this chart to build receptacles to meet any application need. Consult the factory for additional wire lengths or wire types.

#### Mini-Quick® 2 - 6 Pole Receptacles

#16 AWG Discrete Wire

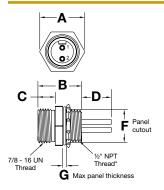
	Male Face Shown Female -		Female R	eceptacles			Male Re	ceptacles	
Poles	mirror image	Straight	Nylon	Right Angle	Flange Mount	Straight	Nylon	Right Angle	Flange Mount
2	0	HRMS02501	HRNS02501	HRMA02501	HRMF02501	HBMS02501	HBNS02501	HBMA02501	HBMF02501
3	(D) (2 3)	HRMS03501	HRNS03501	HRMA03501	HRMF03501	HBMS03501	HBNS03501	HBMA03501	HBMF03501
4	(1) (4) (2) (3)	HRMS04501	HRNS04501	HRMA04501	HRMF04501	HBMS04501	HBNS04501	HBMA04501	HBMF04501
5	(1 S) (2 3 4)	HRMS05501	HRNS05501	HRMA05501	HRMF05501	HBMS05501	HBNS05501	HBMA05501	HBMF05501
6	(1 6 8) (2 3 4)	HRMS06501	HRNS06501	HRMA06501	HRMF06501	HBMS06501	HBNS06501	HBMA06501	HBMF06501

Note:  $\bullet$  For #18 AWG IEC discrete wire, change the conductor type using the Hubbell Logic chart above.



### Mini-Quick® 2 - 6 Pole Receptacles

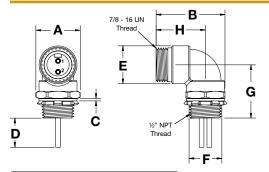
#### **Straight Receptacles**



	MALE	FEMALE
Α	1.14" (29.0)	1.14" (29.0)
В	1.11" (28.2)	1.11" (28.2)
С	0.44" (11.2)	0.44" (11.2)
D	12.0" (304.8)	12.0" (304.8)
F	0.88" (22.4)	0.83" (22.4)
G	0.25" (6.4)	0.25" (6.4)

Note: \*IEC receptacle has PG13.5 rear thread.

#### **Right Angle Receptacles**



	MALE	FEMALE
Α	1.14" (29.0)	1.14" (29.0)
В	1.76" (44.7)	1.76" (44.7)
С	0.25" (6.4)	0.25" (6.4)
D	12.0" (304.8)	12.0" (304.8)
E	0.97" (24.6)	0.97" (24.6)
F	0.83" (21.8)	0.83" (21.8)
G	1.36" (34.5)	1.36" (34.5)
Н	1.26" (32.0)	1.26" (32.0)

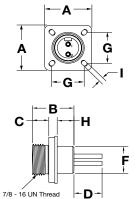
#### **Accessories**

Closure caps protect plugs and receptacles when not in use. Shell size is 1, and the thread is 7/8-16 UN.

Description	Catalog Number	
Closure Cap	HPCAP1	6.00° (152.4) 0.56° (14.2) 1.12° (28.5)
Closure Cap	HRCAP1	6.00° (152.4) (152.4) (152.4) (14.7) (14.7) (1.13° (28.6)

#### Dimensions in Inches (mm)

#### **Flange Mount Receptacles**



	MALE	FEMALE
Α	1.25" (31.75)	1.25" (31.75)
В	1.11" (28.19)	1.11" (28.19)
С	0.44" (11.18)	0.44" (11.18)
D	12.0" (304.8)	12.0" (304.8)
F	0.75" (19.05)	0.75" (19.05)
G	0.86" (21.84)	0.86" (21.84)
Н	0.45" (11.43)	0.45" (11.43)
I	0.12" (03.02)	0.12" (03.02)

#### **Color Code By Wire Type**

#16 AWG F	•				
Contact	2	3	4 D-1-	5	6
Number	Pole	Pole	Pole	Pole	Pole
1	White	Green	Black	White	White
2	Black	Black	White	Red	Red
3		White	Red	Green	Green
4			Green	Orange	Orange
5				Black	Black
6					Blue
#18 AWG F	Receptacles				
Contact	3		4	5	
Number	Pole		Pole	Pole	
1	Yellow/0	Green	Black	Black	
2	Brown		Blue	Blue	
3	Blue		Brown	Yellow/Gr	reen
4			White	Brown	
5				White	

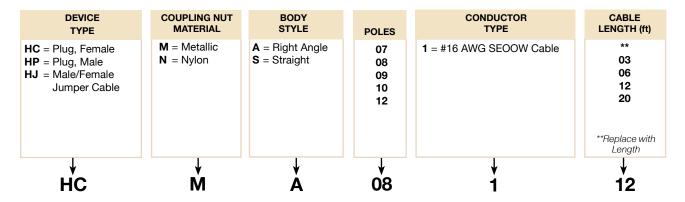


### Mini-Quick® 7 - 12 Pole Plugs

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number **HCMA08112** is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Consult the factory for additional cable lengths or cable types.

#### Mini-Quick® 7 - 12 Pole Plugs

Catalog numbers using #16 AWG SEOOW cable are listed below.

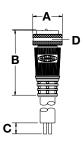
	Male Face Shown Female - mirror		Fema	ale Plugs	Mal	e Plugs	Male/Female JumperCables
Poles	image	Cable Length	Straight	Right Angle	Straight	Right Angle	Straight
7	① 6 ② ⑦ 6 ③ 4	3 ft (0.91m) 6 ft (1.83m) 12 ft (3.66m) All other lengths.▲	HCMS07103 HCMS07106 HCMS07112 HCMS071**	HCMA07103 HCMA07106 HCMA07112 HCMA071**	HPMS07103 HPMS07106 HPMS07112 HPMS071**	HPMA07103 HPMA07106 HPMA07112 HPMA071**	HJMS07103 HJMS07106 HJMS07112 HJMS071**
8	(1) (2) (6) (2) (8) (8) (9) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	3 ft (0.91m) 6 ft (1.83m) 12 ft (3.66m) All other lengths.▲	HCMS08103 HCMS08106 HCMS08112 HCMS081**	HCMA08103 HCMA08106 HCMA08112 HCMA081**	HPMS08103 HPMS08106 HPMS08112 HPMS081**	HPMA08103 HPMA08106 HPMA08112 HPMA081**	HJMS08103 HJMS08106 HJMS08112 HJMS081**
9	0 6 2 8 9 6 3 4	3 ft (0.91m) 6 ft (1.83m) 12 ft (3.66m) All other lengths.▲	HCMS09103 HCMS09106 HCMS09112 HCMS091**	HCMA09103 HCMA09106 HCMA09112 HCMA091**	HPMS09103 HPMS09106 HPMS09112 HPMS091**	HPMA09103 HPMA09106 HPMA09112 HPMA091**	HJMS09103 HJMS09106 HJMS09112 HJMS091**
10	(1 (8 (7)) (2 (9 (0) (6)) (3 (4 (5))	3 ft (0.91m) 6 ft (1.83m) 12 ft/3.66m) All other lengths.	HCMS10103 HCMS10106 HCMS10112 HCMS101**	HCMA10103 HCMA10106 HCMA10112 HCMA101**	HPMS10103 HPMS10106 HPMS10112 HPMS101**	HPMA10103 HPMA10106 HPMA10112 HPMA101**	HJMS10103 HJMS10106 HJMS10112 HJMS101**
12	(1 9 8) 2 10 12 7 3 11 6 4 5	3 ft/0.91m) 6 ft/1.83m) 12 ft/3.66m) All other lengths.	HCMS12103 HCMS12106 HCMS12112 HCMS121**	HCMA12103 HCMA12106 HCMA12112 HCMA121**	HPMS12103 HPMS12106 HPMS12112 HPMS121**	HPMA12103 HPMA12106 HPMA12112 HPMA121**	HJMS12103 HJMS12106 HJMS12112 HJMS121**

Note: ▲ Replace \*\* with length required in feet. For nylon coupling nuts, replace "M" with "N" per the ordering chart above. Example: change HPMA07106 to HPMA07106.



### Mini-Quick® 7 - 12 Pole Plugs

#### **Straight Plug**



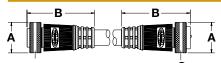
#### 7 - 8 Pole

	MALE	FEMALE
Α	1.12" (28.5)	1.12" (28.5)
В	2.53" (64.3)	2.49" (63.3)
С	2.75" (69.9)	2.75" (69.9)
D	1 - 16 UI	N Thread

#### 9 - 12 Pole

	MALE	FEMALE				
Α	1.25" (31.8)	1.25" (31.8)				
В	2.77" (70.4)	2.73" (69.3)				
С	2.75" (69.9)	2.75" (69.9)				
D	1 1/8 - 16 UN Thread					

#### **Jumper Cable**



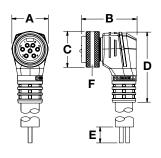
7 - 8 Pole

	MALE	FEMALE		
Α	1.12" (28.5)	1.12" (28.5)		
В	2.53" (64.3)	2.49" (63.3)		
С	1 - 16 L	JN Thread		

#### 9 - 12 Pole

	MALE	FEMALE		
Α	1.25" (31.8)	1.25" (31.8)		
В	2.77" (70.4)	2.73" (69.3)		
С	1 1/8 - 16	UN Thread		

#### **Right Angle Plug**



#### 7 - 8 Pole

	MALE	FEMALE
Α	1.14" (29.0)	1.14" (29.0)
В	1.73" (43.9)	1.69" (42.9)
С	1.12" (28.5)	1.12" (28.5)
D	2.22" (56.4)	2.22" (56.4)
E	2.75" (69.9)	2.75" (69.9)
F	1 - 16 U	N Thread

#### 9 - 12 Pole

	MALE	FEMALE
Α	1.25" (31.8)	1.25" (31.8)
В	1.84" (47.0)	1.80" (45.7)
С	1.25" (31.8)	1.25" (31.8)
D	2.54" (64.5)	2.54" (64.5)
E	2.75" (69.9)	2.75" (69.9)
F	1 1/8 - 16 U	N Thread

# Cable Diameters By Cable Type

Number of	#16 AWG				
Conductors	STOOW				
7	0.52" (13.2)				
8	0.56" (14.2)				
9	0.60" (15.2)				
10	0.65" (16.7)				
12	0.70" (17.7)				

#### **Conductor Color Code**

#16 AWG SEOOW Plugs										
Contact Number	2 Pole	3 Pole	4 Pole	5 Pole	6 Pole	7 Pole	8 Pole	9 Pole	10 Pole	12 Pole
1	White	Green	Black	White	White	White/Black	Orange	Orange	Orange	Orange
2	Black	Black	White	Red	Red	Black	Blue	Blue	Blue	Blue
3		White	Red	Green	Green	White	White/Black	Red/Black	White/Black	White/Black
4			Green	Orange	Orange	Red	Black	Green/Black	Red/Black	Red/Black
5				Black	Black	Orange	White	White	Green/Black	Green/Black
6					Blue	Blue	Red	Red	Orange/Black	Orange/Black
7						Green	Green	Green	Red	Blue/Black
8							Red/Black	White/Black	Green	Black/White
9								Black	Black	Green
10									White	Red
11										White
12										Black

#### Accessories

Closure caps protect plugs and receptacles when not in use. Adapter rings allow the mating of male and female plugs for in-line applications.

		Closure Cap		Closure Cap			Adapter Ring		
	Shell			Shell			Shell		
Description	Size TI	hread Size	Catalog Number	Size	Thread Size	Catalog Number	Size	Thread Size	Catalog Number
7 to 8 Pole	1	- 16 UN	HPCAP2		1 - 16 UN	HRCAP2	II	1 - 16 UN	HMQAR2
9 to 12 Pole	III 1	1/8 - 16UN	HPCAP3	III	1 1/8 - 16UN	HRCAP3	III	1 1/8 - 16UN	HMQAR3
		- 6.00° (152.4)	0.56* (14.2) 1.12* (28.5)	(	(152.4) (152.4)	0.58* (14.7) 1.13* (28.6)		1.00"	0.48"
Cap Size	II- 1.12"	(28.5), III- 1.25" (31.	8)	II- 1.13	3" (28.6), III- 1.25" (31	.8)	II- 1.0	0" (25.4), III- 1.13" (2	28.6)

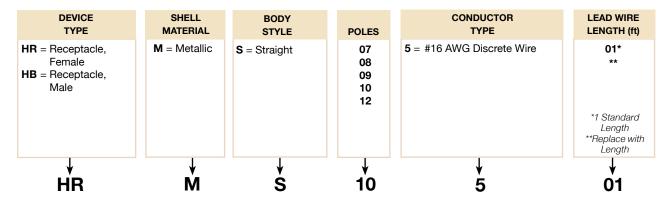


### Mini-Quick® 7 - 12 Pole Receptacles

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number **HRMS10501** is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Consult the factory for additional wire lengths or wire types.

#### Mini-Quick® 7 - 12 Pole Receptacles

#16 AWG Discrete Wire

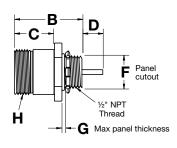
Poles	Male Face Shown Female - mirror image	Female Receptacles	Male Receptacles
7	(1) (6) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	HRMS07501	HBMS07501
8	(1) 7 (6) (2) (8) (5) (3) (4)	HRMS08501	HBMS08501
9	(1) (8) (8) (8) (9) (9) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	HRMS09501	HBMS09501
10	(1) (9) (7) (2) (9) (6) (8) (8)	HRMS10501	HBMS10501
12	(0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	HRMS12501	HBMS12501



### Mini-Quick® 7 - 12 Pole Receptacles

#### **Straight Receptacles**





#### 7 - 8 Pole

	MALE	FEMALE
Α	1.29" (32.8)	1.29" (32.8)
В	1.44" (36.6)	1.44" (36.6)
С	0.80" (20.3)	0.80" (20.3)
D	12.0" (304.8)	12.0" (304.8)
F	0.83" (21.1)	0.83" (21.1)
G	0.25" (6.4)	0.25" (6.4)
Н	1 - 16 UI	N Thread

#### 9 - 12 Pole

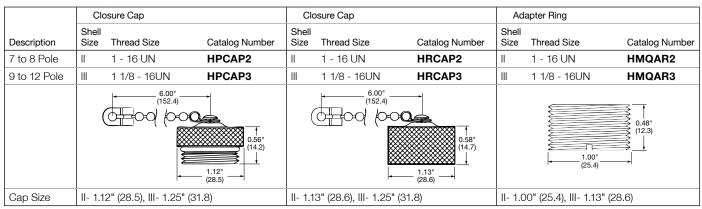
	MALE	FEMALE
Α	1.44" (36.6)	1.44" (36.6)
В	1.62" (41.2)	1.62" (41.2)
С	0.96" (24.4)	0.96" (24.4)
D	12.0" (304.8)	12.0" (304.8)
F	0.83" (21.1)	0.83" (21.1)
G	0.25" (6.4)	0.25" (6.4)
Н	1 1/8 - 16	UN Thread

#### **Conductor Color Code**

#16 AWG	Receptacle	S								
Contact Number	2 Pole	3 Pole	4 Pole	5 Pole	6 Pole	7 Pole	8 Pole	9 Pole	10 Pole	12 Pole
1	White	Green	Black	White	White	White/Black	Orange	Orange	Orange	Orange
2	Black	Black	White	Red	Red	Black	Blue	Blue	Blue	Blue
3		White	Red	Green	Green	White	White/Black	Red/Black	White/Black	White/Black
4			Green	Orange	Orange	Red	Black	Green/Black	Red/Black	Red/Black
5				Black	Black	Orange	White	White	Green/Black	Green/Black
6					Blue	Blue	Red	Red	Orange/Black	Orange/Black
7						Green	Green	Green	Red	Blue/Black
8							Red/Black	White/Black	Green	Black/White
9								Black	Black	Green
10									White	Red
11										White
12										Black

#### **Accessories**

Closure caps protect plugs and receptacles when not in use. Adapter rings allow the mating of male and female plugs for in-line applications.







#### **Features and Benefits**

#### Mini-Quick® Field Attachable Connectors - Screw Terminal Style

#### **Electrical Specifications**

Voltage Rating 250V Amperage 3 Pin - 12A 4,5 Pin - 9A Wire Size, Max #16 AWG

#### **Mechanical Specifications**

Coupling Nut Anodized aluminum, SST consult factory

Connector Shell PBT
Connector Insert PUR/PA

Contacts Brass, gold plate over palladium nickel

#### **Environmental Specifications**

Moisture Resistance IP66 Suitability
Operating Temperature -40°C to 85°C



IP66



#### **Housing Design**

- High impact body design
- Strain relief protects terminations



#### Internal Design

- Superior contact design utilizing high performance gold over palladium nickel plating
- Coupling nut anodized aluminum, SST option consult factory
- Precision wire funnels eliminate stray strands

#### Mini-Quick® 3 - 5 Pole Field Attachable Connectors

	Male Face Shown		Female 0	Connector	Male In-Lir	ne Connector	Male C	onnector
Poles	Female - mirror image	Cable Range	Straight	Right Angle	Straight	Right Angle	Straight	Right Angle
3	(D)	.24"32" (6.1-8.1) .39"47" (9.9-11.9) .47"55" (11.9-13.1)	HCMS03F9 HCMS03F13	HCMA03F9 _ _ _	HIMS03F9 HIMS03F13	HIMA03F9 - -	HPMS03F9 HPMS03F13	HPMA03F9 - -
4	① ④ ② ③	.24"32" (6.1-8.1) .39"47" (9.9-11.9) .47"55" (11.9-13.1)	HCMS04F9 HCMS04F13 HCMS04F16	HCMA04F9 _ _ _	HIMS04F9 HIMS04F13 HIMS04F16	HIMA04F9 — —	HPMS04F9 HPMS04F13 HPMS04F16	HPMA04F9 — —
5	(1) (5) (2) (3)	.24"32" (6.1-8.1) .39"47" (9.9-11.9) .47"55" (11.9-13.1)	HCMS05F9 HCMS05F13 HCMS05F16	HCMA05F9 - -	HIMS05F9 HIMS05F13 HIMS05F16	HIMA05F9 - -	HPMS05F9 HPMS05F13 HPMS05F16	HPMA05F9 - -

# Female, Straight Male, Straight



# Female, Right Angle Male, Right Angle



#### Male In-Line, Straight



#### Male In-Line, Right Angle





#### **Features and Benefits**

#### Micro-Quick® Control Connectors

- Nickel plated brass coupling nuts and receptacle shells
- · Black overmold and cable
- Insulgrip connector body design
- Beryllium copper socket contacts
- Standard #22 AWG cable 85% copper braid coverage
- Plating resists corrosion in high abuse environments
- Strong, resilient base metal ensures contacts maintain their shape and continuity over time.
- · Cable resists nicks and abrasions and provides shielding when braid is terminated
- Resilient base metal maintains socket contact shape
- Ergonomic connector body has an industrial look







#### **Housing Design**

• Gated strain relief with graduated window sizes distributes force away from contacts to protect terminations



Strain Relief

Corrosion Resistance

#### Internal Design

- Hard gold over palladium/nickel contact plating high mating cycles and longer contact life
- O-rings for moisture protection
- Custom knurled, anti-vibration coupling nut prevents conection from loosening under harsh vibration conditions
- Indicator ring ensures proper mating

#### **Material Specifications**

Contact Plating

Insulator Materials Nylon 6/6, White Contact Materials Pins - Brass

Sockets - Beryllium copper Hard gold over palladium/nickel Glass filled polyurethane, Black

Overmold Material Coupling Nut, Metallic Nickel plated brass Coupling Nut, Nylon Nylon 6/6, Black Receptacle Shell Nickel plated brass Cable #22 AWG -PVC jacket (black)

PVC conductor insulation Copper braid - 85% coverage

Stranding - 19/34

#18 AWG -TPE jacket (black)

PVC conductor insulation

Stranding - 41/34

#22 AWG -20 pounds min per UL2238 #18 AWG -30 pounds min per UL 2238

#### **Electrical Specifications**

Voltage Rating 300V DC/300V AC

Amperage #22 AWG - 2&3P=5A, 4&5P=4A, 6P=3A #18 AWG - 2&3P=8A, 4P=6A, 5P=5A

Contact Resistance  $\leq$  5 m $\Omega$ Isolation Resistance  $\geq 1000 \text{ M}\Omega$ 

#### **Environmental Specifications**

Moisture Protection UL Type 4, 4X, 12 and 13 Ingress Protection IP66 Suitability

Operating Temperature #22 AWG PVC cable: -20°C to 105° C

#18 AWG TPE cable: -40°C to 105° C 500 hours salt spray per MIL-STD-1344,

Method 1001

Vibration Resistance 10 - 2,000 Hz @15g per MIL-STD-1344,

Method 2005

#### Certifications

UL 2238 and UL50E, File No. E192071

CSA Certified, C22.2 No. 182.3 and CSA C22.2 No. 94.2-07

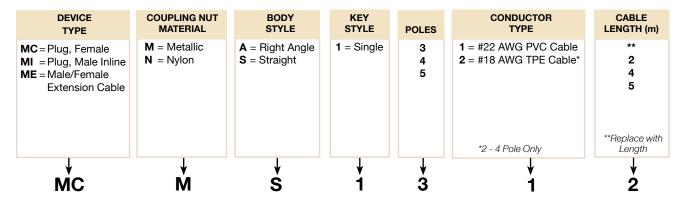


#### Micro-Quick® Single Key 3 - 5 Pole Plugs

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number MCMS1312 is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Consult the factory for additional cable lengths or cable types.

#### Micro-Quick® 3 - 5 Pole Single Key Plugs

Catalog numbers using #22 AWG PVC cable are listed below. For #18 AWG TPE cable, change the conductor type per the Hubbell Logic chart above.

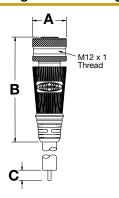
	Male Face Shown Female - mirror		F	emale Plugs	Male In-Line Plugs	Male/Female Extension Cables
Poles	image	Cable Length	Straight	Right Angle	Straight	Straight
3	(3 0)	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths.▲	MCMS1312 MCMS1314 MCMS1315 MCMS131**	MCMA1312 MCMA1314 MCMA1315 MCMA131**	MIMS1312 MIMS1314 MIMS1315 MIMS131**	MEMS1312 MEMS1314 MEMS1315 MEMS131**
4	(3 0)	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths.	MCMS1412 MCMS1414 MCMS1415 MCMS141**	MCMA1412 MCMA1414 MCMA1415 MCMA141**	MIMS1412 MIMS1414 MIMS1415 MIMS141**	MEMS1412 MEMS1414 MEMS1415 MEMS141**
5	(0 6 0) (4)	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths.	MCMS1512 MCMS1514 MCMS1515 MCMS151**	MCMA1512 MCMA1514 MCMA1515 MCMA151**	MIMS1512 MIMS1514 MIMS1515 MIMS151**	MEMS1512 MEMS1514 MEMS1515 MEMS151**

Note: ▲ Replace \*\* with length required in meters. For nylon coupling nuts, replace "M" with "N" per the ordering chart above. Example: change MCMA1412 to MCMA1412.



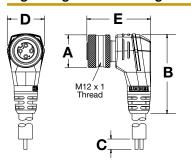
### Micro-Quick® Single Key 3 - 5 Pole Plugs

#### **Straight Female Plug**



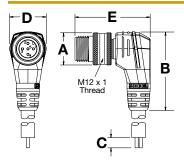
Α	0.59" (15.0)
В	1.83" (46.5)
С	2.75" (69.9)

#### **Right Angle Female Plug**



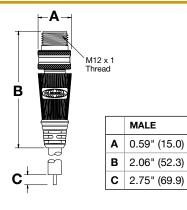
Α	0.59" (15.0)
В	1.44" (36.6)
С	2.75" (69.9)
D	0.67" (17.0)
Е	1.15" (29.2)

#### **Right Male In-Line Plug**

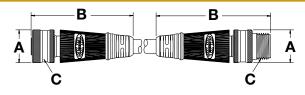


Α	0.59" (15.0)
В	1.44" (36.6)
С	2.75" (69.9)
D	0.67" (17.0)
Е	1.38" (35.1)

#### Straight Male In-Line Plug



#### **Extension Cable**



	FEMALE	MALE		
Α	0.59" (15.0)	0.59" (15.0)		
В	1.83" (46.5)	2.06" (52.3)		
С	M12 x 1			

#### **Cable Diameters By Cable Type**

Number of Conductors	#22 AWG PVC	#18 AWG TPE
3	0.21" (5.3)	0.24" (6.1)
4	0.22" (5.7)	0.26" (6.6)
5	0.26" (6.6)	0.28" (7.1)

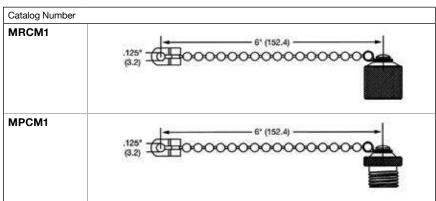
#### **Conductor Color Code**

Contact Number	3 Pole	4 Pole	5 Pole
1	Brown	Brown	Brown
2	Not Used	White	White
3	Blue	Blue	Blue
4	Black	Black	Black
5	Not Used	Not Used	Gray

#### **Accessories**

#### **Dust Caps**

Closure caps protect plugs and receptacles when not in use. Thread is M12 x 1.



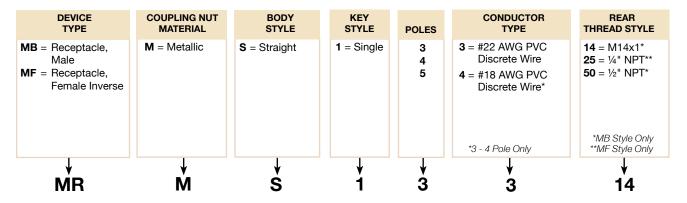


#### Micro-Quick® Single Key 3 - 5 Pole Receptacles

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number **MRMS13314** is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Consult the factory for additional cable lengths or cable types.

#### Micro-Quick® 3 - 5 Pole Single Key Receptacles- #22 AWG Discrete Wire\*

Catalog numbers using #22 AWG PVC discrete wire are listed below. For #18 AWG PVC discrete wire, change the conductor type per the Hubbell Logic chart above.

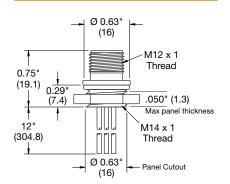
	Male Face Shown Female - mirror	Male Receptacle Rear Thread Style		Female Inverse Receptacles Rear Thread Style
Poles	image	M14 x 1	½" NPT	1/4" NPT
3	(3 0)	MBMS13314	MBMS13350	MFMS13325
4	(3 O) (9 O)	MBMS14314	MBMS14350	MFMS14325
5	(3 S O) (4)	MBMS15314	MBMS15350	MFMS15325

Note: \*For #18 AWG discrete wire, replace the conductor type per Hubbell Logic chart above. All receptacles available in 1ft. length standard. For additional lengths, please consult factory.

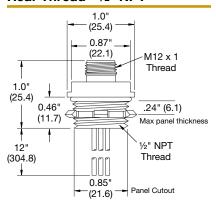


### Micro-Quick® Single Key 3 - 5 Pole Receptacles

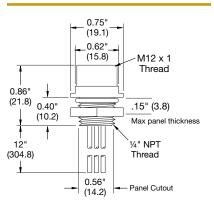
#### Male Receptacle Rear Thread - M14x1



#### Male Receptacle Rear Thread - ½" NPT



# Female Inverse Receptacle Rear Thread - 1/4" NPT



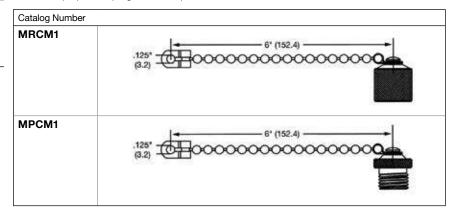
#### **Conductor Color Code - Single Key**

Contact Number	3 Pole	4 Pole	5 Pole
1	Brown	Brown	Brown
2	Not Used	White	White
3	Blue	Blue	Blue
4	Black	Black	Black
5	Not Used	Not Used	Grav

#### **Accessories**

#### **Dust Caps**

Closure caps protect plugs and receptacles when not in use. Thread is M12 x 1.



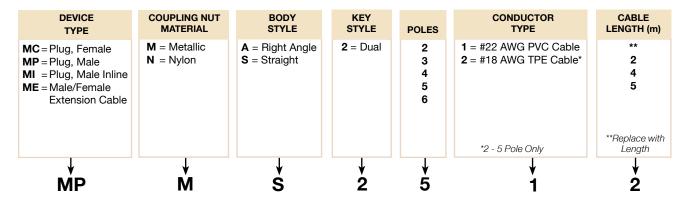


#### Micro-Quick® Dual Key 2 - 6 Pole Plugs

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number MPMS2512 is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Consult the factory for additional cable lengths or cable types.

#### Micro-Quick® 2 - 6 Pole Dual Key Plugs

Catalog numbers using #22 AWG PVC cable are listed below. For #18 AWG TPE cable, change the conductor type per the Hubbell Logic chart above.

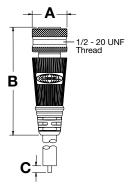
	Male Face Shown Female - mirror		Femal	e Plugs		Male Plugs		Male/Female Extension Cables
Poles	image	Cable Length	Straight	Right Angle	Straight	Right Angle	In-Line Straight	Straight
2	0	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths.	MCMS2212 MCMS2214 MCMS2215 MCMS221**	MCMA2212 MCMA2214 MCMA2215 MCMA221**	MPMS2212 MPMS2214 MPMS2215 MPMS221**	MPMA2212 MPMA2214 MPMA2215 MPMA221**	MIMS2212 MIMS2214 MIMS2215 MIMS221**	MEMS2212 MEMS2214 MEMS2215 MEMS221**
3	(9 0)	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths •	MCMS2312 MCMS2314 MCMS2315 MCMS231**	MCMA2312 MCMA2314 MCMA2315 MCMA231**	MPMS2312 MPMS2314 MPMS2315 MPMS231**	MPMA2312 MPMA2314 MPMA2315 MPMA231**	MIMS2312 MIMS2314 MIMS2315 MIMS231**	MEMS2312 MEMS2314 MEMS2315 MEMS231**
4	(3) (0)	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths.	MCMS2412 MCMS2414 MCMS2415 MCMS241**	MCMA2412 MCMA2414 MCMA2415 MCMA241**	MPMS2412 MPMS2414 MPMS2415 MPMS241**	MPMA2412 MPMA2414 MPMA2415 MPMA241**	MIMS2412 MIMS2414 MIMS2415 MIMS241**	MEMS2412 MEMS2414 MEMS2415 MEMS241**
5	(1) (3) (2) (4)	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths	MCMS2512 MCMS2514 MCMS2515 MCMS251**	MCMA2512 MCMA2514 MCMA2515 MCMA251**	MPMS2512 MPMS2514 MPMS2515 MPMS251**	MPMA2512 MPMA2514 MPMA2515 MPMA251**	MIMS2512 MIMS2514 MIMS2515 MIMS251**	MEMS2512 MEMS2514 MEMS2515 MEMS251**
6	(0 S) (0 S) (0 S) (0 S)	6.56 ft (2m) 13.12 ft (4m) 16.40 ft (5m) All other lengths	MCMS2612 MCMS2614 MCMS2615 MCMS261**	MCMA2612 MCMA2614 MCMA2615 MCMA261**	MPMS2612 MPMS2614 MPMS2615 MPMS261**	MPMA2612 MPMA2614 MPMA2615 MPMA261**	MIMS2612 MIMS2614 MIMS2615 MIMS261**	MEMS2612 MEMS2614 MEMS2615 MEMS261**

Note: ▲ Replace \*\* with length required in meters. For nylon coupling nuts, replace "M" with "N" per the ordering chart above. Example: change MCMS2314 to MCNS2314.



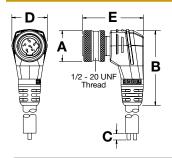
### Micro-Quick® Dual Key 2 - 6 Pole Plugs

#### **Straight Plug**



	MALE	FEMALE
Α	0.59" (15.0)	0.59" (15.0)
В	1.83" (46.5)	1.83" (46.5)
С	2.75" (69.9)	2.75" (69.9)

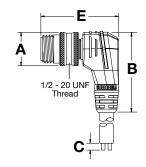
#### **Right Angle Plug**



	MALE	FEMALE
Α	0.59" (15.0)	0.59" (15.0)
В	1.44" (36.6)	1.44" (36.6)
С	2.75" (69.9)	2.75" (69.9)
D	0.67" (17.0)	0.67" (17.0)
Е	1.15" (29.2)	1.15" (29.2)

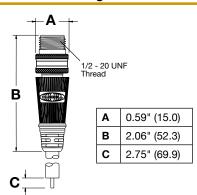
#### **Right Angle Male In-Line Plug**



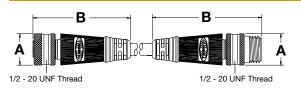


Α	0.59" (15.0)
В	1.44" (36.6)
С	2.75" (69.9)
D	0.67" (17.0)
Е	1.38" (35.1)

#### Male In-Line Plug



#### **Extension Cable**



	MALE	FEMALE	
Α	0.59" (15.0)	0.59" (15.0)	
В	2.06" (52.3)	1.83" (46.5)	

#### **Conductor Color Code - Dual Key**

Contact Number	2 Pole	3 Pole	4 Pole	5 Pole	6 Pole
1	Brown	Green	Red/Black	Red/White	Red/White
2	Blue	Red/Black	Red/White	Red	Red
3		Red/White	Red	Green	Green
4			Green	Red/Yellow	Red/Yellow
5				Red/Black	Red/Black
6					Red/Blue

#### **Cable Diameters By Cable Type**

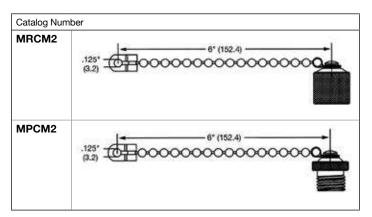
Number of Conductors	#22 AWG PVC	#18 AWG TPE	
2	0.20" (5.1)	0.23" (5.8)	
3	0.21" (5.3)	0.24" (6.09)	
4	0.22" (5.7)	0.26" (6.6)	
5	0.26" (6.7)	0.28" (7.1)	
6	0.26" (6.5)	_	

#### Dimensions in Inches (mm)

#### **Accessories**

#### Dust Caps

Closure caps protect plugs and receptacles when not in use. Key style is for dual with thread of ½"-20 UNF.



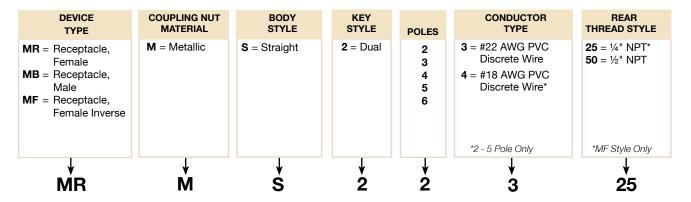


#### Micro-Quick® Dual Key 2 - 6 Pole Receptacles

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number MRMS22325 is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Consult the factory for additional cable lengths or cable types.

Male Receptacle		Female Inverse Receptacles
Rear Thread Style		Rear Thread Style
M14 X 1 ½" NPT		1⁄4" NPT

#### Micro-Quick® 2 - 6 Pole Dual Key Receptacles

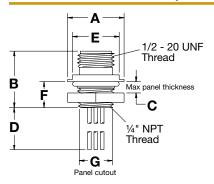
Catalog numbers using #22 AWG PVC cable are listed below. For #18 AWG PVC discrete wire, change the conductor type per the Hubbell Logic chart above.

	Male Face Shown Female - mirror	Female Receptacle Rear Thread Style		Male Receptacle Rear Thread Style		Female Inverse Receptacles
Poles	image	1/4" NPT	½" NPT	1/4" NPT	½" NPT	1/4" NPT
2	0	MRMS22325	MRMS22350	MBMS22325	MBMS22350	MFMS22325
3	(3 2)	MRMS23325	MRMS23350	MBMS23325	MBMS23350	MFMS23325
4	(3) (0)	MRMS24325	MRMS24350	MBMS24325	MBMS24350	MFMS24325
5	(0 s) (0 s) (0 s)	MRMS25325	MRMS25350	MBMS25325	MBMS25350	MFMS25325
6	0000	MRMS26325	MRMS26350	MBMS26325	MBMS26350	MFMS26325



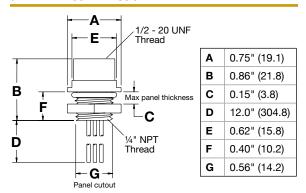
### Micro-Quick® Dual Key 2 - 6 Pole Receptacles

#### 1/4" NPT Rear Thread Receptacle

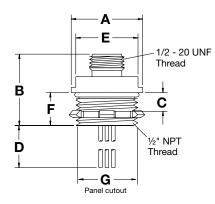


	MALE	FEMALE
Α	0.75" (19.1)	0.75" (19.1)
В	0.75" (19.1)	0.86" (21.8)
С	0.10" (2.5)	0.10" (2.5)
D	12.0" (304.8)	12.0" (304.8)
Е	0.62" (15.8)	0.62" (15.8)
F	0.35" (8.9)	0.38" (9.7)
G	0.56" (14.2)	0.56" (14.2)

# Female Inverse Receptacle 1/4" NPT Rear Thread



#### 1/2" NPT Rear Thread Receptacle



	MALE	FEMALE
Α	1.00" (25.4)	1.00" (25.4)
В	1.00" (25.4)	1.00" (25.4)
С	0.24" (6.10)	0.24" (6.10)
D	12.0" (304.8)	12.0" (304.8)
Е	0.87" (22.1)	0.87" (22.1)
F	0.46" (11.7)	0.46" (11.7)
G	0.85" (21.6)	0.85" (21.6)

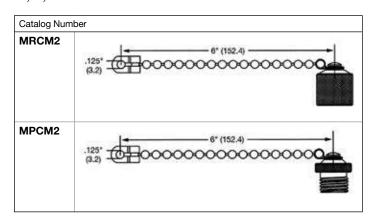
#### **Conductor Color Code - Dual Key**

Contact Number	2 Pole	3 Pole	4 Pole	5 Pole	6 Pole
1	Brown	Green	Red/Black	Red/White	Red/White
2	Blue	Red/Black	Red/White	Red	Red
3		Red/White	Red	Green	Green
4			Green	Red/Yellow	Red/Yellow
5				Red/Black	Red/Black
6					Red/Blue

#### **Accessories**

#### **Dust Caps**

Closure caps protect plugs and receptacles when not in use. Key style is for dual with thread of ½"-20 UNF.





#### **Features and Benefits**

#### IP66 SUITABILITY

#### Micro-Quick® Field Attachable Connectors - Screw Terminal Style

#### **Electrical Specifications**

Voltage Rating 250V Amperage 4A Wire Size, Max #18 AWG

#### **Mechanical Specifications**

Coupling Nut Nickel plated brass, SST consult factory

Connector Shell PBT
Connector Insert Nylon

Contacts Brass, gold plate over palladium nickel

#### **Environmental Specifications**

Moisture Resistance IP66 Suitability
Operating Temperature -40°C to 90°C





#### **Housing Design**

- High impact body design
- Strain relief protects terminations



#### Internal Design

- Superior contact design utilizing high performance gold over palladium nickel plating
- Coupling nut anodized aluminum, SST option consult factory
- Precision wire funnels eliminate stray strands

#### 3 - 5 Pole Field Attachable Connectors

	Male Face Shown		Female (	Connector	Male In-Li	ne Connector
Poles	Female - mirror image	Cable Range	Straight	Right Angle	Straight	Right Angle
3	(3) (1)	.16"24" (4.1-6.1) .24"32" (6.1-8.1)	MCMS23F7 MCMS23F9	MCMA23F7 MCMA23F9	MIMS23F7 MIMS23F9	MIMA23F7 MIMA23F9
4	(3 0)	.16"24" (4.1-6.1) .24"32" (6.1-8.1)	MCMS14F7 MCMS14F9	MCMA14F7 MCMA14F9	MIMS14F7 MIMS14F9	MIMA14F7 MIMA14F9
5	(3 b) (3 6 0) (4)	.16"24" (4.1-6.1) .24"32" (6.1-8.1)	MCMS15F7 MCMS15F9	MCMA15F7 MCMA15F9	MIMS15F7 MIMS15F9	MIMA15F7 MIMA15F9

#### Female, Straight



#### Female, Right Angle



#### Male In-Line, Straight



### Male In-Line, Right Angle





#### **Features and Benefits**

#### Micro-Quick® Field Attachable Connectors - IDC Style

Allows field installation of control connector. Insulation Displacement Contacts do not require stripped conductors, greatly speeding installation.

#### **Material Specifications**

Housing Polyester Elastomer, Black Wire Guide Nylon 6/6, Gray Strain Relief Bushing Neoprene, Black

Contact Materials Copper Alloy
Contact Plating Tin over Nickel

Coupling Nut

O-ring

Cable Compression Nut

Zinc Alloy with Nickel Plating
Neoprene, Black
Zinc Alloy with Nickel Plating

#### **Electrical Specifications**

Electrical Sp	ecincations	
Catalog Suffix	IDC	IDCL
Voltage Rating	32V AC/DC	50V AC/DC
Wire Range	#22 AWG max.,	#18 AWG max.,
	#24 AWG min.	#22 AWG min.
Cable Diameters	.16" to .21"	.22" to .32"
	(4.1 to 5.3 mm)	(5.6 to 8.1 mm)
Amperage	3A	6A
Contact Res.	$<$ 5 m $\Omega$	$<$ 5 m $\Omega$



#### **Housing Design**

- Rugged, nickel-plated hardware, excellent corrosion and abuse resistance
- Strain relief bushing protects terminations and provides IP66 ingress protection
- Operating temperature -20°C to 110°C



#### Internal Design

IP66

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- Copper alloy insulation displacement contacts
- Wire guide for virtually toolless termination

#### Micro-Quick® IDC Style

Ī		Male Face Shown Female - mirror			Female	Connector	Male In-Li	ne Connector
	Poles	image	Cable Range	Wire Gauge	Straight	Right Angle	Straight	Right Angle
	3	(3 0)	.16"21" (4.1-5.3) .22"32" (5.6-8.1)	22 - 24 18 - 22	MCMS13IDC MCMS13IDCL	<u>-</u>	MIMS13IDC MIMS13IDCL	<u>-</u>
	4	(3 O) (9	.16"21" (4.1-5.3) .22"32" (5.6-8.1)	22 - 24 18 - 22	MCMS14IDC MCMS14IDCL	MCMA14IDC —	MIMS14IDC MIMS14IDCL	MIMA14IDC —

#### Female, Straight



Dimensions in Inches (mm)

#### Female, Right Angle



#### Male In-Line, Straight



#### Male In-Line, Right Angle





#### **Features and Benefits**

#### Nano-Quick® Control Connectors

- Nickel plated brass coupling nuts and receptacle shells
- Black overmold and cable
- Insulgrip connector body design
- UL Listed cable assemblies and receptacles
- Plating resists corrosion in high abuse environments
- Cable assembly resists dirt and blends with environment giving a clean look to the installation
- Third party certified for electrical, mechanical and environmental performance
- Ergonomic connector body has an industrial look
- Strong, resilient base metal ensures contacts maintain their shape and continuity over time



**IP66** 



#### **Housing Design**

- Gated strain relief with graduated window sizes improves flexibility, strength and protects wire terminations; superior arc of bend control
- Operating temperature
  - PVC Cable: -20° to 105° C
  - TPE Cable: -40°C to 105° C



#### Internal Design

- Hard gold over palladium nickel contact plating; superior conductivity, extended contact life
- O-rings for moisture protection
- Anti-vibration coupling nut prevents conection from loosening under harsh vibration conditions
- Beryllium copper socket contacts ensures contacts maintain their shape and continuity

#### **Material Specifications**

Insulator Materials Nylon 6/6, White Cable #24 AWG PVC jacket, Black, PVC conductor Contact Materials insulation, Copper braid - 85% coverage, Pins - Brass, Sockets Stranding 19/36 Sockets - Beryllium copper Contact Plating Hard gold over palladium/nickel #24 AWG -TPE jacket, Black, PVC conductor Overmold Material Polyurethane, Black insulation, Stranding - 19/36 Coupling Nut, Metallic Nickel plated brass Strain Relief 20 pounds min per UL 2238 Receptacle Shell Nickel plated brass

#### **Electrical Specifications**

Voltage Rating 125V AC/75V DC

Amperage 3&4P=4A

Contact Resistance  $\leq 5 \text{ m}\Omega$ Isolation Resistance  $\geq 1000 \text{ M}\Omega$ 

#### **Environmental Specifications**

Moisture Protection

Ingress Protection IP66 Suitability
Operating Temperature PVC Cable: -20° to 105° C
TPE Cable: -40°C to 105° C

Corrosion Resistance 500 hours salt spray per
MIL-STD-1344, Method 1001

Vibration Resistance 10 - 2,000 Hz @15g per MIL-STD1344,
Method 2005

UL Type 4, 4X, 12 and 13

#### Certifications

UL 2238 and UL50E, File No. E192071

CSA Certified, C22.2 No. 182.3 and CSA C22.2 No. 94.2-07

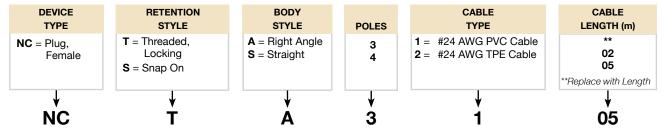


#### Nano-Quick® 3 - 4 Pole Plugs and Receptacles

Choose the appropriate configuration from the Selector below.

#### **Hubbell Logic Configurator**

For example, catalog number NCTA3105 is derived as follows:



Note: Availability of specific items may vary. Consult factory for delivery. Use this chart to build plugs to meet any application need. Consult the factory for additional cable lengths or cable types.

#### 3 - 4 Pole Female Plugs

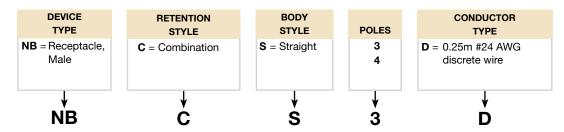
Catalog numbers using #24 AWG PVC cable are listed below. For #24 AWG TPE cable, change the cable type per the Hubbell Logic chart above.

	Female Face		Th	readed, Locking	S	nap Together
Poles	Shown	Cable Length	Straight	Right Angle	Straight	Right Angle
3	(4) (3) (1)	6.56 ft (2m) 16.40 ft (5m) All other lengths	NCTS3102 NCTS3105 NCTS31**	NCTA3102 NCTA3105 NCTA31**	NCSS3102 NCSS3105 NCSS31**	NCSA3102 NCSA3105 NCSA31**
4	(4 2) (3 1)	6.56 ft (2m) 16.40 ft (5m) All other lengths ▲	NCTS4102 NCTS4105 NCTS41**	NCTA4102 NCTA4105 NCTA41**	NCSS4102 NCSS4105 NCSS41**	NCSA4102 NCSA4105 NCSA41**

Note: ▲ Replace \*\* with length required in feet. For snap on retention style, replace "T" with "S" per the ordering chart above. Example: change NC**T**A3105 to NC**S**A3105.

#### **Hubbell Logic Configurator**

For example, Catalog Number NBCS3D is derived as follows:



#### 3 - 4 Pole Male Receptacles

	Male Face	Male Receptacle Rear Thread Style
Poles	Shown	M8 x 1
3	(1) (3)	NBCS3D

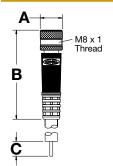
	Male Face	Male Receptacle Rear Thread Style
Poles	Shown	M8 x 1
4	② ④ ① ③	NBCS4D

Note: Replace \*\* with length required in feet.



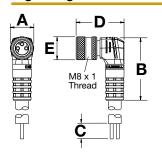
### Nano-Quick® 3 - 4 Pole Plugs and Receptacles

#### **Straight Female Locking Plug**



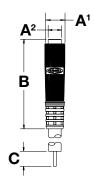
Α	0.38" (9.7)
В	1.51" (38.4)
С	2.75" (69.9)

#### **Right Angle Female Locking Plug**



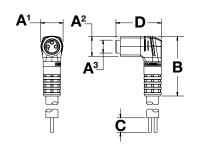
Α	0.39" (9.9)
В	1.04" (26.4)
С	2.75" (69.9)
D	0.78" (19.8)
Е	0.38" (9.7)

#### **Straight Female Snap Together Plug**



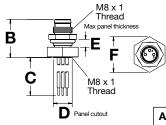
A <sup>1</sup>	0.34" (8.6)
A <sup>2</sup>	0.22" (5.6)
В	1.50" (38.1)
С	2.75" (69.9)

#### **Right Angle Female Snap Together Plug**



A <sup>1</sup>	0.39" (9.9)
A <sup>2</sup>	0.38" (9.7)
A <sup>3</sup>	0.22" (5.6)
В	1.04" (26.4)
С	2.75" (69.9)
D	0.79" (20.1)

#### **Male Combination Receptacle**



Α	0.31" (7.9)
В	0.63" (16.0)
С	12.0" (304.8)
D	0.35" (8.8)
Е	0.80" (2.0)
F	0.59" (15.0)

#### **Cable Diameters By Cable Type**

Number of Conductors	#24 AWG PVC	#24 AWG TPE	
3	0.21" (5.3)	0.21" (5.3)	
4	0.21" (5.3)	0.21" (5.3)	

#### **Conductor Color Code**

Contact Number	3 Pole	4 Pole	
1	Brown	Brown	
2	Not Used	White	
3	Blue	Blue	
4	Black	Black	

#### **Features and Benefits**

#### Nano-Quick® Field Attachable Connectors - IDC Style

Allows field installation of control connector. Insulation Displacement Contacts do not require stripped conductors, greatly speeding installation.

#### **Material Specifications**

Housing Polyester Elasomer, Black Wire Guide Nylon 6/6, Gray Strain Relief Bushing Neoprene, Black Contact Materials Copper Alloy Tin over Nickel

Coupling Nut Zinc Alloy with Nickel Plating

O-ring Neoprene, Black

Cable Compression Nut Zinc Alloy with Nickel Plating

#### **Electrical Specifications**

Voltage Rating 32VAC/DC

Wire Range #22 AWG max., #24 AWG min.
Cable Diameters .13" to .21" (3.3 to 5.3 mm)

 $\begin{array}{ll} \text{Amperage} & \text{3A} \\ \text{Contact Resistance} & < 5 \text{ m}\Omega \end{array}$ 



#### **Housing Design**

- Rugged, nickel-plated hardware, excellent corrosion and abuse resistance
- Strain relief bushing protects terminations and provides IP66 ingress protection
- Operating temperature -20°C to 110°C



#### Internal Design

IP66

- Copper alloy insulation displacement contacts
- Wire guide for virtually toolless termination

#### Nano-Quick® IDC

	Male Face Shown Female - mirror			Female Connector	Male Connector
Poles	image	Cable Range	Wire Gauge	Straight	Straight
3	(T) (3)	.13"21" (3.3-5.3)	22 - 24	NCTS13IDC	NITS13IDC
4	(2 (4) (1 (3)	.13"21" (3.3-5.3)	22 - 24	_	NITS14IDC

#### Female, Straight



### Male, Straight





#### Signal-Quick® Cushioned Sensor Mounts

Install tubular proximity sensors with a Cushioned Sensor Mount and protect against over-travel damage. Reduces replacement expenses and downtime. Hubbell's Cushioned Sensor Mounts feature:

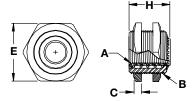
- Spring-loaded housing eliminates impact damage
- Reduces downtime and replacement expenses
- Reduces spare sensor inventories
- Shielded and non-shielded end caps eliminate abrasion damage
- Block style or threaded housing designs
- Anodized aluminum or stainless steel

When something out of the ordinary happens or targets over-travel, the sensor simply retracts to avoid damage. The sensor returns to its original position and the equipment continues to operate.

#### **Material Specifications**

Material: An

Anodized aluminum housing Zinc-plated brass jam nuts CSM12LP is all Stainless Steel

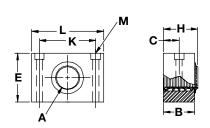




**Threaded Style** 

#### **Threaded Style**

	,···				
Catalog Number	Α	В	С	Е	Н
CSM8	M8 x 1	M16 x 1.5	0.12" (3.1)	0.87" (22.1)	0.87" (22.1)
CSM12LP	M12 x 1	M18 x 1	0.16" (4.1)	0.95" (24)	0.83" (21.1)
CSM18	M18 x 1	M30 x 1.5	0.20" (5.1)	1.41" (35.8)	1.17" (29.7)
CSM30	M30 x 1.5	M47 x 1.5	0.20" (5.1)	2.01" (51)	1.47" (37.3)





**Block Style** 

#### **Block Style**

Catalog Number	Α	В	С	E	Н	K	L	М
BCSM8	M8 x 1	0.75" (19)	0.37" (9.5)	0.62" (15.8)	0.87" (22.1)	0.72" (18.4)	1.0" (25.4)	0.14" (3.6)
BCSM12	M12 x 1	0.75" (19)	0.37" (9.5)	1.0" (25.4)	0.87" (22.1)	0.98" (24.8)	1.5" (38.1)	0.20" (5.2)
BCSM18	M18 x 1	1.0" (25.4)	0.50" (12.7)	1.25" (31.7)	1.17" (29.7)	1.21" (30.7)	1.5" (38.1)	0.18" (4.6)
BCSM30	M30 x 1.5	1.38" (34.9)	0.68" (17.5)	2.0" (50.8)	1.47" (37.4)	2.03" (51.5)	2.5" (63.5)	0.26" (6.7)

#### Signal-Quick® Sensor Mounting Brackets

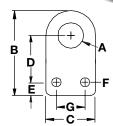
Eliminate design time and fabrication expense. Choose the Hubbell Angle Bracket or Flat Bracket to mount any tubular proximity sensor.

- Fixed mounting patterns or multi-slotted for positioning versatility.
- Industry standard mounting footprints.
- · Rapid installation.
- Immediately available from stock.
- Cost savings over "make your own".









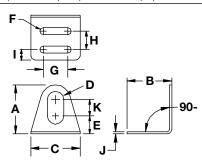
#### **Material Specifications**

Material: Stainless Steel

#### **Flat Brackets**

Catalog Number	Α	В	С	D	E	F	G	Thickness
FB12	0.48" (12.1)	1.95" (49.6)	1.25" (31.8)	0.86" (21.8)	0.47" (11.9)	0.22" (5.54)	0.75" (19.1)	0.12" (3.02)
FB18	0.72" (18.2)	2.27" (57.6)	1.38" (34.9)	1.36" (34.6)	0.22" (5.56)	0.24" (6.05)	1.0" (25.4)	0.12" (3.02)
FB30	1.19" (30.1)	3.42" (86.9)	2.0" (50.8)	2.05" (52)	0.37" (9.40)	0.31" (7.94)	1.25" (31.8)	0.12" (3.02)





#### **Material Specifications**

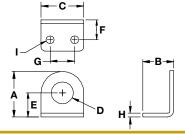
Material: Stainless steel

Zinc-plated steel (AAB47)

#### **Adjustable Angle Brackets**

Catalog Number	Α	В	С	D	E	F	G	Н	1	J	К
AAB08	1.0" (25.4)	1.25" (31.8)	1.25" (31.8)	0.34" (8.74)	0.31 (7.92)	0.22" (5.54)	0.62" (15.9)	0.46" (11.9)	0.28" (7.14)	0.07" (1.78)	0.38" (9.53)
AAB12	1.5" (38.1)	1.37" (34.8)	1.5" (38.1)	0.50" (12.7)	0.55" (13.9)	0.22" (5.54)	0.75" (19.1)	0.56" (14.3)	0.31" (7.92)	0.07" (1.78)	0.50" (12.7)
AAB18	2.0" (50.8)	1.37" (34.8)	1.75" (44.5)	0.72" (18.3)	0.75" (19.1)	0.22" (5.54)	1.0" (25.4)	0.56" (14.3)	0.31" (7.92)	0.07" (1.78)	0.63" (15.9)
AAB22	2.0" (50.8)	1.37" (34.8)	1.75" (44.5)	0.88" (22.2)	0.69" (17.4)	0.22" (5.54)	1.0" (25.4)	0.56" (14.3)	0.31" (7.92)	0.07" (1.78)	0.63" (15.9)
AAB30	2.5" (63.5)	1.75" (44.5)	2.25" (57.2)	1.19" (30.1)	0.91" (23)	0.28" (7.11)	1.37" (34.8)	0.81" (20.6)	0.41" (10.3)	0.09" (2.29)	0.75" (19.1)





#### **Material Specifications**

Material: Stainless Steel

#### **Angle Brackets**

Catalog Number	Α	В	С	D	E	F	G	Н	I
AB12	1.16"" (29.3)	1.0"" (25.4)	1.25" (31.8)	0.48" (12.1)	0.53" (13.5)	0.53" (13.5)	0.75" (19.1)	0.12" (3.02)	0.22" (5.6)
AB18	1.47" (37.3)	1.0" (25.4)	1.38" (34.9)	0.48" (12.1)	0.53" (13.5)	0.78" (19.8)	1.0" (25.4)	1.12" (3.02)	0.24" (6.0)
AB30	2.13" (54.0)	1.50" (38.1)	2.00" (50.8)	1.19" (30.1)	1.13" (28.7)	1.13" (28.7)	1.25" (31.8)	0.12" (3.02)	0.31" (7.9)

#### Signal-Quick® End Caps

- Use alone or with Cushioned Sensor Mount.
- Beveled edge deflects lateral impacts.
- Reduces and or eliminates abrasion damage.
- Reduces downtime and sensor replacement expenses.



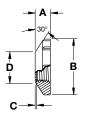
#### **Specifications**

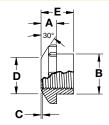
Material: Delrin (Non-Shielded)

Glass-filled Nylon (Shielded) Polypropylene (EC30)

#### **Shielded**

Non-Shielded





#### **End Caps**

Shielded	Style	Α	В	С	D	E	Thread
EC08	8mm	0.21" (5.28)	0.60" (15.2)	0.015" (.38)	0.25" (6.45)	N/A	M8 x 1
EC12	12mm	0.25" (6.35)	0.96" (24.4)	0.015" (.38)	0.45" (11.4)	N/A	M12 x 1
EC18	18mm	0.33" (8.38)	1.23" (31.3)	0.03" (.76)	0.73" (17.5)	N/A	M18 x 1
EC30	30mm	0.30" (7.62)	1.72" (43.7)	0.03" (.76)	1.13" (28.6)	N/A	M30 x 1
Non-Shielded							
EC08N	8mm	0.20" (5.08)	0.57" (14.5)	0.015" (.38)	0.25" (6.45)	0.37" (9.50)	M8 x 2
EC12N	12mm	0.25" (6.35)	0.90" (22.9)	0.03" (.76)	0.45" (11.4)	0.68" (17.3)	M12 x 1
EC18N	18mm	0.33" (8.38)	1.34" (34.0)	0.025" (.64)	0.67" (17.0)	0.70" (17.8)	M18 x 1
EC30N	30mm	0.31" (7.87)	1.75" (44.5)	0.04" (1.02)	1.15" (29.2)	0.90" (22.9)	M30 x 1

Note: The wear surface thickness (Dimension C) does not reduce a sensor's sensing range, but will consume an equal amount of the gap required between the sensor and target.

#### Signal-Quick® Block Mounts

Bond to sensor face with any epoxy.

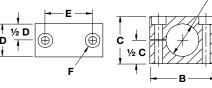
- Use when threads are inaccessible.
- Reduces and/or eliminates abrasion damage.
- Reduces downtime and sensor replacement expenses.

#### **Specifications**

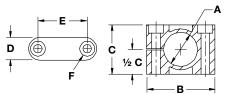
Material:

Glass-filled Nylon Anodized aluminum

#### Metallic



#### **Nylon**





#### **Block Mounts**

Metallic	Style	Α	В	С	D	Е	F
BM08M	8mm	0.32" (8.05)	0.62" (15.8)	1.0" (25.4)	0.75" (19.0)	0.72" (18.4)	0.14" (3.58)
BM12M	12mm	0.48" (12.1)	1.0" (25.4)	1.5" (38.1)	0.75" (19.0)	0.98" (24.9)	0.20" (5.08)
BM18M	18mm	0.71" (18.1)	1.25" (31.7)	1.5" (38.1)	1.0" (25.4)	1.21" (30.7)	0.18" (4.58)
ВМЗОМ	30mm	1.19" (30.1)	2.0" (50.8)	2.5" (63.5)	1.38" (34.9)	2.03" (51.5)	0.26" (6.73)
Nylon		,	, ,	, ,		, ,	,
BM08N	8mm	0.32" (8.05)	1.06" (27)	0.63" (16)	0.47" (12)	0.67" (17)	0.18" (4.5)
BM12N	12mm	0.48" (12.1)	1.26" (32)	0.79" (20)	0.47" (12)	0.87" (22)	0.18" (4.5)
BM16N	16mm	0.63" (16.1)	1.42" (36)	1.02" (26)	0.47" (12)	1.02" (26)	0.18" (4.5)
BM18N	18mm	0.71" (18.1)	1.42" (36)	1.02" (26)	0.47" (12)	1.02" (26)	0.18" (4.5)
BM20N	20mm	0.79" (20.1)	1.77" (45)	1.18" (30)	0.59" (15)	1.26" (32)	0.22" (5.5)
BM22N	22mm	0.87" (22.1)	1.77" (45)	1.18" (30)	0.59" (15)	1.26" (32)	0.22" (5.5)
BM30N	30mm	1.18" (30.1)	2.17" (55)	1.50" (38)	0.71" (18)	1.65" (42)	0.22" (5.5)

#### Signal-Quick® Universal Aiming Brackets

Attach limit switch style (30mm threaded base) or threaded barrel photoelectric and ultrasonic sensors. Achieve secure mounting quickly and with ease.

- Swivel action for aiming simplicity.
- Durable glass-filled nylon construction.
- Regular or extended base models.
- Sizes for 12, 18 and 30mm threaded sensors.

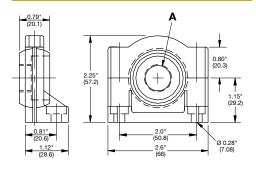
#### **Material Specifications**

Material:

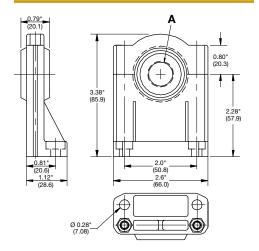
Glass-filled Nylon



#### **Bracket, Standard**



#### **Bracket, Extended**



#### **Universal Aiming Brackets**

Catalog Number	Style	Description	Thread
UB12	12mm	Bracket	M12 x 1
UB12E	12mm	Bracket, Extended Base	M12 x 1
UB18	18mm	Bracket	M18 x 1
UB18E	18mm	Bracket, Extended Base M18 x	
UB30	30mm	Bracket	M30 x 1.5
UB30E	30mm	Bracket, Extended Base	M30 x 1.5

#### CableTrak® Hose and Cable Carrier System

The design of CableTrak carriers provides easy access to components during installation and repair. The track's flip top design allows the installer to lay cable and hose components directly into the track instead of pulling them through the length of the track. Hubbell CableTrak carriers can be ordered as assembled kits with brackets or by the foot without brackets. The final length of the track is easily customized by adding or removing sections of track or individual links with a flat head screwdriver.

#### CableTrak® Installation

- 1. Unlock Tab.
- 2. Locking tabs secure the retaining bar into place. To unlock tabs, slide a flat head screwdriver under the tab and release it with a twisting motion.

#### Access/Install Cables and Hoses

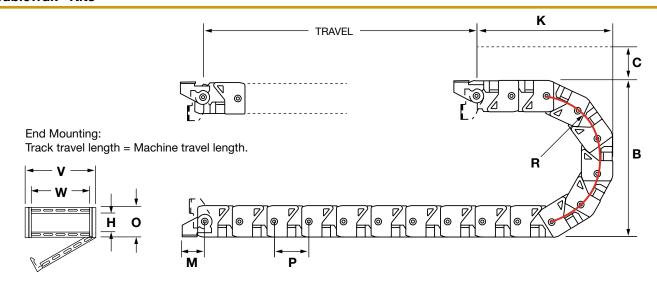
- Easy access is important, especially for pre-assembled cable/hose sets involving large O.D. plugs, receptacles, and couplings.
- 4. Lock Tab.
- **5.** To re-secure retaining bars, engage the hinge and snap the locking tab into place.







#### CableTrak® Kits



#### CableTrak® Kit with Brackets

Catalog Number	Track Length (ft)	W Inner Width	H Inner Height	A Max Hose/Cab O.D.	B Max Component Width	V Outer Width	O Outer Height	R Bend Radius	B Bend Height	C Clearance	K Min Brkt to Bend	M Brkt to Pivot	P Pitch	L* Curve Length (ft)
HCT10114K**	4.0'	0.59"	0.75"	0.286"	0.531"	1.03"	1.00"	1.44"	3.86"	2.00"	5.68"	1.33"	1.250"	1.000'
HCT10219K**	4.0'	1.00"	0.75"	0.382"	0.900"	1.44"	1.00"	1.91"	4.82"	2.00"	5.41"	1.33"	1.250"	1.000'
HCT16119K	4.0'	1.50"	1.00"	0.382"	1.350"	2.12"	1.62"	1.91"	5.44"	3.00"	5.72"	1.19"	1.812"	1.000'
HCT16134K	4.5'	1.50"	1.00"	0.688"	1.350"	2.12"	1.62"	3.44"	8.50"	3.00"	7.85"	1.19"	1.812"	1.500'
HCT16219K	4.0'	2.28"	1.00"	0.328"	2.052"	2.91"	1.62"	1.91"	5.44"	3.00"	5.72"	1.19"	1.812"	1.000'
HCT16234K	4.5'	2.28"	1.00"	0.688"	2.052"	2.91"	1.62"	3.44"	8.50"	3.00"	7.85"	1.19"	1.812"	1.500'
HCT16334K	4.5'	3.08"	1.00"	0.688"	2.772"	3.70"	1.62"	3.44"	8.50"	3.00"	7.85"	1.19"	1.812"	1.500'
HCT16434K	4.5'	4.06"	1.00"	0.688"	3.654"	4.69"	1.62"	3.44"	8.50"	3.00"	7.85"	1.19"	1.812"	1.500'
HCT25134K	4.5'	2.60"	1.75"	0.680"	2.340"	3.70"	2.50"	3.40"	9.30"	3.00"	8.31"	1.75"	2.500"	1.500'
HCT25234K	4.5'	4.25"	1.75"	0.680"	3.825"	5.36"	2.50"	3.40"	9.30"	3.00"	8.31"	1.75"	2.500"	1.500'
HCT25247K	5.0'	4.25"	1.75"	0.956"	3.825"	5.36"	2.50"	4.78"	12.06"	3.00"	10.52"	1.75"	2.500"	2.000'
HCT25347K	5.0'	6.60"	1.75"	0.956"	5.940"	7.70"	2.50"	4.78"	12.06"	3.00"	10.52"	1.75"	2.500"	2.000'

#### CableTrak® Kit without Brackets

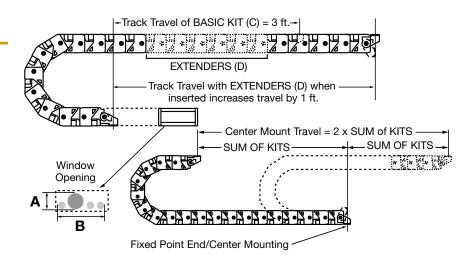
Catalog Number	Track Length (ft)	W Inner Width	H Inner Height	A Max Hose/Cab O.D.	B Max Component Width	V Outer Width	O Outer Height	R Bend Radius	B Bend Height	C Clearand	P ce Pitch	L* Curve Length (ft)
HCT101141**	1.0'	0.59"	0.75"	0.286"	0.531"	1.03"	1.00"	1.44"	3.86"	2.00"	1.250"	1.000'
HCT102191**	1.0'	1.00"	0.75"	0.382"	0.900"	1.44"	1.00"	1.91"	4.82"	2.00"	1.250"	1.000'
HCT161191	1.0'	1.50"	1.00"	0.382"	1.350"	2.12"	1.62"	1.91"	5.44"	3.00"	1.812"	1.000'
HCT161341	1.0'	1.50"	1.00"	0.688"	1.350"	2.12"	1.62"	3.44"	8.50"	3.00"	1.812"	1.500'
HCT162191	1.0'	2.28"	1.00"	0.328"	2.052"	2.91"	1.62"	1.91"	5.44"	3.00"	1.812"	1.000'
HCT162341	1.0'	2.28"	1.00"	0.688"	2.052"	2.91"	1.62"	3.44"	8.50"	3.00"	1.812"	1.500'
HCT163341	1.0'	3.08"	1.00"	0.688"	2.772"	3.70"	1.62"	3.44"	8.50"	3.00"	1.812"	1.500'
HCT164341	1.0'	4.06"	1.00"	0.688"	3.654"	4.69"	1.62"	3.44"	8.50"	3.00"	1.812"	1.500'
HCT251341	1.0'	2.60"	1.75"	0.680"	2.340"	3.70"	2.50"	3.40"	9.30"	3.00"	2.500"	1.500'
HCT252341	1.0'	4.25"	1.75"	0.680"	3.825"	5.36"	2.50"	3.40"	9.30"	3.00"	2.500"	1.500'
HCT252471	1.0'	4.25"	1.75"	0.956"	3.825"	5.36"	2.50"	4.78"	12.06"	3.00"	2.500"	2.000'
HCT253471	1.0'	6.60"	1.75"	0.956"	5.940"	7.70"	2.50"	4.78"	12.06"	3.00"	2.500"	2.000'

Note: \*L = Minimum length in feet to form CableTrak curve.

<sup>\*\*</sup>These models do not have a flip top design and do not accept separators due to their small size.

#### CableTrak® Accessories

**Center Mounting:** Mounting the fixed track end in the center of the machine travel allows the track to travel beyond the fixed end. Center mounting effectively doubles the travel distance of the track requiring half the track length of an end mounted application.



#### Calculating

Center Mount (Stationary bracket mounted in center of travel range): Track Length = (MT/2) + L End Mount (Stationary bracket mounted off center of travel range): Track Length = (MT/2) + L + offset from center in feet MT = Total machine travel distance in feet

L = Length of track taken up by the bend radius

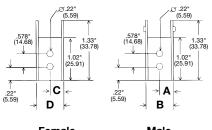
#### **Customizing Track Length**

Hubbell CableTrak is easily customized by adding or subtracting links to the track. CableTrak kits provide 4 to 5 feet of track with brackets pre-installed. Track length can be increased by installing the required number of extenders to reach the required length. To further tune the length of track, individual links can be added or removed. To determine the number of links to add or remove, divide the length in inches to be added or subtracted by the pitch of the track and round up.

#### CableTrak® Accessories

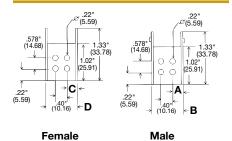
Bracket Kits	For Use With	Α	В	С	D	E	F	G	Н
HCTBK101	HCT101 Series	.40" (10.2)	.81" (20.6)	.47" (12.0)	.94" (23.9)	-	-	-	_
HCTBK102	HCT102 Series	.44" (11.2)	1.22" (31.0)	.44" (11.2)	1.35" (34.3)	-	-	-	_
HCTBK161	HCT161 Series	.99" (25.2)	1.97" (50.1)	.87" (22.1)	1.84" (46.7)	1.19" (30.2)	.281" (7.1)	.75" (19.1)	.81" (20.6)
HCTBK162	HCT162 Series	1.78" (45.2)	2.75" (69.9)	1.65" (41.9)	2.63" (66.8)	1.19" (30.2)	.281" (7.1)	.75" (19.1)	.81" (20.6)
HCTBK163	HCT163 Series	2.57" (65.3)	3.55" (90.2)	2.44" (62.0)	3.42" (86.9)	1.19" (30.2)	.281" (7.1)	.75" (19.1)	.81" (20.6)
HCTBK164	HCT164 Series	3.56" (90.4)	4.53" (115.1)	3.47" (88.1)	4.41" (112.0)	1.19" (30.2)	.281" (7.1)	.75" (19.1)	.81" (20.6)
HCTBK251	HCT251 Series	2.08" (52.8)	3.21" (81.5)	1.80" (45.7)	3.03" (77.0)	1.75" (44.5)	.344" (8.7)	1.00" (25.4)	1.25" (31.8)
HCTBK252	HCT252 Series	3.74" (95.0)	4.87" (123.7)	3.46" (87.9)	4.69" (119.1)	1.75" (44.5)	.344" (8.7)	1.00" (25.4)	1.25" (31.8)
HCTBK253	HCT253 Series	6.08" (154.4)	7.21" (183.1)	5.80" (147.3)	7.03" (178.6)	1.75" (44.5)	.344" (8.7)	1.00" (25.4)	1.25" (31.8)
Separators	For Use With	Α	В	С	D	E	F		
HCTSP16PK12	: HCT16 Series	1.24" (31.5)	.82" (20.8)	.94" (23.9)	.27" (6.9)	.14" (3.6)	.50" (12.7)		
HCTSP25PK12	PHCT25 Series	2.03" (51.6)	1.00" (25.4)	1.19" (30.2)	.35" (8.9)	.15" (3.8)	.62" (15.8)		

#### **HCTBK101 - Brackets**

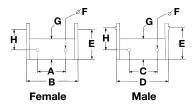


Female Male

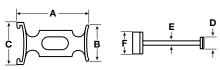
#### HCTBK102 - Brackets



HCTBK161 - HCTGK253 Brackets

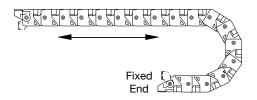


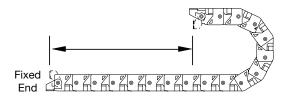
#### **Separators**



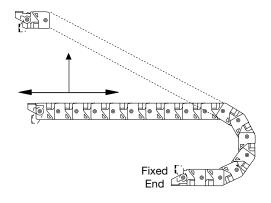
#### CableTrak® System Mounting Options

#### **Horizontal Travel**

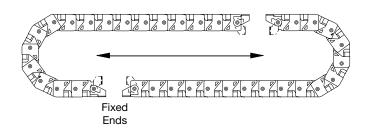




# Combination Horizontal & Vertical Travel

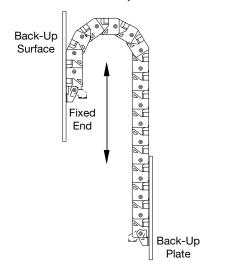


#### **Opposed Travel**

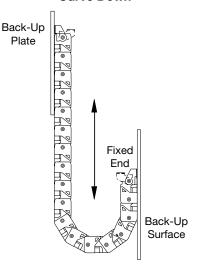


#### **Vertical Travel**

#### **Curve Up**



#### **Curve Down**



#### **Specifications**

Material Fiberglass reinforced nylon.

Operating Temperature Continuous +20°F to +100°F (-7°C to 38°C).

Intermittent\* -40°F to +220°F (-40°C to 104°C).

Maximum Operating Speed 600 FPM (feet per minute), 180 MPM (meters per minute).

Operating speed is based on short lengths that are self supported (up to 9ft.).

Maximum Unsupported

Travel Distance HCT16 Series without sag 9 ft. (2.8 m) with sag 10.5 ft. (3.2 m). HCT25 Series without sag 13.5 ft. (4.1 m) with sag 17 ft. (5.2 m).

Machine tool, robotic automation, material handling.

Note: "Intermittent refers to the operating of the product outside the normal (continuous operating) temperature range momentarily before returning back to the normal range.

Applications



#### **DIN Rail Utility Box**

Hubbell's DIN Rail Utility Box offers a labor saving way to provide utility power to any control cabinet. Installing the DIN Rail Utility Box is as easy as snapping the box onto a 35mm DIN Rail and connecting the line, neutral and ground wires to the terminal block. Utility power for fans, lights, laptop computers, testers or any other power requirement. If load limiting is a concern, Hubbell's "CB" version comes with a 5 Amp circuit breaker that provides over-current protection to make sure that large loads are not drawn from the DIN Rail Utility Box. All Hubbell DIN Rail Utility Boxes may be mounted either vertically or horizontally on the DIN Rail; the "H" version comes with the terminal block mounted for easy wiring when the DIN Rail Utility Box is mounted horizontally.

	<b>15A 125V</b> <b>NEMA 5-15R</b> UL CSA
uplex Receptacles	0.5 HP

	0.0111	
Color	Catalog Number	
Gray	DRUB15	DRUB20
Gray	DRUB15H	_
Gray	DRUB15CB5	_
Gray	DRUB15HCB5	_
Gray	-	DRUB20AC
Gray	-	DRUB20ACCB5
Gray	-	DRUB5462*
	Gray Gray Gray Gray Gray Gray	Color Catalog Number Gray DRUB15 Gray DRUB15H Gray DRUB15CB5 Gray DRUB15HCB5 Gray - Gray - Gray -

**GFCI Duplex Receptacles** 

Description	Color	Catalog Number	
Complete unit.	Gray	DRUBGFI15	DRUBGFI20
Complete unit, horizontal.	Gray	DRUBGFI15H	-
Complete unit with 5A circuit breaker.	Gray	DRUBGFI15CB5	-
Complete unit with 5A circuit breaker, horizontal.	Gray	DRUBGFI15HCB5	-
Complete unit with aux GFCI contacts.	Gray	DRUBGFI15AC	DRUBGFI20AC
Complete unit, faceless with aux GFCI contacts.	Gray	-	DRUBGFI20BFAC

TVSS Duplex Receptacles

Description	Color	Catalog Number	
Complete unit.	Gray	DRUBTVSS15	-
Complete unit with aux contacts.	Gray	DRUBTVSS15AC	-

#### Isolated Ground Duplex Receptacles

Description	Color	Catalog Number	
Complete unit.	Gray	DRUBIG15 -	

#### Toggle Switch Unit

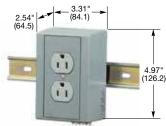
Description	Color	Catalog Number
Complete unit with HBL1221.	Gray	DRUB1221AC
Complete unit with 15A 125V SW/REC.	Gray	DRUB6404

**DIN Rail Utility Box Components** 

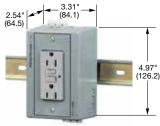
Description	Color	Catalog Number
Pre-wired kit without circuit breaker.	Gray	DRUBKIT
Pre-wired kit with circuit breaker.	Gray	DRUBKITCB5
Pre-wired kit with aux.	Gray	DRUBKITAC
Pre-wired kit with circuit breaker and aux.	Gray	DRUBKITACCB5
Communications kit (unloaded).	Gray	HIDRUBCKIT
(For use with Network Wiring frames in section W).	•	
Switch plate only.	Gray	KP1GY**
Rectangular opening plate only.	Gray	KP26GY**
1.60 in. opening plate only.	Gray	KP720GY**
1.40 in. opening plate only.	Gray	KP7GY**
Duplex receptacle plate only.	Gray	KP8GY**

Note: <sup>\( \Delta \)</sup>See section M for additional information on isolated ground devices.

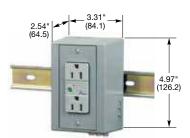
NEMA® is a registered trademark of the National Electrical Manufacturers Association.



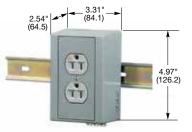
DRUB15



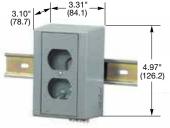
DRUBGFI15AC



**DRUBTVSS15** 



DRUBIG15



**HIDRUBCKIT** 

<sup>\*</sup>DRUB5462 configuration not pictured.

<sup>\*\*</sup>UL Listed, CSA Certified.







#### **NFPA 70E Compliant**

#### **Features and Benefits**

#### PANEL-SAFE® Power and Data

An arc flash is a short circuit that travels through air from one live circuit to another. Problems including gaps in insulation, dust or corrosion on the surface of a conductor, or even use of substandard components can cause a serious safety hazards and equipment failures. Arc flash incidents can be extremely costly to a business and can result in serious or even fatal burns, as well as damage to eyesight. Hubbell PANEL-SAFE® provides through door access to live electrical components without having to open the enclosure.

- Available in Type 4, 12 and 4X versions with protective clear cover
- Provides overcurrent protection for both power and data access ports
- Ensures safety with finger-safe contacts and Hubbell GFCI functionality



IP66





#### Housing Design

- Rugged, nickel-plated hardware, excellent corrosion and abuse resistance
- Protective clear cover
- Operating temperature -20°C to 110°C



#### Internal Design

- Hubbell GFCI with functionality indicator
- Cat. 5e Ethernet access\*
- Overcurrent protection



#### **Housing Design**

- Locking Hasp accepts 5/32" padlock
- Supplemental "Tool" entry screw closure



#### Internal Design

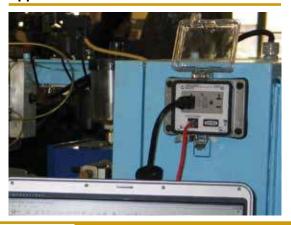
- Additional convenience outlet on GFCI versions
- Finger-safe contacts
- Stainless steel snap latch

Note: \*Additional computer interfaces and PLC connections available upon request.

#### **Specifications**

opoomoatic	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Electrical	GFCI - conforms to UL 943 2006 requirement In-Cabinet Receptacle - GFCI protected Data Jack - Cat. 5e Circuit Breaker - 3A
Mechanical	Cover - Clear Polycarbonate (UV Rated) Housing - Cast Aluminum Finish - Powder Coat Latch - Stainless steel
Environmental	Enclosure - NEMA Type 4, 12 and NEMA Type 4X
Certification	UL Recognized CSA Certified

#### **Application**







**NFPA 70E Compliant** 



### PANEL-SAFE® Power Only

Description	NEMA TYPE 4	NEMA TYPE 4X
20A 125V GFCI with In-Cabinet Receptacle.	PR20	_

PR20

### PANEL-SAFE® Data Only

Description	NEMA TYPE 4	NEMA TYPE 4X
Cat. 5e Ethernet Access only.	P5E	P4X5E
DB9 Interface Connector only.	PDB9	_
PANEL-SAFE Data Port with DB9 Connector.	PDB9MF	_
DH + Combo (DB9/8M Din) and Cat. 5e Ethernet.	PDH5E	_
PANEL-SAFE Data Port, (2) USBA, 3 ft. Cable.	_	P4XUSBA2C3



P5E

#### PANEL-SAFE® Power and Data

Description	NEMA TYPE 4	NEMA TYPE 4X
20A 125V GFCI with In-Cabinet Receptacle and Cat. 5e Ethernet Access.	PR205E	PR4X205E
20A 125V GFCI with In-Cabinet Receptacle, Cat. 5e Ethernet Access and 3A Circuit Breaker.	PR205EB	PR4X205EB
PANEL-SAFE with 20A GFCI and Cat.5e, DB9 and 3A Circuit Breaker.	PR205EDB9B	_
PANEL-SAFE with 20A GFCI and Cat.5e, (1) 3A USB.	PR205EUSBA	_
PANEL-SAFE with 20A GFCI and Cat.5e, (2) 3A USB.	PR205EUSBA2	-
PANEL-SAFE Data Access Port.	PR205EUSBA2VGA	_
20A 125V GFCI Power and Cat. 5e, DB9 and 3A Circuit Breaker.	PR205EDB9MFB	_
20A 125V GFCI Power and Cat. 5e Ethernet, DH + Combo (DB9/8M Din).	P20DH5E	_
PANEL-SAFE with 20A GFCI and Cat.5/DB9.	P205EDB9	_
15A 125V Power and Cat. 5e Ethernet Access.	P155E	P4X155E
15A 125V Power, Cat. 5e Ethernet Access and 3A Circuit Breaker.	P155EB	P4X155EB
15A 125V Power and (2) Cat. 5e Ethernet Access.	P155E2	_
15A 125V Power, Cat.5e and (1) 3A USB.	P155EUSB	_
15A 120V AC Power, NEMA 12/4, DB9 M/F, 10 ft. Cable.	P15DB9MFC10	_
15A 125V Power and DH485 Interface (RJ-45F to RJ-45M, 10 ft. Cable).	P15DH485C10	_
15A 125V Power and Micrologix 8M Din/F to 8M Din/M, 10 ft. Cable.	P15ML8F8MC10	_



PR205E



PR205EB



P155E



P155EB

Additional computer interfaces, PLC connections and configurations available upon request. Consult factory for catalog number and availability.



#### **Features and Benefits**

#### **HI-Impact Industrial Ethernet Connectors**

Hubbell's Industrial Ethernet System provides leading edge Category 5e and 6 network transmission performance suitable for industrial and other harsh environments. This system incorporates the use of our standard data connectivity jacks which feature our keystone latching mechanism, in a rugged sealed housing providing IP67 rated protection.

Extend your LAN to include automation equipment and manufacturing or process control equipment. Utilize the Hubbell system to provide added protection in harsh environments such as convention centers, food processing plants, outdoor billboards and display screens, medical and other environments which require added protection from moisture, corrosion, dust-debris, vibration and chemicals.





#### **Housing Design**

- Housing made from high impact polymer
- O-rings for moisture protection
- Sealed connection is IP67 rated



#### Internal Design

- Category 6 and 5e component connectors
- Standard Hubbell Keystone latching



#### **Industrial Ethernet Connectors**

Description	Cat. 6	Cat. 6 Inline Coupler
Connector	HI6	HI6C













HISF11

Industrial Ethernet Patch Cords and Plugs	
Description	Catalog Number
HI-Impact RJ-45 to standard RJ-45.	HI6xxAE
HI-Impact RJ-45 on both ends.	HI6xxEE
Standard RJ-45 on both ends.	HI6xxAA

Note: Substitute "XX" with 03, 05, 07, 10, 15, 20, 25, 30, 35, 40, 45, 50 to indicate length in feet.

#### Coupler Housing and Connector Cap

Description	Catalog Number
HI-Impact coupler housing is a perfect solution for temporary and flexible work areas where single port drops are needed. Add any HI-Impact connector to support your application.	HICH
Connector Cap	HIC

#### **HI-Impact Wallplates**

Description	1-Gang	1-Gang	2-Gang	2-Gang
	1-Port Opening	2-Port Openings	2-Port Openings	4-Port Openings
Stainless steel wallplate.	HISF11	HISF12	HISF22	HISF24

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

#### **Environmental Specifications**

Ingress Protection:	NEMA TYPE 4X (connectors).
	IP67 and IP66 (dust/water). IP55 (plates).
Corrosion:	Resistant to most common chemicals,

oils and cleaning agents. HI-Impact Housing: UV resistant.

Temperature Range: TIA/EIA-568-B.2 -25°C to 70°C.

#### Material

Valox<sup>®</sup>, UL 94V-0. HI-Impact Housing: Nose Contacts:

Beryllium copper with a minimum of 50 micro-inch gold plating over nickel under plating.

#### **Electrical**

Mechanical

Acceleration:

UL 1863 compliant.

Mating Cycles:

Frequency Range:

Vibration

ANSI/TIA/EIA-568-B.2-1 (Cat. 6 and 5e). Supports TIA-1005 Industrial Telecommunications Infrastructure.

10-500Hz.

5g (operational).

750 minimum.

# **SECTION K**

## **Table of Contents**



Weatherproof Cable Reels and Industrial Power Cord Reels



Industrial and Commercial Lighted Cord Reels



Air/Water Hose Reels and Static Discharge Reels



Product	Page
Weatherproof Cable Reels	K-2
Industrial Power Cord Reels	K-3
Industrial and Commercial Lighted Cord Reels	K-4
Commercial Cord Reels	K-5
Air/Water Hose Reels and Static Discharge Reels	K-6



#### **Features and Benefits**

#### **Weatherproof Cable Reels**

- Powder coated, solid steel construction
- Multi-position roller guide can be mounted in four different positions
- Ratchet lock can be disengaged in field for constant tension application
- UL Type 4X enclosure protects spring motor, junction box, slip ring assembly and cable entrance from hosedown or corrosion
- Optional pivot base allows 340° rotation of reel and increases range of cable to nearly any direction



HBL501242W with HBL16PB

HBL501242W with HBL16PB

#### Weatherproof Cable Reels, 50 Ft. (15.2m)

				Weight	
Description	Cable Type	Amps	Volts AC	Lbs. (kg)	Catalog Number
14" weatherproof reel.	#14/3 SOW-A	15	600	55 (24.9)	HBL501431W*
16" weatherproof reel.	#12/3 SOW-A	20	600	80 (36.3)	HBL501232W*
16" weatherproof reel, (white reel housing).	#12/3 SOW-A	20	600	80 (36.3)	HBL501232WM1*
16" weatherproof reel.	#12/4 SOW-A	16	600	86 (39.0)	HBL501242W*
16" weatherproof reel.	#10/3 SOW-A	25	600	86 (39.0)	HBL501032W*
16" weatherproof reel, (white reel housing).	#10/3 SOW-A	25	600	86 (39.0)	HBL501032WM1*
16" weatherproof reel.	#10/4 SOW-A	20	600	92 (41.7)	HBL501042W*

Note: \*All weatherproof cable reels are supplied with wire leads and ¾" NPT hub feed. Power supply cable not supplied.



HBL14PB

#### Accessories

Description	Weight Lbs. (kg)	Description
14" pivot base.	5 (2.3)	HBL14PB
16" pivot base.	13 (5.9)	HBL16PB
Replacement stop.	.2 (.09)	HBLWPBS

#### **Specifications**

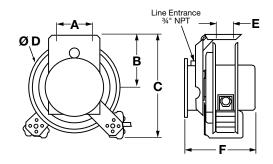
Listing/Certification UL 355 and CSA, C22.2 No. 21.

Environment Type 4X enclosure, CAN/CSA - C22.2 No. 21.

Dry, indoor and wet and damp outdoor non-hazardous location.

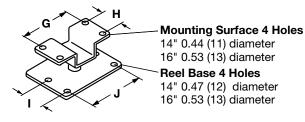
#### **Dimensions**

Inch (mm)	Α	В	С	D	Е	F	G	Н	I	J
14" Reel	6.50"	8.12"	16.25"	13.75"	3.00"	12.19"	3.00"	3.00"	3.00"	6.50"
	(165)	(206)	(413)	(349)	(76)	(310)	(76)	(76)	(76)	(165)
16" Reel	6.50"	9.12"	18.25"	15.75"	3.00"	14.19"	6.00"	6.00"	4.94"	6.50"
	(165)	(232)	(464)	(400)	(76)	(360)	(152)	(152)	(125)	(165)



#### **Pivot Base**

#### 340° Pivot Base (Optional)



Note: Pivot base for use only with Weatherproof Cable Reel.

#### **Features and Benefits**

#### **Industrial Power Cord Reels**

- Durable, corrosion resistant steel construction design with yellow or white powder coat finish
- Multi-position guide arm
- Positive-latch mechanism automatically maintains desired cord length
- 12 AWG cord for greater current carrying capacity
- Plug-in 5 ft. long power cord requires no electrical wiring



#### **Industrial Power Cord Reels**

	Cable		NEMA		Volts	Weight	
Cord End	Feet (m)	Cable Type	Style	Amps	AC	Lbs. (kg)	Catalog Number
Without cord ends.	50 (15.2)	#16/3 SJ	_	10	125	20 (9.1)	HBL50163
Without cord ends.	45 (13.7)	#12/3 SJ	_	20	125	21 (9.5)	HBL45123
HBL5269C connector.	45 (13.7)	#12/3 SJ	5-15R	15	125	28 (12.7)	HBL45123C
HBL5369C connector. Same as above with white reel housing.	45 (13.7)	#12/3 SJ	5-20R	20	125	28 (12.7)	HBL45123C20 HBL45123C20W
HBL2313 connector. Same as above with white reel housing.	45 (13.7)	#12/3 SJ	L5-20R	20	125	28 (12.7)	HBL45123TL20 HBL45123TL20W
Portable outlet box with (1) gray	45 (13.7)	#12/3 SJ	5-15R	15	125	29 (13.2)	HBL45123R
duplex receptacle.	45 (13.7)	#12/3 SJ	5-20R	20	125	29 (13.2)	HBL45123R20
Same as above except white.							HBL45123R20W
Black portable outlet box with (1) gray duplex receptacle, white reel housing.	45 (13.7)	#12/3 SJ	5-20R	20	125	29 (13.2)	HBL45123R20WM1
Portable outlet box with (2) gray duplex receptacles.	45 (13.7)	#12/3 SJ	5-20R	20	125	29 (13.2)	HBL45123R220
Same as above except white.							HBL45123R220W
Black portable outlet box with (2) gray duplex receptacles, white reel housing.	45 (13.7)	#12/3 SJ	5-20R	20	125	29 (13.2)	HBL45123R220WM1
Portable outlet box with (1) ground fault	45 (13.7)	#12/3 SJ	5-15R	15	125	29 (13.2)	
protected gray duplex receptacle.	45 (13.7)	#12/3 SJ	5-20R	20	125	29 (13.2)	HBL45123GF20
Same as above, with white reel housing.							HBL45123GF20W
Black portable outlet box with (2) ground fault protected gray duplex receptacles, white reel housing.	45 (13.7)	#12/3 SJ	5-20R	20	125	25 (11.3)	HBL45123GF220WM1

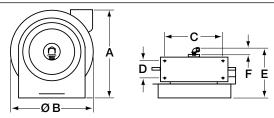
Note: 15 Amp: Supplied with 5 ft. power supply cord with HBL5266C, 15A straight blade plug. 20 Amp: Supplied with 5 ft. power supply cord with HBL5366C, 20A straight blade plug. Ground fault protected reels supplied with (1) GFM20 and (1) HBLP26FS.

#### Accessories

Description	Weight Lbs. (kg)	Catalog Number
Pivot base 340° rotation fits all industrial models.	5 (2.3)	HBL340PB
Replacement stop.	.2 (.09)	HBL12BS

#### **Dimensions**

Inch (mm)	Α	В	С	D	E	F	
	13.00"	12.38"	8.00"	2.50"	9.75"	1.25"	
	(330)	(314)	(203)	(64)	(248)	(32)	



Note: All models have four .625" (15.9) diameter mounting holes.

#### **Listing/Certification**

UL 355 CSA C22.2 No. 21.

#### **Environment**

Dry, indoor, non-hazardous locations.

#### **Mounting Positions**

Wall mount. Ceiling mount. Bench mount.







HBL45123R



HBL45123R20WM1





HBL45123GF220WM1





#### Industrial Lighted Cord Reels, 50 Ft. (15.2m) - 16/3 AWG SJEO Cable



Cord End	Watts (Max)	Amps	Volts AC	Weight Lbs. (ka)	Catalog Number
LED hand lamp, with end light.	8 + 1	0.07	120	( 3)	HBL50162LED
Fluorescent hand lamp.	13	0.3	120	21 (9.5)	HBL50162FL
Incandescent hand lamp.	100	0.8	125	21 (9.5)	HBL50163IN

Note: Supplied with 5 ft. power supply cord with HBL5266C, 15A straight blade plug.

#### **Accessories**



**HBLC25143IN** 

	Watts		Volts	Weight	
Description	(Max)	Amps	AC	Lbs. (kg)	Catalog Number
Replacement stop.	_	_	_	.2 (.09)	HBL16BS
Replacement LED hand lamp.	8 + 1	0.07	120	1 (.5)	HBL16LEDR*
Replacement fluorescent hand lamp.	13	0.3	120	1 (.5)	HBL16FLR
Replacement incandescent hand lamp.	100	0.8	125	1 (.5)	HBL16INR

Note: \*ETL Listed by INTERTEK.



HBLC40182LED

HBLC40182AFL

HBLC40163FL





**HBL50163IN** 

#### **Commercial Lighted Cord Reels**



Description	Cable Feet (m)	Cable Type	Watts (Max)	Amps	Volts AC	Weight Lbs. (kg)	Catalog Number
Reel with LED hand lamp, with flashlight end, white	40 (12.2)	#18/2 SJTOW	8 + 1	0.65	125	8.2 (3.7)	HBLC40182LED
Reel with non-metallic incandescent hand lamp and automatic shut off switch, yellow.	25 (7.6)	#16/3 SJT	75	0.6	125	9.0 (4.1)	HBLC25163AIN**
Reel with metallic incandescent hand lamp with receptacle, yellow.	25 (7.6)	#14/3 SJT	1,625	13	125	9.5 (4.3)	HBLC25143IN
Reel with fluorescent hand lamp and automatic shut off switch, white.	40 (12.2)	#18/2 SJTOW	13	0.3	120	8.2 (3.7)	HBLC40182AFL**
Reel with fluorescent hand lamp and in-line receptacle, white.	40 (12.2)	#16/3 SJT	1,200	10	120	9.0 (4.1)	HBLC40163FL





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#### **Features and Benefits**

#### **Commercial Cord Reels**

- Durable steel construction for commercial and general purpose applications
- · Compact size, flexible mounting options for ceiling, wall or bench
- Automatic ratchet lock holds cord at desired length and provides easy, smooth retraction of cord
- 12 AWG cord for greater current carrying
- Attached plug for power cord requires no wiring



#### **Commercial Cord Reels**

- Durable light weight non-metallic housing
- Removable bracket allows reel to be disengaged from mount providing portability
- 40 Ft. of #12/3 cord for greater current carrying capacity
- Triple tap outlet with supplemental over current protection

HBLC40123TT

#### **Commercial Cord Reels**

Description	Cable Feet (m)	Cable Type	Watts (Max)	Amps	Volts AC	Weight Lbs. (kg)	Catalog Number
Reel with triple tap outlet, black.	40 (12.2)	#12/3 SJTW	1,875	15	125	9.0 (4.1)	HBLC40123TT
Reel with wire leads, black.	40 (12.2)	#12/3 SJTW	1,875	15	125	9.0 (4.1)	HBLC40123
Reel with triple tap outlet, with white cord.	30 (9.1)	#16/3 SJT	1,250	10	125	8.5 (3.9)	HBLC30163TT
Reel with a Hubbell HBL5969VBLK connector, yellow.	25 (7.6)	#16/3 SJT	1,250	10	125	8.5 (3.9)	HBLC25163C
Reel with wire leads, yellow.	25 (7.6)	#16/3 SJT	1,250	10	125	8.5 (3.9)	HBLC25163**
Replacement mounting bracket for 12/3 cable, commercial cord reels HBLC40123(TT).	_	-	_	_	_	.3 (.17)	HBLC12MB



Note: Reels supplied with 2 ft. power supply cord and molded on straight blade 15A plug. \*\*UL Listed only.

#### **Specifications**

Listing/Certification UL 355.

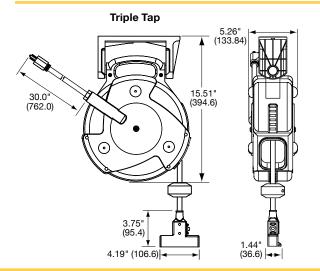
Environment Drv. indoor, non-hazardous locations.

Incandescent Lamp 75 watt max., auto switch, no receptacle; 100 watt max. bulb, with receptacle.

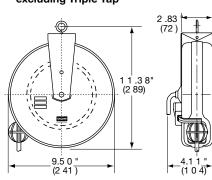
Fluorescent Lamp 10A/1200W max. with in-line receptacle; 13 watt without receptacle.

HBLC25163C

#### **Dimensions**



#### **All Other Commercial Reels** excluding Triple Tap



#### **Features and Benefits**

#### Air/Water Hose Reels

- Constructed of rugged steel, baked polyester finish components
- Multi-position four roller guide and adjustable hose stop
- Spring rewind and ratchet lock
- Full flow shafts and swivels assure maximum product delivery



#### **Static Discharge Reels**

- Steel construction
- Compact design minimizes required installation space
- Available with steel or nylon coated steel cable
- Large grounding jaw clamp provides low resistant ground termination

#### Air/Water Hose Reels



**HBLHR2535** 

,,	0.0						
Description	Cable Feet (m)	Max Pressure Psi	Frame Size	Input Hose Fitting (NPTF)	O.D. Inch (mm)	Weight Lbs. (kg)	Catalog Number
Low pressure ¼" ID.	35 (10.7)	300	Α	1/4	0.51 (13.0)	24 (10.9)	HBLHR2535
	50 (15.2)	300	В	1/4	0.51 (13.0)	26 (11.8)	HBLHR2550
Low pressure %" ID.	25 (7.6)	300	Α	3/8	0.65 (16.5)	23 (10.4)	HBLHR3825
•	50 (15.2)	300	С	3/8	0.65 (16.5)	36 (16.3)	HBLHR3850
	70 (21.3)	300	Ε	3/8	0.65 (16.5)	50 (22.7)	HBLHR3870
Low pressure ½" ID.	35 (10.7)	300	С	3/8	0.77 (19.6)	38 (17.2)	HBLHR5035
•	50 (15.2)	300	Ε	3/8	0.77 (19.6)	44 (20.0)	HBLHR5050

#### **Static Discharge Reels**



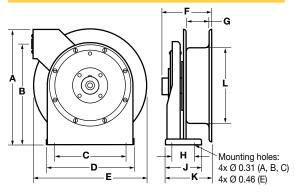
			Weight	
Description	Cable Feet (m)	Cable Type	Lbs. (kg)	Catalog Number
Static discharge reel.	50 (15.2)	Single 3/32" Steel	12 (5.4)	HBL50SD
Static discharge reel.	50 (15.2)	Single 1/32" Steel Nylon Coated	13 (5.9)	HBL50SDN
Static discharge reel.	50 (15.2)*	Dual (Y) 3/32" Steel	13 (5.9)	HBL50YSD
Note: *25 ft (10 6m) + Dual 15 ft	(1 5m) for "V"			

Note: \*35 ft. (10.6m) + Dual 15 ft. (4.5m) for "Y".

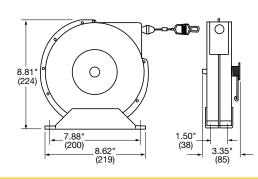
#### **Dimensions**

Frame size	Α	В	С	D	E	F	G	Н	J	K	L	М
A	12.88	11.25	8.00	9.88	12.13	5.50	2.50	2.50	4.00	5.09	8.38	_
	(327)	(286)	(203)	(250)	(308)	(140)	(64)	(64)	(102)	(132)	(213)	
В	14.50	12.81	9.75	11.25	13.75	6.19	3.16	2.50	4.00	5.88	8.38	_
	(368)	(325)	(248)	(285)	(349)	(157)	(80)	(64)	(102)	(149)	(213)	
С	17.50	15.63	9.75	11.25	16.50	6.19	3.16	2.50	4.00	5.88	10.25	_
	(445)	(286)	(248)	(285)	(419)	(157)	(80)	(64)	(102)	(149)	(260)	
E	20.38	18.12	7.88	9.45	19.00	6.63	3.35	3.86	5.43	6.10	11.00	9.5
	(518)	(460)	(200)	(240)	(483)	(168)	(85)	(98)	(138)	(155)	(280)	(241)

#### Air/Water Hose Reels



### **Static Discharge Reel**



# SECTION L









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120/240V AC, 3Ø 250V AC, 3Ø 120/208V AC	

#### **Features and Benefits**

# AUTOGUARD® Self Test Technology 1st introduced by Hubbell Over 10 Years Ago! Self Test Monitoring Now Required in 2015 UL943 GFCI Safety Standad.

#### **Hubbell Self Test GFCI Patented Technology**

Hubbell AUTOGUARD® GFCI receptacles continually test and monitor for "people protection capability" automatically. This patented safety feature includes disconnecting power to the receptacle if critical components are damaged and GFCI protection is lost. GFCI automonitoring is conducted continuously within every 30 seconds.

Also, clear visual indicators are provided on the device face representing power status, trip condition, ground fault condition and end of life status. In addition, for added safety, power will be denied to the receptacle face if reverse wiring of line and load was to occur.

UL (Underwriters Laboratory) now requires all manufacturers to provide self test monitoring capability effective June 29, 2015. When was the last time you tested a GFCI receptacle? Industry studies indicate only a very small number of installations are actually being tested as is recommended by the manufacturer and UL. This is the fundamental reason this revision has been incorporated into UL943 standard for 2015.

Each GFR must automatically monitor GFCI functionality periodically	If the unit can no longer provide GFCI protection, it must comply with the following	Reverse line and load miswire function – (repeated)
Automatically test within (5) seconds of power to line and load terminals; periodically means every (3) hours or less.	Deny Power (trip with the inability to reset); if unit does reset it is subject to the next auto-monitoring test cycle.  Visual and/or audible indication that it no longer can provide protection.	If the line conductor is wired to the load terminal, power to the receptacle face will be denied. This includes both the initial installation and any subsequent reinstallations.



**GFRST15WNL** 

















#### **Features and Benefits**

- Patented AUTOGUARD® Technology Continuous Self Test functionality and disconnects power to receptacle if critical components are damaged and GFCI protection is lost
- Federal Communications Commission Part 15 Compliant for radiated and conducted emissions
- Thermoplastic Nylon Housing High Impact and Ultraviolet Resistant construction provides resilience in harsh environments
- Clear Visual Indication of GFR Status LED Indicating Lights:
  - Green LED (power to the device)
  - Red LED (trip condition/ground fault condition)
  - Flashing Red LED (end of life)
- Internal Back Wiring Clamp and Guide Pocket Quick and dependable termination
- Protection Against Line and Load Reversal No power to the face or downstream receptacles if device is miswired
- Installation Ease, Lower Labor Cost With auto-grounding clip, captive
  mounting screws and single tab "breakoff" ears and full "breakoff" for OEM
  raised covers
- Night Light Option Light sensor controls for automatic "ON/OFF" and custom dual lens for optimum light output











#### **Features and Benefits**

#### Extra Heavy Duty Industrial and Hospital Grade GFCI Receptacles **Tamper-Resistant and Weather Resistant**

#### 10kA Short Circuit Current Rating

#### Limits improper access to energized contacts

- Exclusive patented tamper-resistant protection through switching technology
- Continually tests and monitors for people protection automatically
- Patented self test diagnostics

#### Power indication

Steady "ON" GREEN LED provides indication of power

#### Ground fault indicator

 Steady "ON" RED LED provides visual indication of a ground fault condition: flashing red indicates device has lost capability to provide protection

#### No power at face if reverse wired

• Open circuit condition eliminates false assumption of protection at face

#### Durable face with V-0 flammability rating

Polyester face cover







#### AUTOGUARD® Self Test GFCI Receptacles Tamper-Resistant and Weather Resistant

Description	Rating	Color	Standard	Hospital Grade
Flush, polyester face,	ŪĞ .	Black	GFR5262SGBK	GFR8200SGBK
back and side wired,	( [] w)	Brown	GFR5262SG	GFR8200SG
multiple drive screws.	15A 125V	Gray	GFR5262SGGY	GFR8200SGGY
	NEMA 5-15R UI CSA	lvory	GFR5262SGI	GFR8200SGI
	0.5 HP	Red	GFR5262SGR	GFR8200SGR
		White	GFR5262SGW	GFR8200SGW
Flush, polyester face,	DG	Black	GFR5362SGBK	GFR8300SGBK
back and side wired,	( I [>w)	Brown	GFR5362SG	GFR8300SG
multiple drive screws.	20A 125V	Gray	GFR5362SGGY	GFR8300SGGY
	NEMA 5-20R UL CSA	Ivory	GFR5362SGI	GFR8300SGI
	1 HP	Red	GFR5362SGR	GFR8300SGR
		White	GFR5362SGW	GFR8300SGW

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles listed above are furnished with both a matching color nylon wallplate, and a SS26 302/304 super stainless steel wallplate. 20 amp feed-through capability.

See page Tech-10 for Tamper-Resistant and Weather Resistant descriptions.

#### GFCI Receptacle Specifications per GFCI Products Listed (Pages L-3 to L-8)

Trip Level 4 to 6 mA.

Trip Time .025 second nominal.

Frequency 60 Hz.

Voltage 120V AC +10% - 15% (102V to 132V).

15A/20A, 20A Feed-Thru. Amperage

Maximum Interrupting Capacity 10,000A.

-35°C to 66°C or -30°F to 150°F. Operating Temperature

Maximum Humidity

Listings and Standards Meets UL498 for receptacles, UL943 Class A for GFCIs UL File E41978 CSA Certified.

Meets all NEC® and CEC requirements. NEMA WD-6 ANSI 73.







#### **Features and Benefits**

#### **Heavy Duty Commercial Tamper-Resistant GFCI Receptacles**

- Patented shutter design for tamper-resistant protection
- Compliant with NEC® 406.12 and NEC® 517.18(C)
- Patented AUTOGUARD® self test technology includes disconnecting power to the receptacle if critical components are damaged and GFCI protection is lost
- Alarm version provides audible notification of a trip condition











#### **Tamper-Resistant**

Rating	Color	Standard	Night Light Two LED Night Lights	Alarm	Combination Switch 15A 120V Switch	Standard 3-Pack Three Devices per Pack
□G □G	Almond	GFTRST15AL	GFTRST15ALNL	GFTRST15ALB	_	_
( [] []w)	Black	GFTRST15BK	GFTRST15BKNL	GFTRST15BKB	_	_
	Brown	GFTRST15	GFTRST15NL	GFTRST15B	_	_
15A 125V NEMA 5-15R	Gray	GFTRST15GY	GFTRST15GYNL	GFTRST15GYB	_	_
UL CSA 0.5 HP	lvory	GFTRST15I	GFTRST15INL	GFTRST15IB	GFSPST15I	GFTRST15I3
	Light Almond	GFTRST15LA	GFTRST15LANL	GFTRST15LAB	GFSPST15LA	GFTRST15LA3
	Red	GFTRST15R	GFTRST15RNL	GFTRST15RB	_	_
	White	GFTRST15W	GFTRST15WNL	GFTRST15WB	GFSPST15W	GFTRST15W3
DG	Almond	GFTRST20AL	GFTRST20ALNL	GFTRST20ALB	_	_
( [] [bw)	Black	GFTRST20BK	GFTRST20BKNL	GFTRST20BKB	_	_
	Brown	GFTRST20	GFTRST20NL	GFTRST20B	_	_
20A 125V NEMA 5-20R UL CSA	Gray	GFTRST20GY	GFTRST20GYNL	GFTRST20GYB	_	_
1 HP	lvory	GFTRST20I	GFTRST20INL	GFTRST20IB	_	GFTRST20I3
	Light Almond	GFTRST20LA	GFTRST20LANL	GFTRST20LAB	_	GFTRST20LA3
	Red	GFTRST20R	GFTRST20RNL	GFTRST20RB	_	_
	White	GFTRST20W	GFTRST20WNL	GFTRST20WB	_	GFTRST20W3







## Hospital Grade • Tamper-Resistant

Idilip	, mooiotaint		
Rating	Color	Night Light Two LED Night Lights	Alarm
DG	Almond	GFTRST82ALNL	GFTRST82ALB
( [] [] w)	Black	GFTRST82BKNL	GFTRST82BKB
	Brown	GFTRST82NL	GFTRST82B
15A 125V NEMA 5-15R	Gray	GFTRST82GYNL	GFTRST82GYB
UL CSA 0.5 HP	lvory	GFTRST82INL	GFTRST82IB
	Light Almond	GFTRST82LANL	GFTRST82LAB
	Red	GFTRST82RNL	GFTRST82RB
	White	GFTRST82WNL	GFTRST82WB
OG	Almond	GFTRST83ALNL	GFTRST83ALB
( I Pw)	Black	GFTRST83BKNL	GFTRST83BKB
	Brown	GFTRST83NL	GFTRST83B
20A 125V NEMA 5-20R	Gray	GFTRST83GYNL	GFTRST83GYB
UL CSA 1 HP	lvory	GFTRST83INL	GFTRST83IB
	Light Almond	GFTRST83LANL	GFTRST83LAB
	Red	GFTRST83RNL	GFTRST83RB
	White	GFTRST83WNL	GFTRST83WB

#### **Product Dimensions**

A 3.27 (83.1) B 2.75 (69.8) C 1.75 (44.5) D 1.47 (37.4) E 1.10 (27.9)	GF	CI Receptacle	
	A B C D	3.27 (83.1) 2.75 (69.8) 1.75 (44.5) 1.47 (37.4)	

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.

Dimensions in Inches (mm)



Meets UL Standard 943 Class A GFCI

#### **Features and Benefits**

#### **Heavy Duty Commercial Standard GFCI Receptacles**

- Patented AUTOGUARD® self test technology includes disconnecting power to the receptacle if critical components are damaged and GFCI protection is lost
- Internal back wiring clamp and guide for quick and secure termination
- Night light option includes light sensor controls for automatic ON and OFF, custom dual lens for optimum light output











#### **Standard**

		_					
Rating	Color	Standard	Night Light Two LED Night Lights	Alarm	Assembled in USA	Blank Face Available in 20A Only	Standard 3-Pack Three Devices per Pack
DG	Almond	GFRST15AL	GFRST15ALNL	GFRST15ALB	GFRST15ALU	_	_
( [ [w)	Black	GFRST15BK	GFRST15BKNL	GFRST15BKB	GFRST15BKU	_	_
	Brown	GFRST15	GFRST15NL	GFRST15B	GFRST15U	_	_
15A 125V NEMA 5-15R	Gray	GFRST15GY	GFRST15GYNL	GFRST15GYB	GFRST15GYU	_	_
UL CSA 0.5 HP	lvory	GFRST15I	GFRST15INL	GFRST15IB	GFRST15IU	_	GFRST15I3
	Light Almond	GFRST15LA	GFRST15LANL	GFRST15LAB	GFRST15LAU	_	GFRST15LA3
	Red	GFRST15R	GFRST15RNL	GFRST15RB	GFRST15RU	_	_
	White	GFRST15W	GFRST15WNL	GFRST15WB	GFRST15WU	_	GFRST15W3
DG	Almond	GFRST20AL	GFRST20ALNL	GFRST20ALB	GFRST20ALU	GFBFST20AL	_
( [] [bw)	Black	GFRST20BK	GFRST20BKNL	GFRST20BKB	GFRST20BKU	GFBFST20BK	_
	Brown	GFRST20	GFRST20NL	GFRST20B	GFRST20U	GFBFST20	_
20A 125V NEMA 5-20R	Gray	GFRST20GY	GFRST20GYNL	GFRST20GYB	GFRST20GYU	GFBFST20GY	_
UL CSA 1 HP	lvory	GFRST20I	GFRST20INL	GFRST20IB	GFRST20IU	GFBFST20I	GFRST20I3
	Light Almond	GFRST20LA	GFRST20LANL	GFRST20LAB	GFRST20LAU	GFBFST20LA	GFRST20LA3
	Red	GFRST20R	GFRST20RNL	GFRST20RB	GFRST20RU	GFBFST20R	_
	White	GFRST20W	GFRST20WNL	GFRST20WB	GFRST20WU	GFBFST20W	GFRST20W3







## Standard SNAPConnect®

Rating	Color	Standard	Assembled in USA
DG	Almond	GFRST15SNAPAL	GFRST15SNAPALNA
( [] []w)	Black	GFRST15SNAPBK	GFRST15SNAPBKNA
	Brown	GFRST15SNAP	GFRST15SNAPNA
15A 125V NEMA 5-15R	Gray	GFRST15SNAPGY	GFRST15SNAPGYNA
UL CSA 0.5 HP	lvory	GFRST15SNAPI	GFRST15SNAPINA
	Light Almond	GFRST15SNAPLA	GFRST15SNAPLANA
	Red	GFRST15SNAPR	GFRST15SNAPRNA
	White	GFRST15SNAPW	GFRST15SNAPWNA
DG	Almond	GFRST20SNAPAL	GFRST20SNAPALNA
( D [bw)	Black	GFRST20SNAPBK	GFRST20SNAPBKNA
	Brown	GFRST20SNAP	GFRST20SNAPNA
20A 125V NEMA 5-20R	Gray	GFRST20SNAPGY	GFRST20SNAPGYNA
UL CSA 1 HP	lvory	GFRST20SNAPI	GFRST20SNAPINA
	Light Almond	GFRST20SNAPLA	GFRST20SNAPLANA
	Red	GFRST20SNAPR	GFRST20SNAPRNA
	White	GFRST20SNAPW	GFRST20SNAPWNA

#### **Right Angle Pigtailed Terminal**

Description	Туре	Catalog Number
Clear right angle terminal with 6 inch leads, 600V, #12 AWG THHN/THWN-2, Polycarbonate housing material.	Solid Stranded	SNAP1RA SNAP2RA
Same as above. Assembled in USA.	Solid Stranded	SNAP1RNA SNAP2RNA

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.







Meets UL Standard 943

Class A GFCI

#### **Features and Benefits**

#### **Heavy Duty Commercial Standard Hospital Grade GFCI Receptacles**

- Fed. Spec UL Listed, Hospital Grade
- Green power indicator and red trip indicator
- Patented AUTOGUARD® self test technology
- Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple









#### Hospital Grade •

	ai Giaac •				
			Night Light		
Rating	Color	Standard	Two LED Night Lights	Alarm	Assembled in USA
DG	Almond	GFRST82AL	GFRST82ALNL	GFRST82ALB	GFRST82ALU
( [] []w)	Black	GFRST82BK	GFRST82BKNL	GFRST82BKB	GFRST82BKU
	Brown	GFRST82	GFRST82NL	GFRST82B	GFRST82U
15A 125V NEMA 5-15R	Gray	GFRST82GY	GFRST82GYNL	GFRST82GYB	GFRST82GYU
UL CSA 0.5 HP	lvory	GFRST82I	GFRST82INL	GFRST82IB	GFRST82IU
	Light Almond	GFRST82LA	GFRST82LANL	GFRST82LAB	GFRST82LAU
	Red	GFRST82R	GFRST82RNL	GFRST82RB	GFRST82RU
	White	GFRST82W	GFRST82WNL	GFRST82WB	GFRST82WU
DG	Almond	GFRST83AL	GFRST83ALNL	GFRST83ALB	GFRST83ALU
( [] [bw)	Black	GFRST83BK	GFRST83BKNL	GFRST83BKB	GFRST83BKU
	Brown	GFRST83	GFRST83NL	GFRST83B	GFRST83U
20A 125V NEMA 5-20R	Gray	GFRST83GY	GFRST83GYNL	GFRST83GYB	GFRST83GYU
UL CSA 1 HP	lvory	GFRST83I	GFRST83INL	GFRST83IB	GFRST83IU
	Light Almond	GFRST83LA	GFRST83LANL	GFRST83LAB	GFRST83LAU
	Red	GFRST83R	GFRST83RNL	GFRST83RB	GFRST83RU
	White	GFRST83W	GFRST83WNL	GFRST83WB	GFRST83WU





Rating	Color	Standard
15A 125V NEMA 5-15F UL CSA UL CSA 0.5 HP	Almond Black Brown Gray Ivory Light Almond Red White	GFRST82SNAPAL GFRST82SNAPBK GFRST82SNAP GFRST82SNAPGY GFRST82SNAPI GFRST82SNAPLA GFRST82SNAPR GFRST82SNAPW
20A 125V NEMA 5-20R UL CSA 1 HP	Almond Black Brown Gray Ivory Light Almond Red White	GFRST83SNAPAL GFRST83SNAPBK GFRST83SNAP GFRST83SNAPGY GFRST83SNAPI GFRST83SNAPLA GFRST83SNAPR GFRST83SNAPW



#### **Right Angle Pigtailed Terminal**

Description	Туре	Catalog Number
Clear right angle terminal with	Solid	SNAP1RA
6 inch leads, 600V, #12 AWG	Stranded	SNAP2RA
THHN/THWN-2, Polycarbonate		
housing material.		
Same as above.	Solid	SNAP1RNA
Assembled in USA.	Stranded	SNAP2RNA

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.







Meets UL Standard 943

Class A GFCI



#### Heavy Duty Commercial Tamper and Weather Resistant GFCI Receptacles

- Patented shutter design for tamper-resistant protection
- Meets NEC® requirements for TR (406.12) and WR (406.9), UV and corrosion resistance for harsh and damp applications
- Patented AUTOGUARD® self test technology

Protects against line and load reversal, no power to the face or downstream

if device is miswired















Tampe	er-Resistant
Weath	er Resistant
Rating	Color

15A 125V NEMA 5-15R UL CSA 0.5 HP	Almond Black Brown Gray Ivory Light Almond Red White	
20A 125V NEMA 5-20R UL CSA 1 HP	Almond Black Brown Gray	

Light Almond

Red

White



Standard

GFTWRST15AL

GFTWRST15BK



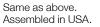
**GFTWRST15ALIG GFTWRST15BKIG GFTWRST15IG GFTWRST15GYIG GFTWRST15IIG GFTWRST15LAIG GFTWRST15RIG GFTWRST15WIG GFTWRST20ALIG GFTWRST20BKIG** GFTWRST20IG **GFTWRST20GYIG** GFTWRST20IIG **GFTWRST20LAIG GFTWRST20RIG GFTWRST20WIG** 

SNAPConnect® **GFTWRST15SNAPAL** GFTWRST15SNAPBK **GFTWRST15SNAP GFTWRST15SNAPGY** GFTWRST15SNAPI **GFTWRST15SNAPLA** GFTWRST15SNAPR **GFTWRST15SNAPW** GFTWRST20SNAPAL **GFTWRST20SNAPBK** 

GFTWRST20SNAP GFTWRST20SNAPGY GFTWRST20SNAPI **GFTWRST20SNAPLA** GFTWRST20SNAPR GFTWRST20SNAPW

**Right Angle Pigtailed Terminal** Clear right angle terminal with 6 inch leads, 600V, #12 AWG THHN/THWN-2, Polycarbonate housing material.

Solid	SNAP1RA
Stranded	SNAP2RA



**SNAP1RNA** Solid Stranded **SNAP2RNA** 

















Rating	Color	Standard	Assembled in USA	Isolated Ground	SNAPConnect®	Right Angle Pig	gtailed Terminal
15A 125V NEMA 5-15R UL CSA 0.5 HP	Almond Black Brown Gray Ivory	GFTWRST82AL GFTWRST82BK GFTWRST82 GFTWRST82GY GFTWRST82I	GFTWRST82ALU GFTWRST82BKU GFTWRST82U GFTWRST82GYU GFTWRST82IU	GFTWRST82ALIG GFTWRST82BKIG GFTWRST82IG GFTWRST82GYIG GFTWRST82IIG	GFTWRST82SNAPAL GFTWRST82SNAPBK GFTWRST82SNAP GFTWRST82SNAPGY GFTWRST82SNAPI	Clear right ar with 6 inch le #12 AWG THI Polycarbonat material.	ads, 600V, HN/THWN-2,
	Light Almond Red White	GFTWRST82LA GFTWRST82R GFTWRST82W	GFTWRST82LAU GFTWRST82RU GFTWRST82WU	GFTWRST82LAIG GFTWRST82RIG GFTWRST82WIG	GFTWRST82SNAPLA GFTWRST82SNAPR GFTWRST82SNAPW	Solid Stranded	SNAP1RA SNAP2RA
☐ Jaw	Almond Black Brown	GFTWRST83AL GFTWRST83BK GFTWRST83	GFTWRST83ALU GFTWRST83BKU GFTWRST83U	GFTWRST83ALIG GFTWRST83BKIG GFTWRST83IG	GFTWRST83SNAPAL GFTWRST83SNAPBK GFTWRST83SNAP	Same as abo Assembled in	
20A 125V NEMA 5-20R UL CSA 1 HP	Gray Ivory Light Almond Red White	GFTWRST83GY GFTWRST83I GFTWRST83LA GFTWRST83R GFTWRST83W	GFTWRST83GYU GFTWRST83IU GFTWRST83LAU GFTWRST83RU GFTWRST83WU	GFTWRST83GYIG GFTWRST83IIG GFTWRST83LAIG GFTWRST83RIG GFTWRST83WIG	GFTWRST83SNAPGY GFTWRST83SNAPI GFTWRST83SNAPLA GFTWRST83SNAPR GFTWRST83SNAPW	Solid Stranded	SNAP1RNA SNAP2RNA

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.







#### **Features and Benefits**

#### **Heavy Duty Commercial Weather Resistant GFCI Receptacles**

- Patented AUTOGUARD® self test technology
- Meets NEC® requirements for weather resistance (406.9), UV and corrosion resistance for harsh and damp applications
- Protects against line and load reversal, no power to the face or downstream if device is miswired







#### Weather Resistant

Rating	Color	Standard	Rating	Color	Standard
15A 125V NEMA 5-15R UL CSA 0.5 HP	Almond Black Brown Gray Ivory Light Almond Red White	GFWRST15AL GFWRST15BK GFWRST15 GFWRST15GY GFWRST15I GFWRST15LA GFWRST15R GFWRST15W	20A 125V NEMA 5-20R UL CSA 1 HP	Almond Black Brown Gray Ivory Light Almond Red White	GFWRST20AL GFWRST20BK GFWRST20 GFWRST20GY GFWRST20I GFWRST20LA GFWRST20R GFWRST20W

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.

#### **Features and Benefits**

#### **UL 508 1.5HP GFCI Receptacles**

Hubbell AUTOGUARD® GFR products continually test and monitor for "people protection" capability" automatically. This patented safety feature includes disconnecting power to the receptacle if critical components are damaged and GFCI protection is lost. Also, visual indicators are clearly provided on the device face representing "power status", "trip condition", "ground fault condition" and "end of life status".

- Blank face 1.5 horsepower motor control rated switch UL508 listed. Also listed to Underwriters Laboratories standard 943 for Class A GFCI
- If wired incorrectly there will be no power to the face or to downstream receptacles for added safety. (2) LED indicators provide immediate status of power, trip condition and ability to provide GFCI protection
- In addition to providing Class A GFCI protection, the HP series includes a 1.5 HP rating for motor control switching per UL508



**GFBFHP20GY** 

#### **UL 508 1.5HP GFCI**

Rating	Color	Standard
20A 125V 1.5 HP	Black Brown Gray Ivory Light Almond Red White	GFBFHP20BK GFBFHP20 GFBFHP20GY GFBFHP20I GFBFHP20LA GFBFHP20R GFBFHP20W

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.







## Features and Benefits Meets UL Standard 943 Class A GFCI

#### Heavy Duty SNAPConnect® Commercial Grade GFCI Receptacles

Requires minimal box space

- Compact size
- Clean finished look

Installation ease

Self-grounding staple

Audible SNAP, indicates solid connection

- Secure, easy grip latch
- Inspection of power contacts
- Clear terminal housing
- No exposed metal



**No Special Tester Required** .085 inch keyhole accepts the probe points found on the most common voltage testers and digital multi-meters



## Labor Savings Feature!



**Save one Minute!**Rough-in the SNAPConnect® terminal instead of pigtails.



Save Over Three Minutes!
Remove protective packaging and SNAPConnect® device to the circuit.



Complete Trim-Out in Less Than One Minute!
Secure mounting screws, attach wallplate, job complete.

#### **Features and Benefits**

#### **Arc Fault AFCI Receptacles**

- Meets new 2017 National Electric Code for AFCI Protection
- Qualified to Federal Specification Listing WC596
- Meets or exceeds UL requirements for tripping time on series and parallel arcs
- Tamper-Resistant and self grounding construction are standard features
- Green power ON LED indicator
- Automatically tests the AFCI each time the reset button is pressed in place
- No reset when tested if AFCI functionality is compromised









#### **Arc Fault AFCI Receptacles**



Color	Standard
Black	AFR15TRBK
Brown	AFR15TR
Gray	AFR15TRGY
lvory	AFR15TRI
Light Almond	AFR15TRLA
White	AFR15TRW



Color
Black
Brown
Gray
lvory
Light Almond
White

Standard AFR20TRBK AFR20TR **AFR20TRGY** AFR20TRI **AFR20TRLA** AFR20TRW

AFR20BFI AFR20BFW

Back and Side

Self-Grounding Clip

Power & Rev Wire

#14-10 AWG

2 Pole, 3 Wire

5-15R, 5-20R

Construction

Termination

Grounding

Indicators

**NEMA** 

Configuration

Terminal

**Blank Face** 

#### **Specifications**

Ratings	
Amperage	15 Amp/20 Amp
Feed-thru	20 Amp Protection
Voltage	120V AC (+10% to15%)
	(102V to 132V)
Horsepower	(1) @ Rated Voltage
Flammability	Rated V2 per UL 94
Operating	(-35°C to 66°C) or
Temperature	(-30°F to 150°F)

(-30°F to 150°F)

#### Certifications

UL1699A E366570 UL498 Receptacle **UL Fed Spec** WC-596 C22.2 No. 42 **CSA Standard** CSA Tech Letter No. M-02A **NEMA** WD-6

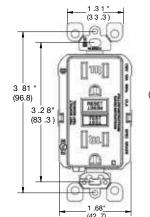
15 Amp

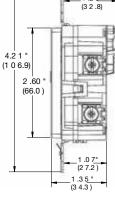
Tamper-Resistant

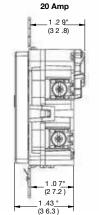
NEC® 406.12; 210.52 – All 15 and 20A 125V, receptacles shall be listed Tamper-Resistant for dwelling installations.

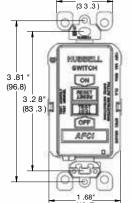
The Hubbell "AFR" series meets all requirements for an outlet branch-circuit type AFCI; protects branch circuit wiring and extensions to branches such including appliances and cord sets.

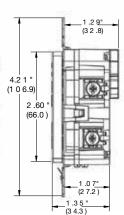
#### **Product Dimensions**











Dimensions in Inches (mm)

NEC® is a registered trademark of the National Fire Protection Association (NFPA).







#### **Features and Benefits**

#### **Dual Function AFCI/GFCI Receptacles**

- Cost effective solution conveniently located within living space; clearly visible, easily resettable if necessary
- Dual functionality, interrupts power if a ground fault or arc fault is detected
- Safety feature prevents device from resetting if it can no longer provide protection or is reverse wired
- Intuitive visual indication is provided for power (LED green ON); trip condition (LED green OFF)
- Clear indication if unit can no longer provide protection (LED red flashes) and will not reset





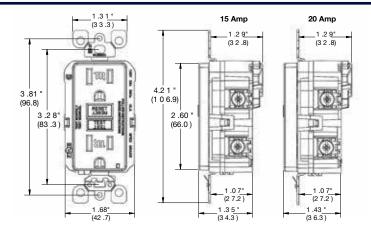
# **Dual Function AFCI/GFCI Receptacles**

Rating Color Standard Rating Color Standard		74 Of Gran Of Hoodpladico					
	Rating	Color	Standard Rating	Color	Standard		
Black AFGF15TRBK Brown AFGF15TR Gray AFGF15TRI ULCSA U	15A 125V NEMS-15R UL CSA 0.5 HP	Brown Gray Ivory Light Almond	AFGF15TR  AFGF15TRGY  AFGF15TRI  AFGF15TRLA  AFGF15TRLA	Brown Gray Ivory Light Almond	AFGF20TR AFGF20TRGY AFGF20TRI AFGF20TRLA		

#### **Specifications**

Ratings		Certifications		Construction	
Amperage Feed-thru Voltage	15 Amp/20 Amp 20 Amp Protection 120V AC (+10% to -15%) (102V to 132V)	UL1699A UL498 UL943 UL Fed Spec	E485931 Receptacle GFCI WC-596	Termination Terminal Grounding Indicators	Back and Side #14-10 AWG Autoground Clip Power, Trip, End of Life
Horsepower Flammability Operating Temperature	(1) @ 120V AC Rated V2 per UL 94 (-35°C to 66°C) or (-30°F to 150°F)	CSA Standard CSA Tech NEMA	C22.2 No. 42 Letter No. M-02A WD-6	Configuration NEMA	2 Pole, 3 Wire 5-15R, 5-20R

#### **Product Dimensions**



#### **Typical Applications Include:**

**NEMA Type 4X** 

Power Generators, Spas, High Pressure Washers, Power Centers, Refineries and Mobile Power.









The sensing module functions interdependently with a magnetic branch circuit breaker. The module monitors the electrical circuit by use of an external differential current transformer. No direct load is present at the module. In the event of a ground fault, the load is interrupted by way of the hydraulic magnetic circuit breaker utilizing a shunt trip coil.

This line of Sensing Modules is rated from 1 to 50 Amps and circuit current-carrying conductors from 1 to 3 poles.

Product is available with an automatic or manual "safe start" reset feature. The enclosure, when mounted with the supplied gasket, achieves a UL NEMA Type 4X Rating. This module and breaker system is ideal for portable generator integration protecting all outlets on a generator. This system meets the proposed requirements for generators Underwriters Laboratory Standard 2201. UL/cUL 943 Listed, Class A 4-6mA trip level and UL1053 Compliant.



GFSM120M



Catalog Number Configurator



GFSMCB120401P

Catalog Number
GFSM120A
GFSM120M
GFSM240A
GFSM240M

#### **GFCI Sensing Module Circuit Breakers**

GFCI Sensing Module, 50A Maximum

Ground Fault Sensing Module Circuit Breaker	A/C Voltage	Amperage	Number of Poles	Sensing Module Required
GFSMCB	120	1 to 50	1	GFSM120A or M
	120		2	GFSM120A or M
	240		2	GFSM240A or M
	120/240		2	GFSM120A or M
	120/240		3	GFSM120A or M

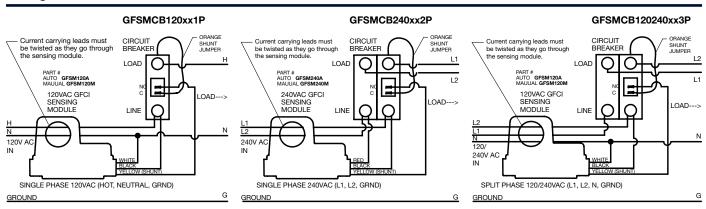
**Example Catalog Numbers:** 

GFSMCB120401P: 120V, 40A, 1 Pole GFSMCB240502P: 240V, 50A, 2 Pole GFSMCB120240203P: 120/240V, 20A, 3 Pole

Note: Voltage tolerance +10% / -15%.

Consult factory for other available configurations.

#### Wiring Schematics





Circuit Guard® Wired On Industrial Portable GFCI Plug

Description	Rating	Catalog Number
GFCI plug, manual set, black.	2 pole, 3 wire grounding, 15A, 125V, NEMA 5-15P.	GFP5266C
GFCI plug, manual set, yellow.	2 pole, 3 wire grounding, 15A, 125V, NEMA 5-15P.	GFP5266CY
GFCI plug with 1 foot line cord, manual set, yellow, with connector body.	2 pole, 3 wire grounding, 15A, 125V, NEMA 5-15P, NEMA 5-15R.	GFP1C



GFP5266CY

Circuit Guard® Wired On Commercial Portable GFCI Plug

Description	Rating	Catalog Number
GFCI plug, automatic set field wireable, black.	2 pole, 3 wire grounding, 15A, 125V, NEMA 5-15P.	GFP515A
GFCI plug, manual set field wireable, black.	2 pole, 3 wire grounding, 15A, 125V, NEMA 5-15P.	GFP515M



GFP1C

#### **Specifications**

Trip Level	4 to 6 mA.
Trip Time	.025 sec. nominal.
_	0011

Frequency 60 Hz.

Voltage 120V AC +10% - 15%. Incorporates no voltage release feature.

Amperage 15A. Maximum Interrupting Capacity 2,000A.

Operating Temperature -35°C to 66°C or -30°F to 150°F.

Maximum Humidity 95%.

High-impact, UV stabilized material. UL94V-0 flammability classification. Housing

Input NEMA 5-15P.

Cord Range 16/3 - 12/3 Type SJ, 18/3 - 12/3 Type S.

Cord Type: Length (GFP1C) 14/3 Type SJTW-A (UL), SJTW (CSA); 1 foot; NEMA 5-15R.

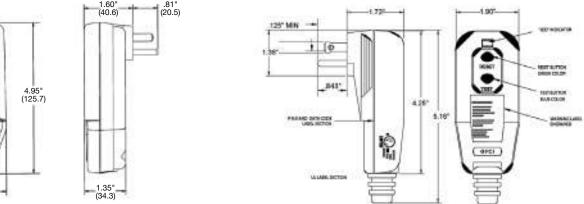
Power "ON" Indication Indicator light.

Meets UL943 Class A Listed, CSA Certified. Listings Codes Meets all NEC® and CEC requirements.



#### **Product Dimensions**

## **GFP5266C Series GFP515 Series** 1.60" (40.6) .81" (20.5)



NEC® is a registered trademark of the National Fire Protection Association (NFPA).

#### Plug-In Portable GFCI and GFCI Tester











GFP315A

#### **Specifications**

opeomeations	
GFP315A	
Trip Level	4 to 6 mA.
Trip Time	.025 sec. nominal.
Frequency	60 Hz.
Voltage	120V AC +10% - 15%. Incorporates no voltage release feature.
Amperage	15A.
Maximum Interrupting Capacity	2000A.
Operating Temperature	-35°C to 66°C or -30°F to 150°F.
Maximum Humidity	95%.
Housing	High-impact ABS.
Input	NEMA 5-15P.
Output	3 NEMA 5-15R.
Fault Indication	Indicator light.
Center Screw	For optional permanent mounting.
Listings and Standards	Meets UL498 for receptacles, UL943 Class A for GFCls UL File E41978, CSA Certified.
Codes	Meets all NEC® and CEC requirements.

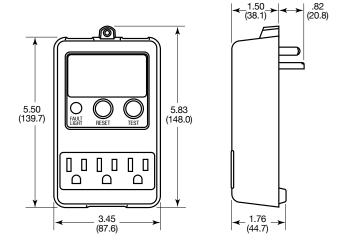


#### **GFCI Tester**

Description	Rating	Catalog Number
Ground fault tester.	120V AC	GFT2G

- Designed to measure the trip level of portable or "wired-in" GFCI's in a range of 2-7mA. Leakage level can be adjusted from 2-7mA.
- Ideal for measuring leakage level of GFCI breakers, GFCI portables and GFCI receptacles.

#### **Product Dimensions**

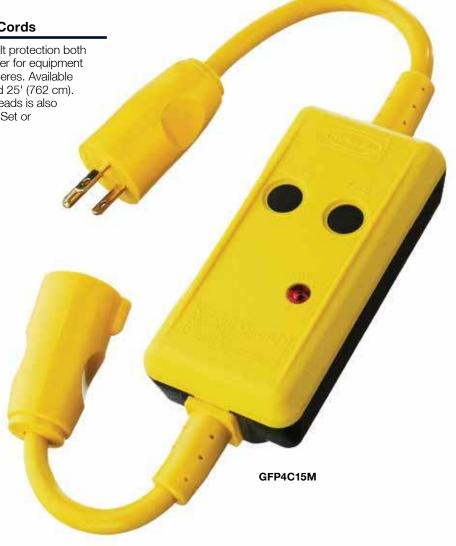


Dimensions in Inches (mm)

#### **Features and Benefits**

# Circuit Guard® Portable GFCI Line Cords Portable GFCI Line Cords provide ground fault protection both indoors and out. They interrupt electrical power for equipment loads when leakage to ground is 4-6 milliamperes. Available in lengths of 18" (45.7 cm), 6' (182.9 cm), and 25' (762 cm). A 15' (457.2 cm) OEM version with stripped leads is also

available. They are offered with an Automatic Set or Manual Set feature to meet your application.





#### Housing Design

- High impact UV stabilized housing resists dust, sunlight and chemicals for long life
- Watertight GFCI housing for use in harsh environments
- Available in Automatic Set with yellow base or Manual Set with black base



#### Molded Strain Relief

• Heavy-duty molded strain relief prevents conductor strain and resulting failure



#### Safety

- One-piece flush sealed keypads for greater reliability and resistance to damage due to impact
- Bright fault indicator light provides fault confirmation from a distance



#### **Plug and Connector**

- Heavy-duty molded plug and connector for reliable connection
- Solid (not formed) plug blades are crimped and soldered for a better connection and longer life



#### **Industrial Grade, Portable GFCI Line Cords**





Circuit Guard® Portable GFCI Line Cords, 15A 120V AC

Description	Automatic Set.	Manual Set
18" (45.7 cm) GFCI line cord.	GFP4C15A	GFP4C15M
6' (182.9 cm) GFCI line cord.	GFP6C15A	GFP6C15M
25' (762.0 cm) GFCI line cord.	GFP25C15A	GFP25C15M
15' (457.2 cm) GFCl power supply cord with stripped leads.	GFPOEMA*	GFPOEMM*
50' (1524.0 cm) GFCI power supply with Elastogrip® watertight straight blade.	-	GFP50C15WM
100' (3048.0 cm) GFCI power supply with Elastogrip® watertight straight blade.	-	GFP100C15WM

Note: \*Total length is 15' 4.5" (468.6 cm) including leads: green 4.5" (114.3), black and white 3.5" (88.9). Each pre-stripped .375" (9.5).



## Circuit Guard® Portable GFCI Line Cords, 20A 120V AC

Description	Automatic Set.	Manual Set
3' (91.4 cm) GFCI line cord.	-	GFP3C20M

GFP25C15A

#### Circuit Guard® Manual Set Twist-Lock Portable GFCI Line Cords

15A 120V AC **20A 120V AC** 

GFP3C20MTL

Description	Catalog Number
3' (91.4 cm) GFCI line cord.	GFP3C15MTL



GFP6C15M

#### Automatic Set GFCI

#### Automatically energizes or sets the GFCI for use upon plug in and after the loss of primary power (power failure or unplugging the device). After a ground fault condition, unit must be reset by pushing the reset button. This feature eliminates the need for unit to be reset each time it is plugged in or powered up. Ideal for equipment intended for continuous use where a temporary power failure is likely and undesirable. Examples are pumps, pressure washers, portable signs or lighting and engine heaters.

#### Manual Set GFCI

Requires the GFCI to be manually set for use by pressing the reset button upon plug in and after loss of primary power (power failure or unplugging the device). Must be manually reset after a ground fault condition. Ideal for applications where operator injury might occur if equipment were to restart after a power failure. Typical equipment includes power drills, saws, lathes and grinders.



**GFPOEMM** 

	Straight Blade	Twist-Lock®
Input	15A NEMA 5-15P, 20A NEMA 5-20P.	15A NEMA L5-15P HBL47CM20C, 20A NEMA L5-20P HBL23CM11.
Output	15A NEMA 5-15R (except GFPOEMM), 20A NEMA 5-20R.	15A NEMA L5-15R HBL47CM29C, 20A NEMA L5-20R HBL23CM13.

#### **Specifications**



GFP3C20MTL

Portable	GECI	l ine	Cords
rui table	GEGI	LIIIE	COLUS

Trip Level	4 to 6 mA.
Trip Time	.025 sec. nominal.
Frequency	60 Hz.

Voltage 120V AC +10% - 15%. Incorporates no voltage release feature.

15A/20A. Amperage Maximum Interrupting Capacity 2000A.

Operating Temperature -35°C to 66°C or -30°F to 150°F.

Maximum Humidity Housing

High-impact, UV stabilized PVC. UL 94V-0 flammability classification. Meets UL and CSA watertight requirements. Adhesive bonded. 14/3 SJTW-A (UL), SJTW (CSA). Except GFP3C20M, GFP3C15MTL and Cord Type

GFP3C20MTL are 12/3 SJTW. Visual Fault Indication Light On Indicates fault.

Meets UL943 Class A, UL File E41978, CSA Certified. Listing and Standards Codes Meets all NEC® and CEC requirements.



#### Commercial Grade, Portable GFCI Line Cords

#### Circuit Guard® Portable GFCI Single Outlet, 15A 120V AC - 12/3 SJEOW

Description	Automatic Set.	Manual Set
2' (60.9 cm) GFCI line cord.	GFP2CA	GFP2CM
25' (762.0 cm) GFCI line cord.	GFP25CA	GFP25CM



#### Circuit Guard® Portable GFCI Triple Tap Outlet, 15A 120V AC - 12/3 SJEOW

Description	Automatic Set.	Manual Set
2' (60.9 cm) GFCI line cord.	GFP2TTA	GFP2TTM
25' (762.0 cm) GFCI line cord.	GFP25TTA	GFP25TTM



## Circuit Guard® OEM Equipment Integrated Cord Sets, 15A 120V AC - 14/3 SJEOW

Description	Automatic Set.	Manual Set
15' (457.2 cm) GFCI with flying leads.	GFP15LA	GFP15LM
35' (1066.8 cm) GFCI with flying leads.	GFP35LA	GFP35LM



#### 15A GFCI In Line GFCI, Single and Triple Tap, 15A 120V AC - 12/3 SJTW

Description	Automatic Set.	Manual Set
2' (60.9 cm), 5-15 single tap.	GFPIL15125A	GFPIL15125M
2' (60.9 cm), 5-15 triple tap.	GFPIL15125TRIA	GFPIL15125TRIM



#### 20A GFCI In Line GFCI, Locking, 20A 120V AC - 12/3 SJTW

Description	Automatic Set.	Manual Set
2' (60.9 cm), L5-20 locking.	GFPIL20125LKA	GFPIL20125LKM

GFP15LA

#### 20A GFCI In Line GFCI, Locking, 20A 250V AC - 12/3 SJTW

Description	Automatic Set.	Manual Set
2' (60.9 cm), L6-20 locking.	GFPIL20250LKA	GFPIL20250LKM



GFPIL15125TRIM

#### **Specifications**

			_	
Porta	ble	GFCI	Line	Cords

Trip Level 4 to 6 mA.
Trip Time .025 sec. nominal.
Frequency 60 Hz.

Voltage 120/250V AC +10% - 15%. Incorporates no voltage release feature.

Amperage 15A/20A. Maximum Interrupting Capacity 2000A.

Operating Temperature -35°C to 66°C or -30°F to 150°F.

Maximum Humidity 95

Housing
High-impact, UV stabilized PVC. UL 94V-0 flammability classification.
Meets UL and CSA watertight requirements. Adhesive bonded.

Visual Fault Indication Light On Indicates fault.

Listing and Standards Meets UL943 Class A, UL File E41978, CSA Certified.

Codes Meets all NEC® and CEC requirements.



GFPIL20125LKA



GFPIL20125LKM







### **Multiple Outlet Portable GFCI**

Description	Rating	Receptacles	Plug	Catalog Number
4 outlet, manual set, yellow.	15A, 120V AC	(2) Duplex 5-15R	NEMA 5-15P	GFP15M
4 outlet, manual set, yellow.	20A, 120V AC	(2) Duplex 5-20R	NEMA 5-20P	GFP20M

GFP15M



GFCI Module - UL Type 3R Rated

Description	Rating	Catalog Number
GFCI module, manual set, yellow.	20A, 120V AC, 60 Hz	GFM20
GFCI module, auto set, yellow.	20A, 120V AC, 60 Hz	GFM20A

#### **Specifications**

	GFP15M / GFP20M	GFM20 / GFM20A
Trip Level	4 to 6 mA.	4 to 6 mA.
Trip Time	.025 sec. nominal.	.025 sec. nominal.
Frequency	60 Hz.	60 Hz.
Voltage	120V AC +10% - 15%.	120V AC +10% - 15%.
	No voltage release feature.	No voltage release feature.
Maximum Interrupting Capacity	5000A.	5000A.
Current	15A / 20A.	20A / 20A Feed-through.
Operating Temperature	-35°C to 66°C or -30°F to 150°F.	-35°C to 66°C or -30°F to 150°F.
Housing Rating	High-impact, yellow Valox®	High-impact, UV stabilized, rigid PVC.
	with protective lift covers.	UL 94V-0 flammability classification.
		UL Type 3R Rated.
Input	5-15P, 15A / 5-20P, 20A. IP21 Suitability.	#12 AWG stranded conductors (black/white/green).
Output	5-15R(4), 15A / 5-20R(4), 20A.	#12 AWG stranded conductors (red/gray).
Power Supply Cord	6' (182.9 cm) STOW-A (STW FT2 CSA).	N/A.
Mounting Screws	N/A.	Self-tapping, combination, #6-32.
Power "ON" Indication	LED indicator light.	LED indicator light.
Agency Approvals	UL Listed, UL498 for receptacles.	UL Listed, CSA Certified.
	Meets UL943 Class A for GFCI's.	Meets UL943 Class A for GFCI's.
Codes	Meets all NEC® and CEC requirements.	Meets all NEC® and CEC requirements.

 $Valox^{\otimes}$  is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.  $NEC^{\otimes}$  is a registered trademark of the National Fire Protection Association (NFPA).



#### **Applications**

Power Generators Submersible Pumps Textile



Agricultural Equipment Cement Cutting Equipment Food Processing



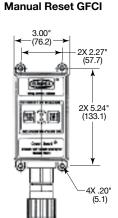
Production Assembly Equipment Spa and Hot Tubs Vending Equipment



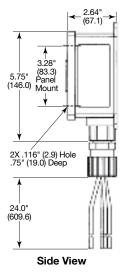
Automatic Reset GFCI







**Product Dimensions** 



Dimensions in Inches (mm)

#### Extra Heavy Duty Industrial Circuit Guard® Hard Wired 30A GFCI - UL Type 4X Rated

Description	Voltage	Alarm	Manual Set	Automatic Set
Hard wired, manual set	120V AC	None	GFHW13005	GFHW13105
and automatic set GFCIs.	120V AC	Audible	GFHW13015	GFHW13115
	240V AC	None	GFHW23005	GFHW23105
	240V AC	Audible	GFHW23015	GFHW23115
	120/240V AC	Audible	GFHW33015	GFHW33115
	3Ø 250V AC	None	GFHW530	GFHW531
	3Ø 120/208V AC	None	GFHW430	GFHW431

#### **Specifications**

Electrical Ratings 120V AC, 240V AC, 120/240V AC, 3Ø 250V AC, 3Ø 120/208V AC. Rated Voltage

Operating Voltage Range 85% to 110%.

Current Up to 30A or device rating.

Frequency 60 Hz. Trip Level 4-6 mA. Single. Phase Response Time .025 sec. Max.

Dielectric Withstand 1500 VRMS across contact, 4000 VRMS between conductors and enclosure. Surge Withstand 6000V impulse, 0.5 microseconds rise time 100kHz ringing frequency with

40% decay per cycle.

Let Go Line Voltage 60% of rated. Grounded Neutral Detection 6 Ohms or less.

Power Up Manual or automatic reset.

Environmental Ratings

Housing Rating UL Type 4X.

Industrial grade design. Construction

Class A GFCI. Type

Operating Temperature -35°C to 66°C, -30°F to 150°F.

Leakage Current @ 93% Humidity

Features

Life (Endurance) 10,000 cycles (6000 with load and 4000 without load). Open neutral protection Trips upon loss of neutral. Grounded Neutral Protection Trips if ground and neutral touch at load side.

Power On Indicator Green light on.

Power Off Indicator Red blinking light plus optional audible alarm. Wiring Application 3 Wire Single Phase (Hot, Neutral and Ground),

4 Wire Single Phase (Line 1, Line 2, Neutral and Ground).

Double Insulated. Switch Interface Electromagnetic Latching Mechanism

Physical Specifications

Wire Leads #10 AWG, 24" long. Unit Color Gray with black cover.

Label Color on Portable Automatic reset: yellow background with black lettering. and Hard Wired Units Manual reset: black background with yellow lettering.

Weight 1.40 lbs.

#### Related Code

OSHA 29 CFR 1926.404 (b) (1) (ii) Confined Space OSHA 29 CFR 1926.405 (a) (2) (ii) (G) Construction Sites NEC 590.6 NEC 511.12 Commercial Garages NEC 680.5B Fountains Spas and Hot Tubs NEC 680.40 Marinas NEC 555.3





#### Applications

Pressure Washers De-icing Equipment Pipeline Heaters



Portable Electric Heaters Material Dryers Automotive Garages



Portable Power Tools Submersible Pumps Outdoor Signage

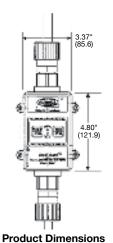








GFPIL30250LKM



Extra Heavy Duty Industrial Circuit Guard® 30A GFCI In Line GFCI - Locking

Description	Cord Length	Voltage	Manual Set	Automatic Set
L5-30 locking.	2' (60.9 cm)	120V AC	GFPIL30125LKM	GFPIL30125LKA
L6-30 locking.	2' (60.9 cm)	250V AC	GFPIL30250LKM	GFPIL30250LKA

#### Plug and Connector Selector Chart (partial listing)

The chart below is a list of possible Hubbell plug and connector body products that can be used with the Hubbell Portable GFCIs.

Family	Style	Amps	Voltage	Hubbell Catalog Number
Insulgrip®	Straight Blade	15	120V AC	HBL5266C & HBL5269C
Insulgrip <sup>®</sup>	Twist-Lock®	30	240V AC	HBL2621 & HBL2623
Watertight Safety-Shroud®	Twist-Lock®	30	240V AC	HBL2621SW & HBL2623SW
IEC Pin & Sleeve	Watertight Pin & Sleeve	30	240V AC	HBL330P6W & HBL330C6W
Insulgrip® Pin & Sleeve	Insulgrip® Pin & Sleeve	30	240V AC	HBL330PS2W & HBL330CS2W
Hubbellock®	Hubbellock®	20	120V AC	HBL23035B & HBL23032B

#### Specifications

Specifications	
Electrical Ratings	
Rated Voltage	120V AC, 240V AC, 120/240V AC,
	3Ø 250V AC, 3Ø 120/208V AC.
Operating Voltage Range	85% to 110%.
Current	Up to 30A or device rating.
Frequency	60 Hz.
Trip Level	4-6 mA.
Response Time	25 mS Max.
Dielectric Withstand	1500 VRMS across contact, 4000 VRMS
	between conductors and enclosure.
Surge Withstand	6000V impulse, 0.5 microseconds rise time
	100kHz ringing frequency with 40% decay
	per cycle.
Let Go Line Voltage	60% of rated.
Power Up	Manual or Automatic reset.
Environmental Ratings	
Housing Rating	UL Type 4X.
Construction	Industrial grade design.
Type	Meets UL943 Class A GFCI.
Operating Temperature	-35°C to 66°C, -30°F to 150°F.
Leakage Current @ 93% Humidity	Zero.

Features Life (Endurance) 10,000 cycles (6000 with load and 4000 without load). Open Neutral Protection Trips upon loss of neutral. Grounded Neutral Protection Trips if ground and neutral touch at load side. Power On Indicator Green light on. Power Off Indicator Red blinking light plus optional audible alarm. Wiring Application 3 Wire Single Phase (Hot, Neutral and Ground). 4 Wire Single Phase (Line 1, Line 2, Neutral and Ground). Double Insulated. Switch interface Latching Mechanism Electromagnetic. **Physical Specifications** 

Cord Type	2-50', 10/3 SJGOOW. 100', 8/3 SEOW.
Unit Color	Gray with black cover.
Label Color on Portable	Automatic reset: Yellow background with black
and Hard Wired Units	lettering. Manual reset: Black background
	with yellow lettering.
Weight	2 ft. 1.8 lbs., 6 ft. 2.7 lbs., 25 ft. 6.8 lbs.,
	50 ft. 12.4 lbs.,100 ft. 23.3 lbs.

#### **Related Code**

Holatou Couc	
Confined Space	OSHA 29 CFR 1926.404 (b) (1) (ii)
	OSHA 29 CFR 1926.405 (a) (2) (ii) (G)
Construction Sites	NEC 590.6
Commercial Garages	NEC 511.12
Outdoor Signs	NEC 600.10
Spas and Hot Tubs	NEC 680.40
Boat Yards	NEC 555.3

# SECTION M

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#### Products at a Glance



#### HBL® Extra Heavy Duty Hospital Grade

- Deep nylon body design increases impact and chemical resistance
- One-piece nickel-plated brass ground strap
- ID marking surface for quick circuit identification
- Square head, 10-thread bronze center rivet
- External back wire clamp



#### Extra Heavy Duty SNAPConnect®



- SNAPConnect® modular wiring device system saves installation time
- Eliminates screw terminations
- Steel mounting strap, self-grounding
- Compact size requires minimal space

## SpikeShield® Surge Suppression **Plug Strips**

- UL2930 HCOA's
- UL1449 SPD's available
- 15A and 20A versions
- 6 foot or 15 foot cords available
- USB versions in several models



#### **Hubbell-PRO Heavy Duty**

- Specification Grade and Hospital Grade
- Tamper-Resistant, NOT Plug Resistant™
- Power indicating LED feature optional
- Circuit ID marking area on Hospital Grade
- Steel mounting strap, self-grounding
- Assembled in USA



- Mobile X-Ray devices
- Nylon cover, thermoset interior
- Armored, epoxy filled, rubber cord grip



#### **USB Charger Receptacles**

- Two Type-C, Type A&C and Type A port configurations, high power 5 Amp, 5 Volt USB output
- Heavy duty stainless steel USB ports; rated for 10,000 cord insertions and removals
- Patented Hubbell Tamper-Resistant technology uses cam action shutters
- Available in SNAPConnect® version



#### **4-PLEX Receptacles**

- Hospital Grade and Surge styles
- Mounts directly to 4-inch square box
- "A" and "B" circuit ID molded into face
- Removable knockouts for mounting to octagon concrete ring or box
- Heavy duty, triple wipe, brass power and ground contacts

#### **Features and Benefits**

#### **Hubbell "Hospital Grade" Devices**

UL requirements for Hospital Grade devices is more stringent than those for standard devices. Hubbell receptacles are designed to meet and exceed the standards.

- Exclusive nickel-plated bypass contact design increases contact pressure, lowering the operating temperature
- Four point grounding system provides redundant grounding for low resistance ground continuity in high abuse areas
- High tech reinforced thermoplastic polyester (RTP) back is tough and heat resistant

Because of these features and others, the benefit is performance, reliability and value for any health care facility.



HBL8200GY



#### **Housing Design**

- Reinforced thermoplastic base provides superior thermal, electrical and mechanical properties
- Providing contact stability, this high performance material will reduce heat buildup giving you long lasting performance
- Deep body design increases impact and chemical resistance



#### **Terminals**

- External wiring clamps allow for visual inspection of the terminals
- Unique strand containment feature on the terminal "bundles" the wire, ensuring 100% clamping of wire strands and reducing heat from the termination



#### One-Piece Mounting Strap

- Back wired ground terminal allows faster, easier installation
- One-piece nickel-plated brass integral ground strap for greater corrosion resistance
- Patented ground contact provides redundant grounding



#### Contacts

- Exclusive bypass contacts are made of nickel-plated brass alloy, increasing blade retention, insuring reliable uninterrupted flow of power
- Barbed assembly arms reduce possibility of face/base separation



#### Identification

- I.D. marking surface provides quick, sure circuit identification
- All Hospital Grade devices are marked with the green dot symbol, required by UL



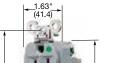
#### Center Rivet

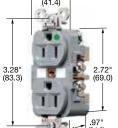
 Square head, 10-thread bronze center rivet won't rotate, reduces stripping and resists corrosion



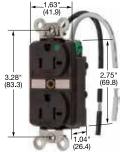




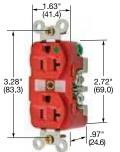




HBL8200GY



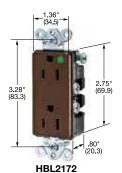
HBL8300SGA



HBL8300RMRI



HBL8200ILW



Dimensions in Inches (mm)





**Hospital Grade** Receptacles

**HBL® Extra Heavy Duty** 

#### **Duplex**

Description	Color	Catalog Number	
Flush, thermoplastic polyester face, back and side wired.	Black Blue Brown Gray Ivory Light Almond Red White	HBL8200BK  - HBL8200 HBL8200GY HBL8200I HBL8200LA HBL8200RED HBL8200W	HBL8300BL HBL8300 HBL8300GY HBL8300I HBL8300LA HBL8300RED HBL8300W
Flush, LED illuminated face, back and side wired.	Gray Ivory Red White	HBL8200ILGY HBL8200ILI HBL8200ILR HBL8200ILW	HBL8300ILGY HBL8300ILI HBL8300ILR HBL8300ILW
Tamper-Resistant receptacle with wire leads. Complies with requirements of NEC® article 517-18(c).	Brown Gray Ivory Light Almond Red White	HBL8200SGA HBL8200SGGYA HBL8200SGIA HBL8200SGLA HBL8200SGRA HBL8200SGWA	HBL8300SGA HBL8300SGGYA HBL8300SGIA HBL8300SGLA HBL8300SGRA HBL8300SGWA
Isolated ground <sup>∆</sup> .	Orange Red	IG8200 IG8200R	IG8300 IG8300R

#### MRI Receptacle, Duplex

Description	Color	Catalog Number	
MRI receptacle, flush, thermoplastic polyester face, back and side wired.	Ivory	HBL8200IMRI	HBL8300IMRI
	Light Almond	HBL8200LAMRI	HBL8300LAMRI
	Red	HBL8200RMRI	HBL8300RMRI
	White	HBL8200WMRI	HBL8300WMRI

#### Slender/Compact, Duplex

Description	Color	Catalog Number	
Flush, thermoplastic polyester face, back, and side wired. Fed. Spec. verified.	Brown Gray Green Ivory Light Almond Red White	HBL8200H HBL8200HG - HBL8200HI HBL8200HLA HBL8200HRED HBL8200HW	HBL8300H HBL8300HG HBL8300HGN HBL8300HI HBL8300HLA HBL8300HRED HBL8300HW

#### Style Line® Decorator\*

Description	Color	Catalog Number	
Flush, nylon face,	Brown	HBL2172	HBL2182
back and side wired.	Gray	HBL2172GY	HBL2182GY
	lvory	HBL2172I	HBL2182I
	Office White	-	HBL2182OW
	Red	HBL2172R	HBL2182R
	White	HBL2172WA	HBL2182WA
Isolated ground <sup>a</sup> .	lvory	-	IG2182I
<u> </u>	Orange	-	IG2182
	White	-	IG2182WA

Note:  $^\Delta\!$ See section N for additional information on isolated ground devices.

\*Not Fed. Spec. Listed.

See pages A-47 and A-48 for accessories.

See page Tech-10 for Tamper-Resistant description.

See section O for wallplates.





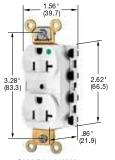






#### SNAPConnect® Extra Heavy Duty **Hospital Grade** • Receptacles

Duplex				
Description	Color	Catalog Number		-
Hospital grade, finder groove, nylon face,	Black	SNAP8200BKA	SNAP8300BKA	_
modular receptacle which requires	Brown	SNAP8200A	SNAP8300A	
pigtailed connector below.	Gray	SNAP8200GYA	SNAP8300GYA	
	Ivory	SNAP8200IA	SNAP8300IA	
	Light Almond	SNAP8200LAA	SNAP8300LAA	
	Red	SNAP8200RA	SNAP8300RA	
	White	SNAP8200WA	SNAP8300WA	_
Hospital grade, smooth nylon face,	Black	SNAP8200BKNA	SNAP8300BKNA	
modular receptacle which requires	Brown	SNAP8200NA	SNAP8300NA	
pigtailed connector below.	Gray	SNAP8200GYNA	SNAP8300GYNA	
Assembled in USA.	lvory	SNAP8200INA	SNAP8300INA	
	Light Almond	SNAP8200LANA	SNAP8300LANA	
	Red	SNAP8200RNA	SNAP8300RNA	
	White	SNAP8200WNA	SNAP8300WNA	
Hospital grade, Tamper-Resistant,	Black	SNAP8200BKTRA	SNAP8300BKTRA	1
smooth nylon face, modular receptacle	Brown	SNAP8200TRA	SNAP8300TRA	-
which requires pigtailed connector below.	Gray	SNAP8200GYTRA	SNAP8300GYTRA	
Assembled in USA.	lvory	SNAP8200ITRA	SNAP8300ITRA	
	Light Almond	SNAP8200LATRA	SNAP8300LATRA	
	Red White	SNAP8200RTRA SNAP8200WTRA	SNAP8300RTRA SNAP8300WTRA	
Handal words Terror Decistors				
Hospital grade, Tamper-Resistant,	Black Brown	SNAP8200BKSCTRA SNAP8200SCTRA	SNAP8300BKSCTRA SNAP8300SCTRA	ير
Split Circuit, smooth nylon face, modular receptacle which requires		SNAP8200GYSCTRA	SNAP8300GYSCTRA	//
pigtailed connector below.	Gray Ivory	SNAP8200ISCTRA	SNAP8300ISCTRA	
Assembled in USA.	Light Almond	SNAP8200LASCTRA	SNAP8300LASCTRA	
Assembled in OSA.	Red	SNAP8200RSCTRA	SNAP8300RSCTRA	
	White	SNAP8200WSCTRA	SNAP8300WSCTRA	
Isolated ground <sup>∆</sup> , Hospital grade,	Orange	SNAP8200IGTRA	SNAP8300IGTRA	-
Tamper-Resistant.	Red	SNAP8200RIGTRA	SNAP8300RIGTRA	
Hospital grade, with Power Indicating LED,	Black	SNAP8200BKL	SNAP8300BKL	
smooth nylon face, modular receptacle	Brown	SNAP8200L	SNAP8300L	BI
which requires pigtailed connector below.	Gray	SNAP8200GYL	SNAP8300GYL	
Assembled in USA.	lvory	SNAP8200IL	SNAP8300IL	
	Light Almond	SNAP8200LAL	SNAP8300LAL	
	Red	SNAP8200RL	SNAP8300RL	
	White	SNAP8200WL	SNAP8300WL	
Isolated ground <sup>∆</sup> , Hospital grade,	Orange	SNAP8200IGL	SNAP8300IGL	
with Power Indicating LED.	Red	SNAP8200RIGL	SNAP8300RIGL	_
Hospital grade, Tamper-Resistant,	Black	SNAP8200BKLTRA	SNAP8300BKLTRA	
with Power Indicating LED, smooth	Brown	SNAP8200LTRA	SNAP8300LTRA	B
nylon face, modular receptacle which	Gray	SNAP8200GYLTRA	SNAP8300GYLTRA	
requires pigtailed connector below.	lvory	SNAP8200ILTRA	SNAP8300ILTRA	1
Assembled in USA.	Light Almond	SNAP8200LALTRA	SNAP8300LALTRA	
	Red	SNAP8200RLTRA	SNAP8300RLTRA	
	White	SNAP8200WLTRA	SNAP8300WLTRA	_
Isolated ground <sup>a</sup> , Hospital grade,	Orange	SNAP8200IGLTRA	SNAP8300IGLTRA	
TR with Power Indicating LED.	Red	SNAP8200RIGLTRA	SNAP8300RIGLTRA	_



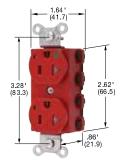
SNAP8300WA



SNAP8300LATR



SNAP8300L



SNAP8300RLTR



Dimensions in Inches (mm)

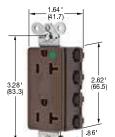
## SNAPConnect® Extra Heavy Duty Hospital Grade Single Recentacles

	Hospita	al Grade	Hospital Grade	■ Tamper-Resistant	1
Color	15A 125V	20A 125V	15A 125V	20A 125V	17
Almond	SNAP8210AL	SNAP8310AL	SNAP8210ALTR	SNAP8310ALTR	
Black	SNAP8210BK	SNAP8310BK	SNAP8210BKTR	SNAP8310BKTR	
Blue	SNAP8210BL	SNAP8310BL	SNAP8210BLTR	SNAP8310BLTR	
Brown	SNAP8210	SNAP8310	SNAP8210TR	SNAP8310TR	
Gray	SNAP8210GY	SNAP8310GY	SNAP8210GYTR	SNAP8310GYTR	
lvory	SNAP8210I	SNAP8310I	SNAP8210ITR	SNAP8310ITR	
Light Almond	SNAP8210LA	SNAP8310LA	SNAP8210LATR	SNAP8310LATR	
Red	SNAP8210R	SNAP8310R	SNAP8210RTR	SNAP8310RTR	
White	SNAP8210W	SNAP8310W	SNAP8210WTR	SNAP8310WTR	

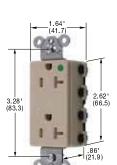




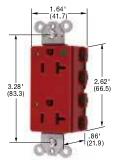




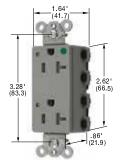
SNAP2182A



SNAP2182ITR



SNAP2182RL



SNAP2182GYLTR



**SNAPCTG** 

Dimensions in Inches (mm)







$\overline{}$	
15A 125V	
IEMA 5-15R	
UL CSA	
0.5 HP	

	Style Line® Decorator			
	Description	Color	Catalog Number	
	Hospital grade, Style Line® decorator,	Black	SNAP2172BKA	SNAP2182BKA
	flush, nylon face, modular receptacle	Brown	SNAP2172A	SNAP2182A
	which requires pigtailed connector on page M-7.	Gray Ivory	SNAP2172GYA SNAP2172IA	SNAP2182GYA SNAP2182IA
	page IVI-7.	Light Almond	SNAP2172LAA	SNAP2182LAA
		Red	SNAP2172RA	SNAP2182RA
		White	SNAP2172WA	SNAP2182WA
	Hospital grade, Style Line® decorator,	Black	SNAP2172BKNA	SNAP2182BKNA
	flush, nylon face, modular receptacle	Brown	SNAP2172DRNA SNAP2172NA	SNAP2182NA
	which requires pigtailed connector on	Gray	SNAP2172GYNA	SNAP2182GYNA
	page M-7. Assembled in USA.	lvory	SNAP2172INA	SNAP2182INA
	pago W 7.7 tooshibida W 007 ti	Light Almond	SNAP2172LANA	SNAP2182LANA
		Red	SNAP2172RNA	SNAP2182RNA
		White	SNAP2172WNA	SNAP2182WNA
2	Hospital grade, Tamper-Resistant,	Black	SNAP2172BKTRA	SNAP2182BKTRA
	Style Line® decorator, flush, nylon face,	Brown	SNAP2172TRA	SNAP2182TRA
	modular receptacle which requires	Gray	SNAP2172GYTRA	SNAP2182GYTRA
	pigtailed connector on page M-7.	lvory	SNAP2172ITRA	SNAP2182ITRA
	Assembled in USA.	Light Almond	SNAP2172LATRA	SNAP2182LATRA
		Red	SNAP2172RTRA	SNAP2182RTRA
		White	SNAP2172WTRA	SNAP2182WTRA
2	Hospital grade, Tamper-Resistant,	Black	SNAP2172BKSCTRA	SNAP2182BKSCTRA
	Split Circuit, Style Line® decorator, flush,	Brown	SNAP2172SCTRA	SNAP2182SCTRA
	nylon face, modular receptacle which	Gray	SNAP2172GYSCTRA	SNAP2182GYSCTRA
	requires pigtailed connector on page M-7.	lvory	SNAP2172ISCTRA	SNAP2182ISCTRA
	Assembled in USA.	Light Almond	SNAP2172LASCTRA	SNAP2182LASCTRA
		Red White	SNAP2172RSCTRA SNAP2172WSCTRA	SNAP2182RSCTRA
	la clata di succiona d'A. I la cia itali succida			SNAP2182WSCTRA
	Isolated ground <sup>∆</sup> , Hospital grade, Tamper-Resistant.	Orange Red	SNAP2172IGTRA SNAP2172RIGTRA	SNAP2182IGTRA SNAP2182RIGTRA
	•	Black	SNAP2172BKL	SNAP2182BKL
	Hospital grade, with Power Indicating LED, Style Line® decorator, flush, nylon face,	Brown	SNAP2172BKL SNAP2172L	SNAP2182L
	modular receptacle which requires	Gray	SNAP2172L SNAP2172GYL	SNAP2182GYL
	pigtailed connector on page M-7.	lvory	SNAP217201L	SNAP2182IL
	Assembled in USA.	Light Almond	SNAP2172LAL	SNAP2182LAL
	A COOMBIGGING OCA	Red	SNAP2172RL	SNAP2182RL
		White	SNAP2172WL	SNAP2182WL
	Isolated ground <sup>∆</sup> , Hospital grade,	Orange	SNAP2172IGL	SNAP2182IGL
	with Power Indicating LED.	Red	SNAP2172RIGL	SNAP2182RIGL
11	Hospital grade, Tamper-Resistant,	Black	SNAP2172BKLTRA	SNAP2182BKLTRA
	with Power Indicating LED, Style Line®	Brown	SNAP2172LTRA	SNAP2182LTRA
	decorator, flush, nylon face, modular	Gray	SNAP2172GYLTRA	SNAP2182GYLTRA
Ri	receptacle which requires pigtailed	lvory	SNAP2172ILTRA	SNAP2182ILTRA
	connector on page M-7.	Light Almond	SNAP2172LALTRA	SNAP2182LALTRA
	Assembled in USA.	Red	SNAP2172RLTRA	SNAP2182RLTRA
		White	SNAP2172WLTRA	SNAP2182WLTRA
	Isolated ground <sup>∆</sup> , Hospital grade,	Orange	SNAP2172IGLTRA	SNAP2182IGLTRA
	TR with Power Indicating LED.	Red	SNAP2172RIGLTRA	SNAP2182RIGLTRA

Note: <sup>A</sup>See section N additional information on isolated ground devices and section O for wallplates. See page A-5 for additional information on SNAPConnect features. See Page M-7 for SNAPConnect pigtailed terminals. See page Tech-10 for Tamper-Resistant and LED Power Indicators descriptions. See pages A-47 and A-48 for accessories.

SNAPConnect® Extra Heavy Duty Hospital Grade ● Receptacles

#### SNAPConnect® Tester

Description	Catalog Number
Circuit Tester for SNAPConnect receptacle terminals,	SNAPCTG
GFCI and standard receptacles	



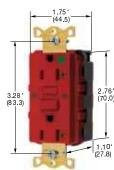








Standard 943



**GFRST83SNAPR** 

#### SNAPConnect® GFCI LED Hospital Grade Receptacles

			010 111	
Description	Rating	Color	Catalog Number	
Hospital Grade SNAPConnect GFCI LED, self-grounding staple, requires connector below, sold separately.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red White	GFRST82SNAPAL GFRST82SNAPBK GFRST82SNAP GFRST82SNAPGY GFRST82SNAPI GFRST82SNAPLA GFRST82SNAPR GFRST82SNAPW	GFRST83SNAPAL GFRST83SNAPBK GFRST83SNAP GFRST83SNAPGY GFRST83SNAPI GFRST83SNAPLA GFRST83SNAPR GFRST83SNAPR

#### SNAPConnect® GFCI LED Hospital Grade • **Tamper and Weather Resistant Receptacles**

Description	Rating	Color	Catalog Number	
Hospital Grade SNAPConnect GFCI TR/WR, self-grounding staple, requires connector below, sold separately.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red White	GFTWRST82SNAPAL GFTWRST82SNAPBK GFTWRST82SNAP GFTWRST82SNAPGY GFTWRST82SNAPI GFTWRST82SNAPLA GFTWRST82SNAPR GFTWRST82SNAPR	GFTWRST83SNAPAL GFTWRST83SNAPBK GFTWRST83SNAP GFTWRST83SNAPGY GFTWRST83SNAPI GFTWRST83SNAPLA GFTWRST83SNAPR GFTWRST83SNAPW





Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability. See page Tech-10 for Tamper-Resistant description.

Color

Black

Brown

Gray

Ivory

Red

White

#### SNAPConnect® USB Charger Hospital Grade TR Receptacles









Description
Hospital Grade SNAPConnect
USB Charger, Tamper-Resistant
Style Line® decorator duplex receptacle,
two USB type 2.0 ports 3 Amp, 5 Volt DC,
15 or 20 Amp, 125 Volt AC.
·

Catalog Number SNAP8200USBBK SNAP8200USB SNAP8200USBGY SNAP8200USBI Light Almond SNAP8200USBLA SNAP8200USBR SNAP8200USBW

SNAP8300USBBK SNAP8300USB SNAP8300USBGY SNAP8300USBI SNAP8300USBLA SNAP8300USBR SNAP8300USBW



SNAP8300USBW













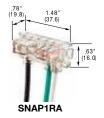
**SNAP8262S** 

Description	Color	Catalog Number	
Hospital Grade SNAPConnect Surge supression, Tamper-Resistant, smooth face, duplex receptacle.	Blue	SNAP8262S	SNAP8362S
	Gray	SNAP8262GYS	SNAP8362GYS
	Ivory	SNAP8262IS	SNAP8362IS
	Light Almond	SNAP8262LAS	SNAP8362LAS
	Red	SNAP8262RS	SNAP8362RS
	White	SNAP8262WS	SNAP8362WS



Description	Wire Type	General Use	Assembled in USA
Clear right angle terminal with 6 inch leads, 600V, #12 AWG THHN/THWN-2, Polycarbonate housing material.	Solid	SNAP1RA	SNAP1RNA
	Stranded	SNAP2RA	SNAP2RNA

Note: See page Tech-10 for Tamper-Resistant and Weather Resistant descriptions.



Dimensions in Inches (mm)





#### **Features and Benefits**

#### **Hubbell-PRO Heavy Duty Receptacles**

- Nylon face and base construction
- Triple-wipe power contacts
- Circuit ID marking area
- Combination Tamper-Resistant and LED for pediatric emergency circuits
- Galvanized steel mounting strap
- Automatic self-grounding staple
- Back and side wiring



8200REDLTRA



15A 125V NEMA 5-15R UL CSA 0.5 HP

8200REDLTRA

8200WLTRA

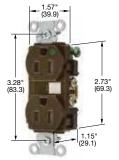


Hospital Grade Receptacles

**Hubbell-PRO Heavy Duty** 

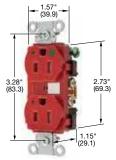
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Description	Color	Catalog Number	
Hospital grade, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	8200BK 8200 8200GY 8200IV 8200LA 8200RED 8200WHI	8300BK 8300 8300GY 8300IV 8300LA 8300RED 8300WHI
Hospital grade, Tamper-Resistant, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	8200BKTRA 8200TRA 8200GYTRA 8200IVTRA 8200LATRA 8200REDTRA 8200WTRA	8300BKTRA 8300TRA 8300GYTRA 8300IVTRA 8300LATRA 8300REDTRA 8300WTRA
Hospital grade, with Power Indicating LED, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	8200BKL 8200L 8200GYL 8200IVL 8200LAL 8200REDL 8200WL	8300BKL 8300L 8300GYL 8300IVL 8300LALM 8300REDL 8300WL
Hospital grade, Tamper-Resistant, with Power Indicating LED, smooth nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond	8200BKLTRA 8200LTRA 8200GYLTRA 8200IVLTRA 8200LALTRA	8300BKLTRA 8300LTRA 8300GYLTRA 8300IVLTRA 8300LALTRA



8200LA

8200TRA



8200REDLTRA

Dimensions in Inches (mm)

The products listed on this page are Assembled in USA, and many are Buy American Compliant. Please contact Hubbell with any certification requirements.

Red

See page Tech-10 for Tamper-Resistant and LED Power Indicators description.

White

See section O for wallplates.

Note: See pages A-47 and A-48 for accessories.

8300REDLTRA

8300WLTRA





#### **Features and Benefits**

#### **Hubbell-PRO Heavy Duty Receptacles**

- Nylon face and base construction
- Triple-wipe power contacts
- Circuit ID marking area
- Combination Tamper-Resistant and LED for pediatric emergency circuits
- Galvanized steel mounting strap
- Automatic self-grounding staple
- Back and side wiring



2182IVLTRA



15A 125V NEMA 5-15R ULCSA 0.5 HP

2172IVLTRA

2172LALTRA

**2172WLTRA** 

2172REDLTRA



20A 125V NEMA 5-20R UL CSA 1 HP

**Hubbell-PRO Heavy Duty** Hospital Grade Receptacles

Description	Color	Catalog Number		
Hospital grade, Style Line® decorator, flush, nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	2172BK 2172 2172GY 2172IV 2172LA 2172RED 2172W	2182BK 2182 2182GY 2182IV 2182LA 2182RED 2182W	
Hospital grade, Tamper-Resistant, Style Line® decorator, flush, nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	2172BKTRA 2172TRA 2172GYTRA 2172IVTRA 2172LATRA 2172REDTRA 2172WTRA	2182BKTRA 2182TRA 2182GYTRA 2182IVTRA 2182LATRA 2182REDTRA 2182WTRA	
Hospital grade, with Power Indicating LED, Style Line® decorator, flush, nylon face, back and side wired. Assembled in USA.	Black Brown Gray Ivory Light Almond Red White	2172BKL 2172L 2172GYL 2172IVL 2172LAL 2172REDL 2172WL	2182BKL 2182L 2182GYL 2182IVL 2182LAL 2182REDL 2182WL	
Hospital grade, Tamper-Resistant, with Power Indicating LED, Style Line® decorator,	Black Brown Gray	2172BKLTRA 2172LTRA 2172GYLTRA	2182BKLTRA 2182LTRA 2182GYLTRA	

Note: See pages A-47 and A-48 for accessories.

See page Tech-10 for Tamper-Resistant and LED Power Indicators description.

See section O for wallplates.

flush, nylon face,

back and side wired.

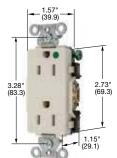
Assembled in USA.

The products listed on this page are Assembled in USA, and many are Buy American Compliant. Please contact Hubbell with any certification requirements.

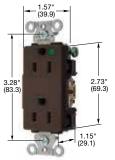
Ivory Light Almond

Red

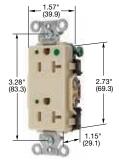
White



2172LATRA



2172L



2182IVLTRA

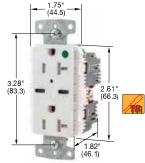
Dimensions in Inches (mm)

2182IVLTRA

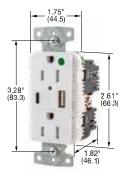
2182LALTRA

2182WLTRA

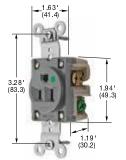
2182REDLTRA



USB8300C5W



USB8200AC5W



**HBL8210GY** 



HBL415HI



Dimensions in Inches (mm)

#### Hospital Grade USB Charger Type-C, Type A&C and Type A









Description	Color	Catalog Number	
Hospital Grade USB Charger Outlet: two Type-C port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond Red White	USB8200C5BK USB8200C5 USB8200C5GY USB8200C5I USB8200C5LA USB8200C5R USB8200C5W	USB8300C5BK USB8300C5 USB8300C5GY USB8300C5I USB8300C5LA USB8300C5R USB8300C5W
Hospital Grade USB Charger Outlet: one Type A and one Type-C port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond Red White	USB8200AC5BK USB8200AC5 USB8200AC5GY USB8200AC5I USB8200AC5LA USB8200AC5R USB8200AC5R	USB8300AC5BK USB8300AC5 USB8300AC5GY USB8300AC5I USB8300AC5LA USB8300AC5R USB8300AC5W
Hospital Grade USB Charger Outlet: two Type A port configurations, high power 5 Amp, 5 Volt USB output, Tamper-Resistant duplex receptacle, USB ports rated 10,000 cycles.	Black Brown Gray Ivory Light Almond Red White	USB8200A5BK USB8200A5 USB8200A5GY USB8200A5I USB8200A5LA USB8200A5R USB8200A5W	USB8300A5BK USB8300A5 USB8300A5GY USB8300A5I USB8300A5LA USB8300A5R USB8300A5W

Note: See page A-7 for additional information on USB charger devices.

#### **HBL® Extra Heavy Duty Hospital Grade** Single Receptacles









Description	Color	Catalog Number	
Flush, nylon face,	Almond	-	HBL8310AL
back and side wired,	Brown	HBL8210	HBL8310
Fed. Spec. verified.	Gray	HBL8210GY	HBL8310GY
•	lvory	HBL8210I	HBL8310I
	Red	HBL8210R	HBL8310R
	White	HBL8210W	HBL8310W
Panel mount on 1.94 in.	Brown	HBL8284	-
(49.2) centers.	lvory	HBL8284I	HBL8384I
Isolated ground <sup>∆</sup> .	Orange	IG8210	IG8310

Note: <sup>A</sup>See section N for additional information on isolated ground devices.

## 4-PLEX® Hospital Grade Receptacles





Description	Color	Catalog Number	
4 outlet high impact resistant	Brown	HBL415H	HBL420H
Polycarbonate construction.	Gray	-	HBL420HGY
Mount to 4 in. square box.	lvory	HBL415HI	HBL420HI
	Red	HBL415HR	HBL420HR
	White	HBL415HW	HBL420HW

#### 4-PLEX® Accessories

Description	Color	Catalog Number	
4-PLEX adapter plates for 1- and 2-gang, device boxes.	Brown	HBL4AP	HBL4AP
	Gray	HBL4APGY	HBL4APGY
	Ivory	HBL4API	HBL4API
	Red	HBL4APR	HBL4APR
	White	HBL4APW	HBL4APW

Note: See page A-28 for additional information on 4-PLEX devices.











**Hospital Grade** Plugs

Insulgrip <sup>®</sup>						
Description	Cord Diameter	Catalog Number				
Black and white nylon.	.230"720" (5.8-18.3)	HBL8215C	HBL8315C			
Transparent housing.	.230"720" (5.8-18.3)	HBL8215CT	HBL8315CT			
8 position angle plug, transparent housing.	.250"655" (6.4-16.6)	HBL8215CAT*	HBL8315CAT*			

### **Valise®**

Description	Cord Diameter	Catalog Number	
White nylon.	.300"660" (7.6-16.8)	HBL8115V	HBL8364V
Insulation displacement, white nylon.	.300"360" (7.6-9.1)	HBL8013V*	-

Note: \*Not Fed. Spec. Listed. See page A-48 for accessories







Hospital Grade Plugs

### **Valise®**

Description	Cord Diameter	Catalog Number	
Valise plug, white nylon.	.300"660" (7.6-16.8)	HBL8666V	HBL8464V

Note: HP ratings listed above are based on 208 to 240V AC only.







### Hospital Grade Connector Bodies

### Insularip®

modigrip						
Description	Cord Diameter	Catalog Number				
Black and white nylon.	.230"720" (5.8-18.3)	HBL8219C	HBL8319C			
Transparent housing.	.230"720" (5.8-18.3)	HBL8219CT	HBL8319CT			

### **Valise®**

Description	Cord Diameter	Catalog Number
White nylon.	.300"660" (7.6-16.8)	HBL8119V -

Note: See page A-49 for accessories.







### **Hospital Grade** Connector Bodies

<b>V</b> alise <sup>®</sup>			
Description	Cord Diameter	Catalog Number	
White nylon.	.300"660" (7.6-16.8)	-	HBL8469V





### **HBL®** Extra Heavy Duty Hospital Grade Receptacles

### **Duplex**

Description	Color	Catalog Number	
Flush, thermoplastic polyester face, back and side wired, multiple drive screws.	Brown	HBL8600	HBL8400
	Ivory	HBL8600I	HBL8400I

Note: See page A-48 for accessories. See section O for wallplates.



HBL8215C



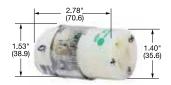
HBL8215CAT



HBL8115V



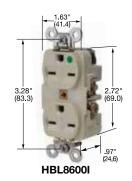
**HBL8219C** 



**HBL8219CT** 



HBL8119V









Meets UL Standard 943 Class A GFCI

### **Features and Benefits**

### Extra Heavy Duty Hospital Grade GFCI Receptacles **Tamper-Resistant and Weather Resistant**

### 10kA Short Circuit Current Rating

Limits improper access to energized contacts

- Exclusive patented tamper-resistant protection through switching technology
- Patented self test continually tests and monitors for people protection automatically

### Power indication

Steady "ON" GREEN LED provides indication of power

### Ground fault indicator

• Steady "ON" RED LED provides visual indication of a ground fault condition; flashing red indicates device has lost capability to provide protection

No power at face if reverse wired

- Open circuit condition eliminates false assumption of protection at face Durable face with V-0 flammability rating
- Polyester face cover



### GFR8300SGI







### **AUTOGUARD® Self Test GFCI Receptacles Tamper-Resistant and Weather Resistant**

AR	
page	

	Description	Rating	Color	Catalog Number		
2	Flush, polyester face,	15 and 20A	Black	GFR8200SGBK	GFR8300SGBK	
<u></u>	back and side wired,	125V AC	Brown	GFR8200SG	GFR8300SG	
q	multiple drive screws.		Gray	GFR8200SGGY	GFR8300SGGY	
			lvory	GFR8200SGI	GFR8300SGI	
			Red	GFR8200SGR	GFR8300SGR	
			White	GFR8200SGW	GFR8300SGW	

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles listed above are furnished with both a matching color nylon wallplate, and a SS26 302/304 super stainless steel wallplate. 20 amp feed-through capability.

See page Tech-10 for Tamper-Resistant and Weather Resistant descriptions.

### GFCI Receptacle Specifications per GFCI Products Listed (Pages M-12 to M-15)

Trip Level 4 to 6 mA.

Trip Time .025 second nominal.

Frequency 60 Hz.

120V AC +10% - 15% (102V to 132V). Voltage

Amperage 15A/20A, 20A Feed Thru.

Maximum Interrupting Capacity 10,000A.

Operating Temperature -35°C to 66°C or -30°F to 150°F.

95%. Maximum Humidity

Listings and Standards Meets UL498 for receptacles, UL943 Class A for GFCIs UL File E41978.

CSA Certified.

Meets all NEC® and CEC requirements. NEMA WD-6 ANSI 73. Codes

NEC® is a registered trademark of the National Fire Protection Association (NFPA).



Meets UL Standard 943 Class A GFCI

### **Features and Benefits**

### **Commercial Tamper-Resistant GFCI Receptacles**

- Patented shutter design for tamper-resistant protection
- Compliant with NEC® 406.12 and NEC® 517-18(c)
- Patented AUTOGUARD® self test technology includes disconnecting power to the receptacle if critical components are damaged and GFCI protection is lost
- Alarm version provides audible notification of a trip condition



**GFTRST83B** 

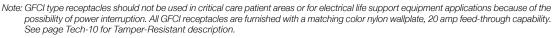






Hospital Grade **Tamper-Resistant GFCI Receptacles** 

Description	Rating	Color	Catalog Number	
Night Light Two LED Night Lights, Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red White	GFTRST82ALNL GFTRST82BKNL GFTRST82NL GFTRST82GYNL GFTRST82INL GFTRST82LANL GFTRST82RNL GFTRST82RNL	GFTRST83ALNL GFTRST83BKNL GFTRST83NL GFTRST83GYNL GFTRST83INL GFTRST83LANL GFTRST83RNL GFTRST83RNL
Alarm, Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red White	GFTRST82ALB GFTRST82BKB GFTRST82B GFTRST82GYB GFTRST82IB GFTRST82LAB GFTRST82RB GFTRST82WB	GFTRST83ALB GFTRST83BKB GFTRST83B GFTRST83GYB GFTRST83IB GFTRST83LAB GFTRST83RB GFTRST83WB

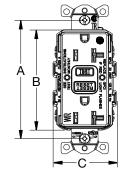


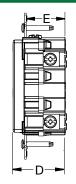




### **Product Dimensions**

	GFCI Receptacle
Α	3.27 (83.1)
В	2.75 (69.8)
С	1.75 (44.5)
D	1.47 (37.4)
Е	1.10 (27.9)





NEC® is a registered trademark of the National Fire Protection Association (NFPA).





# Meets UL Standard 943

Class A GFCI

### **Features and Benefits**

### **Commercial Tamper and Weather Resistant GFCI Receptacles**

- Patented shutter design for tamper-resistant protection
- Meets NEC® requirements for TR (517-18c) and WR (406.9), UV and corrosion resistance for harsh and damp applications
- Patented AUTOGUARD® self test technology
- Protects against line and load reversal, no power to the face or downstream if device is miswired



**GFTWRST83WIG** 



**GFTWRST82AL** 



GFTWRST83GYU



**GFTWRST82BKIG** 



**GFTWRST83SNAPI** 





Hospital Grade • Tamper-Resistant and Weather Resistant GFCI Receptacles





weather Resistar	<u>il GFCI Rec</u>	eptacies	U.5 HP	INF
Description	Rating	Color	Catalog Number	
Standard,	15 and 20A	Almond	GFTWRST82AL	GFTWRST83AL
Flush, nylon face,	125V AC	Black	GFTWRST82BK	GFTWRST83BK
back and side wired,		Brown	GFTWRST82	GFTWRST83
multiple drive screws,		Gray	GFTWRST82GY	GFTWRST83GY
self-grounding staple.		lvory	GFTWRST82I	GFTWRST83I
		Light Almond	GFTWRST82LA	GFTWRST83LA
		Red	GFTWRST82R	GFTWRST83R
		White	GFTWRST82W	GFTWRST83W
Assembled in USA,	15 and 20A	Almond	GFTWRST82ALU	GFTWRST83ALU
Flush, nylon face,	125V AC	Black	GFTWRST82BKU	GFTWRST83BKU
back and side wired,		Brown	GFTWRST82U	GFTWRST83U
multiple drive screws,		Gray	GFTWRST82GYU	GFTWRST83GYU
self-grounding staple.		lvory	GFTWRST82IU	GFTWRST83IU
		Light Almond	GFTWRST82LAU	GFTWRST83LAU
		Red	GFTWRST82RU	GFTWRST83RU
		White	GFTWRST82WU	GFTWRST83WU
Isolated Ground,	15 and 20A	Almond	GFTWRST82ALIG	GFTWRST83ALIG
Flush, nylon face,	125V AC	Black	GFTWRST82BKIG	GFTWRST83BKIG
back and side wired,		Brown	GFTWRST82IG	GFTWRST83IG
multiple drive screws,		Gray	GFTWRST82GYIG	GFTWRST83GYIG
self-grounding staple.		lvory	GFTWRST82IIG	GFTWRST83IIG
		Light Almond	GFTWRST82LAIG	GFTWRST83LAIG
		Red	GFTWRST82RIG	GFTWRST83RIG
		White	GFTWRST82WIG	GFTWRST83WIG
SNAPConnect®,	15 and 20A	Almond	GFTWRST82SNAPAL	GFTWRST83SNAPAL
Flush, nylon face,	125V AC	Black	GFTWRST82SNAPBK	GFTWRST83SNAPBK
back and side wired,		Brown	GFTWRST82SNAP	GFTWRST83SNAP
multiple drive screws,		Gray	GFTWRST82SNAPGY	GFTWRST83SNAPGY
self-grounding staple.		lvory	GFTWRST82SNAPI	GFTWRST83SNAPI
		Light Almond	GFTWRST82SNAPLA	GFTWRST83SNAPLA
		Red	GFTWRST82SNAPR	GFTWRST83SNAPR
		White	GFTWRST82SNAPW	GFTWRST83SNAPW

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability. See page Tech-10 for Tamper-Resistant and Weather Resistant descriptions.

SNAPConnect® Right Angle Pigtailed Terminal

Description	Wire Type	General Use Catalog Number	Assembled in USA Catalog Number
Clear right angle terminal with 6 inch leads	Solid	SNAP1RA	SNAP1RNA
#12 AWG THHN/THWN-2; Polycarbonate	Stranded	SNAP2RA	SNAP2RNA
housing material.			

NEC® is a registered trademark of the National Fire Protection Association (NFPA).



### **Features and Benefits**

### Commercial Standard Hospital Grade GFCI Receptacles

- Fed. Spec UL Listed, Hospital Grade
- Green power indicator and red trip indicator
- Patented AUTOGUARD® self test technology
- Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple





**GFRST82WNL** 

<b>Hospita</b>	ıl Grad	e 🛡 GF	FCI Re	ceptac	les

Hospital Grade • C	GFCI Recepta	acles	0.5 HP	1 HP
Rating	Rating	Color	Catalog Number	
Standard, Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red	GFRST82AL GFRST82BK GFRST82 GFRST82GY GFRST82I GFRST82LA GFRST82R	GFRST83AL GFRST83BK GFRST83 GFRST83GY GFRST83I GFRST83LA GFRST83R
Assembled in USA, Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple.	15 and 20A 125V AC	White Almond Black Brown Gray Ivory Light Almond Red White	GFRST82W GFRST82ALU GFRST82BKU GFRST82U GFRST82GYU GFRST82IU GFRST82LAU GFRST82LAU GFRST82RU	GFRST83W GFRST83ALU GFRST83BKU GFRST83U GFRST83GYU GFRST83IU GFRST83LAU GFRST83RU GFRST83RU
Night Light Two LED Night Lights, Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red White	GFRST82ALNL GFRST82BKNL GFRST82NL GFRST82GYNL GFRST82LANL GFRST82LANL GFRST82RNL GFRST82WNL	GFRST83ALNL GFRST83BKNL GFRST83NL GFRST83INL GFRST83LANL GFRST83LANL GFRST83RNL GFRST83WNL
Alarm, Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red White	GFRST82ALB GFRST82BKB GFRST82B GFRST82GYB GFRST82IB GFRST82LAB GFRST82LAB GFRST82KB	GFRST83ALB GFRST83BKB GFRST83B GFRST83GYB GFRST83IB GFRST83LAB GFRST83RB GFRST83RB
SNAPConnect®, Flush, nylon face, back and side wired, multiple drive screws, self-grounding staple.	15 and 20A 125V AC	Almond Black Brown Gray Ivory Light Almond Red White	GFRST82SNAPAL GFRST82SNAPBK GFRST82SNAP GFRST82SNAPGY GFRST82SNAPI GFRST82SNAPLA GFRST82SNAPR GFRST82SNAPR	GFRST83SNAPAL GFRST83SNAPBK GFRST83SNAP GFRST83SNAPGY GFRST83SNAPI GFRST83SNAPLA GFRST83SNAPR GFRST83SNAPR

Note: GFCI type receptacles should not be used in critical care patient areas or for electrical life support equipment applications because of the possibility of power interruption. All GFCI receptacles are furnished with a matching color nylon wallplate, 20 amp feed-through capability.

SNAPConnect® Right Angle Pigtailed Terminal

		General Use	Assembled in USA
Description	Wire Type	Catalog Number	Catalog Number
Clear right angle terminal with 6 inch leads	Solid	SNAP1RA	SNAP1RNA
#12 AWG THHN/THWN-2; Polycarbonate	Stranded	SNAP2RA	SNAP2RNA
housing material.			



GFRST82R



**GFRST83INL** 



**GFRST83BKB** 



**GFRST83SNAPGY** 





### **Surge Protection Devices**







### Hospital Grade • Circuit Guard® Receptacles

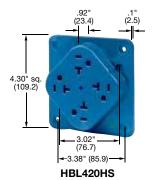
<u> </u>	1.30' 1.23'  (33.0) (31.2)
3.28' (83.3)	2.62° (66.5)
	1.75 287)

SNAP8362GYS

Description	Color	Catalog Number	
SNAPConnect® Tamper-Resistant, surge supression duplex receptacle, smooth face, 240 joules, 15000A peak current. Requires Snap connector on page M-14, sold separately.	Blue	SNAP8262S	SNAP8362S
	Gray	SNAP8262GYS	SNAP8362GYS
	Ivory	SNAP8262IS	SNAP8362IS
	Light Almond	SNAP8262LAS	SNAP8362LAS
	Red	SNAP8262RS	SNAP8362RS
	White	SNAP8262WS	SNAP8362WS
Surge suppression receptacles with light and alarm, 240 joules, 15000A peak current.	Almond Blue Gray Ivory Red White	HBL8262ALSA HBL8262SA HBL8262GYSA HBL8262ISA HBL8262RSA HBL8262RSA HBL8262WSA	HBL8362ALSA HBL8362SA HBL8362GYSA HBL8362ISA HBL8362RSA HBL8362WSA
Isolated ground, surge suppression receptacles with light and alarm, 240 joules, 15000A peak current.	Blue	IG8262SA	IG8362SA
	Gray	IG8262GYSA	IG8362GYSA
	Ivory	IG8262ISA	IG8362ISA
	Orange	IG8262OSA	IG8362OSA
	Red	IG8262RSA	IG8362RSA
	White	IG8262WSA	IG8362WSA
4-PLEX® surge suppression receptacles with lights, 80 joules, 6500A peak current.	Blue	-	HBL420HS
	Ivory	-	HBL420HIS
	Red	-	HBL420HRS

Note: See page Tech-10 for Tamper-Resistant and LED Power Indicators descriptions.

HBL8362ISA



### 4-PLEX® Accessories

Description	Color	Catalog Number
4-PLEX Adapter Plates for 1- and 2-gang, and 4 in. (101.6) square device boxes.	Blue Ivory Red	HBL4APBL HBL4API HBL4APR
4-PLEX Portable Box, 4 in. (101.6) square box with cord grip. Accepts up to .66 in. (16.8) diameter cord.	lvory	HBL4PBI

Note: 4-PLEX Box is not UL Listed.

UL2930 Listed

Listed to UL1449



HBL6MGRPT620

### **UL2930 Health Care Outlet Assembly (HCOA)**

Description	# of Outlets	Cord Length	Color	15 Amp	20 Amp
UL 2930 HCOA with	6	6'	White	HBL6MG6	HBL6MG620
L-N surge protection.	6	15'	White	HBL6MG15	HBL6MG1520
UL 2930 HCOA, Relocatable	6	6'	White	HBL6MGRPT6	HBL6MGRPT620
Power Tap (RPT).	6	15'	White	HBL6MGRPT15	HBL6MGRPT1520



### SpikeShield® Surge Protective Devices (SPD) with Tamper-Resistant Receptacles and Heavy Duty Plug

Description	# of Outlets	Cord Length	Color	15 Amp	20 Amp
Type 3 SPD, Heavy Duty	6	6'	White	HBL6HG6	HBL6HG620
metal housing.	6	15'	White	HBL6HG15	HBL6HG1520
UL Type 3 SPD, Heavy Duty metal housing with 2-port USB.	4	6'	White	HBL6HGUSB6	-

### Hubbellock® Plugs, Connector Bodies and Receptacles

### For Hospital Use Only







20A 125V AC

Hubbellock® Plugs and Connector Bodies

Description	Plugs	Connector Bodies
Nylon cover, thermoset interior.	HBL23014HGB	HBL23001HGB
Armored, epoxy filled, rubber cord grip.	HBL23004HG	-

# Note: Cord clamp range for plug and connector .300" to .660" (7.6 to 16.8).



HBL23014HGB

HBL23001HGB

### Receptacles

Description	Catalog Number
Black, back wired.	- HBL23000HG

### **Wallplates**

Catalog Number
HBL23901HG
HBL23909HG

Note: Suffix HG or HGB type for hospital use only.



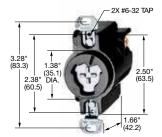




20A 125V AC

Exp	losion	Proof	Plug
-----	--------	-------	------

Description	Catalog Number
Plug, with, epoxy kit, accepts #12 or #14 type SO cable.	HBL24312



HBL23000HG

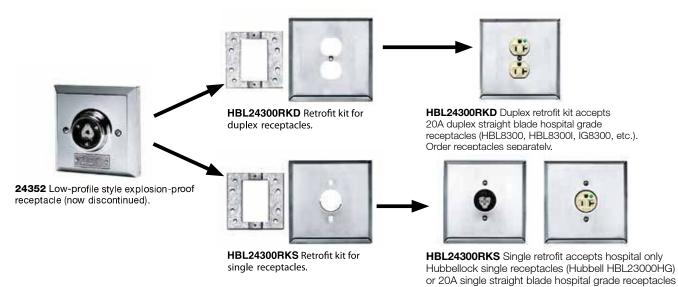
### Hazardous to Non-hazardous Location Receptacle Conversion Kits

Conversion kits for replacement of explosion proof receptacles listed above, with non-explosion proof receptacles, in the hospital areas formerly classified as hazardous locations and now classified non-hazardous locations due to the change from flammable anesthetizing gases to nonflammable anesthetizing gases.

For Conversion To:	Catalog Number
20A, 125V, duplex receptacle (Hubbell HBL830 Series). Includes adapter ring and stainless steel wall plate for duplex receptacle (receptacle not included).	HBL24300RKD
20A, 125V, Hospital Hubbellock receptacle (Hubbell HBL23000HG) or 20A, 125V, straight blade single receptacle (Hubbell HBL8310 series). Includes adapter ring and stainless wall plate for single receptacle (receptacle not included.	HBL24300RKS



HBL24312



Dimensions in Inches (mm)

(Hubbell HBL8310, HBL8310I, IG8310, etc.).

Order receptacles separately.



### **Hubbellock® Mobile X-Ray Devices**



HBL25515

HBL25615







Mobile X-Ray Plugs	50A 250V AC	60A 250V AC	
Description	Catalog Number		
Plug, with epoxy kit, less cord clamp.	HBL25515	HBL25615	
Plug, with cord clamp, less epoxy kit.	HBL25525	HBL25625	

Note: Cord clamp range of plugs with cord clamps .830" to 1.3" (21.1 to 33.0). 50A plugs fit 50A or 60A receptacles.







### **Mobile X-Ray Receptacles**

Description	Catalog Number	Catalog Number			
Receptacle with stainless steel plate assembly.	HBL25505	HBL25605			
Receptacle with cast aluminum plate assembly.	HBL25503	HBL25603			
Replacement receptacle interior.	-	IN16494			



HBL25605

### Accessory

1 " 8)	Description	Catalog Number
	Box stamped steel 8" x 8" x 4" (203.2 x 203.2 x 101.6), accommodates 50A and 60A mobile X-ray receptacles. Knockout sizes 11/4", 11/2" and 2".	HBL25509





# **SECTION N**

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### Products at a Glance



## Surge Protection Panels and Wired-In Branch Panels

- 320,000, 160,000 and 120,000 peak amp capacity
- Wired-in branch panel protection 100,000 peak amp capacity
- Wired-in surge arrestors, single phase 36,000 and three phase 40,000
- Wired-in surge protective devices 50,000 peak amp capacity



### SpikeShield® Surge Protection Plug Strips

- UL2930 Healthcare Outlet Assemblies
- UL1449 Surge Protective Devices
- 15A and 20A versions
- Available in metallic and non-metallic
- 6 foot or 15 foot cords available
- USB ports included in several models



### **Surge Protection Receptacles**

- Available in Specification and Hospital Grade versions
- SNAPConnect® version with tamper-resistant shutters
- Isolated Ground Specification and Hospital Grade SPD's available



### **Isolated Ground Receptacles**

- Available in Specification and Hospital Grade versions
- Twist-Lock® Isolated Ground available
- Isolated Ground SPD's also available



### **Features and Benefits**

### **Hubbell Surge Protective Devices (SPD)**

A cascading approach is recommended for optimal surge protection of any facility or home. A cascading approach includes surge protection at the service entrance, branch panel and the point-of-use. Hubbell offers a comprehensive offering of panel surge products, innovative surge strips and the broadest surge receptacle offering in the industry.

The SpikeShield<sup>®</sup> line of panel surge protective devices offers a broad selection of products to meet the many requirements of industrial, commercial, institutional and residential applications. Hubbell offers a complete offering of high quality, cost effective panel surge products.

- All panel surge products are UL1449 4th edition listed
- Protection levels from 50 kA to 320 kA to handle all real world surge events
- 120, 160 and 320 kA versions feature bus bar construction, bolt down modules, surge counter and a metallic NEMA 1 enclosure
- Hubbell's wired-in surge units are ideal for service entrance, branch panel, or point of use applications such as protecting variable speed drives or other sensitive equipment on the plant floor





### **Housing Design**

- Surface mounting
- Compact design with bus-bar pathways, allows installation in areas with space restrictions
- NEMA 1 enclosure
- All panel products are UL Listed to Standard 1449 4th edition



### Interior Design

- Bolt-down modules, assures positive connection and allows for easy replacement
- Thermal fuse prevents the MOVs from overheating when exposed to high current levels
- Peak amp capacity for 120kA, 160kA and 320kA, protects equipment under the worst electrical conditions



### **Optional Disconnect Models**

- 160 kA and 320 kA surge panels are available with an optional integral disconnect
- Integral switch allows power to SPD to be disconnected before opening the enclosure door



### Protection

- Diagnostics panel
- LED and audible alarm for module failure with silencing
- UL 1449 Type 1 to be used in both Type 1 and Type 2 applications
- Type 1 SPD's can be located at any point in the electrical system, on the line or load side of the equipment overcurrent device



### 320kA and 160kA Service/Branch Panel Protection

The SpikeShield® service entrance product line includes a line of panels with replaceable modules. This series features improved performance through the use of a low impedance bus-bar design and easily replaceable bolt-down modules.

They incorporate a modular (replaceable surge protection modules) design and feature the latest industry approvals and safety ratings. Including UL1449 4th edition.

- Improved performance through the use of a low impedance bus-bar design
- Replaceable surge protection modules
- Surge counter included in all units
- NEMA 1 enclosure
- LED and audible alarm status indicator





HBL8P160DB

### Service/Branch Panel Protection 320,000 Peak Amp Capacity (Type 1 SPD)

Voltage	Configuration	Catalog Number	With Disconnect	Replacement Module
120/240V AC Single Phase	1Ph. 3-wire +G	HBL3P320B	HBL3P320DB	HBL160M120B
120/208V AC Wye*	3Ph. Wye 4-wire +G	HBL4P320B	HBL4P320DB	HBL160M120B
240V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL5P320B	HBL5P320DB	HBL160M240B
240/120V AC Delta split phase	3Ph. Delta 4-wire +G 'High Leg'	HBL6P320B	HBL6P320DB	HBL160M240BHL & HBL160M120B
277/480V AC Wye**	3Ph. Wye 4-wire +G	HBL8P320B	HBL8P320DB	HBL160M480B
480V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL9P320B	HBL9P320DB	HBL160M480DB
347/600V AC Wye	3Ph. Wye 4-wire +G	HBL10P320B	HBL10P320DB	HBL160M600B
600V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>△</sup>	HBL11P320B	HBL11P320DB	HBL160M600B

### Service/Branch Panel Protection 160,000 Peak Amp Capacity (Type 1 SPD)

Voltage	Configuration	Catalog Number	With Disconnect	Replacement Module
120/240V AC Single Phase	1Ph. 3-wire +G	HBL3P160B	HBL3P160DB	HBL160M120B
120/208V AC Wye*	3Ph. Wye 4-wire +G	HBL4P160B	HBL4P160DB	HBL160M120B
240V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL5P160B	HBL5P160DB	HBL160M240B
240/120V AC Delta split phase	3Ph. Delta 4-wire +G 'High Leg'	HBL6P160B	HBL6P160DB	HBL160M240BHL & HBL160M120B
277/480V AC Wye**	3Ph. Wye 4-wire +G	HBL8P160B	HBL8P160DB	HBL160M480B
480V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL9P160B	HBL9P160DB	HBL160M480DB
347/600V AC Wye	3Ph. Wye 4-wire +G	HBL10P160B	HBL10P160DB	HBL160M347B
600V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL11P160B	HBL11P160DB	HBL160M600B

Note: Units come standard with Surge Counter.

### **Electrical Specifications**

						Voltage Protection Rating (VPR)						
					L-	-N	L-	-G	N-	·G	L	-L
320kA Panel	160kA Panel	SCCR♦	In	MCOV †	320kA	160kA	320kA	160kA	320kA	160kA	320kA	160kA
HBL3P320B	HBL3P160B	200kA	20kA	320/160	900	700	900	700	800	600	1500	1000
HBL4P320B	HBL4P160B	200kA	20kA	320/160	900	700	900	700	800	600	1500	1000
HBL5P320B	HBL5P160B	200kA	20kA	320/160	N/A	N/A	1500	1200	N/A	N/A	2000	1500
HBL6P320B	HBL6P160B	200kA	20kA	320/160	1000/1200	900/1500	900/1200	900/1200	800	700	1500	1500
HBL8P320B	HBL8P160B	200kA	20kA	320/160	1500	1200	1500	1200	1200	1200	2000	2500
HBL9P320B	HBL9P160B	200kA	20kA	320/160	N/A	N/A	1800	1800	N/A	N/A	2500	2500
HBL10P320B	HBL10P160B	200kA	20kA	320/160	1500	1500	1500	1500	1500	1500	2500	2500
HBL11P320B	HBL11P160B	200kA	20kA	320/160	N/A	N/A	3000	2500	N/A	N/A	2500	2500

Note: Specification applies to both (B) and (DB) series.

### **Product Specifications**

Max. Surge Current per Phase: Max. Operating Temperature: 320kA and 160kA -20°F to 149°F (-4°C to 65°C)

Diagnostics Indicators:
Dimensions:

Push to Test Diagnostics, Red and Green Status LED's. Dry Contacts, Audible Alarm and Surge Counter

11.04"W x 22.44"H x 7.87"D (320kA) and 11.04"W x 20.32"H x 5.32"D (160kA) 37 lbs. Max. (320kA) and 27 lbs. Max. (160kA)

#10 AWG to #2 AWG

Terminal Accommodation: Operating Frequency: EMI/RFI:

50/60 Hz Up to -30dB NEMA 1

Housing Rating: Listing:

cULus UL1449 4th edition type 1 SPD, UL1283 5th edition, CSA C22.2 No. 269.2-13 1st edition, CSA 22.2,

No. 8-13, 5th edition.

Warranty: 10

<sup>\*120/208</sup> Wye also applies to 127/220 Wye.

<sup>\*\*277/480</sup> Wye also applies to 220/380 Wye, 230/400 Wye and 240/415 Wye.

SCCR - Short Circuit Current Rating. † MCOV - Maximum Continuous Operating Voltage. In - Nominal discharge current.



### 120kA Service/Branch Panel Protection

The SpikeShield® 120kA branch panel product offering features an economical, compact, modular design.

- Economical, compact, modular design
- Protect branch panels, safety switches and load centers
- Surge counter included in all units
- NEMA 1 enclosure
- LED and audible alarm status indicator
- UL1449 4th edition



### Service/Branch Panel Protection 120,000 Peak Amp Capacity (Type 1 SPD)

Voltage V AC	Configuration	Catalog Number	Replacement Module
120/240V AC Single Phase	1Ph. 3-wire +G	HBL3P120C	HBL3P120CM
120/208V AC Wye*	3Ph. Wye 4-wire +G	HBL4P120C	HBL4P120CM
240/120V AC Delta split phase	3Ph. Delta 4-wire +G 'High Leg'	HBL6P120C	HBL6P120CMAC & HBL6P120CMB
277/480V AC Wye**	3Ph. Wye 4-wire +G	HBL8P120C	HBL8P120CM
480V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL9P120C	HBL9P120CM
347/600V AC Wye	3Ph. Wye 4-wire +G	HBL10P120C	HBL10P120CM
600V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL11P120C	HBL11P120CM

Note: Units come standard with Surge Counter.

### **Electrical Specifications**

				Voltage Protection Rating (VPR)					
120kA Panel	SCCR♦	I <sub>n</sub>	MCOV †	L-N	L-G	N-G	L-L		
HBL3P120C	200kA	20kA	120	700	700	600	1000		
HBL4P120C	200kA	20kA	120	700	700	600	1000		
HBL6P120C	200kA	20kA	120	700/1000	700/1000	600	1200		
HBL8P120C	200kA	20kA	120	1200	1200	1000	2000		
HBL9P120C	200kA	20kA	120	N/A	1800	N/A	2000		
HBL10P120C	200kA	20kA	120	1500	1500	1200	2500		
HBL11P120C	200kA	20kA	120	N/A	2500	N/A	2500		

Note: ♦ SCCR - Short Circuit Current Rating. † MCOV - Maximum Continuous Operating Voltage. In - Nominal discharge current.

### **Product Specifications**

Max. Surge Current per Phase: 120kA

Max. Operating Temperature: -40°F to 149°F (-40°C to 65°C)

Diagnostics Indicators: Push to Test Diagnostics, Red and Green Status LED's. Dry Contacts, Audible Alarm and Surge Counter

Dimensions: 11.04"W x 11.44"H x 5.32"D

Weight: 23.0 lbs. Max.

Terminal Accommodation: #10 AWG to #2 AWG

Operating Frequency: 50/60/400 Hz

EMI/RFI: Up to -30dB

Housing Rating: NEMA 1
Listing: CULus UL1449 4th edition type 1 SPD, UL

cULus UL1449 4th edition type 1 SPD, UL1283 5th edition, CSA C22.2 No. 269.2-13 1st edition, CSA 22.2,

No. 8-13, 5th edition.

Warranty: 10 year

<sup>\*120/208</sup> Wye also applies to 127/220 Wye.

<sup>\*\*277/480</sup> Wye also applies to 220/380 Wye, 230/400 Wye and 240/415 Wye.



### **Wired-In Branch Panel Protection**

The wired-in surge protection device brick design is ideal for areas where space is a major consideration. The surge unit can be mounted directly to the panel through a chase nipple connection which will reduce lead length and impedance while increasing protection levels.

The 100kA product features a NEMA 4X housing and a 200kA SCCR rating.

The SpikeShield wired-in surge protective devices are UL1449 4th edition listed.

- 100,000 Peak Amperage Capacity
- Ideal for areas where space is a major consideration
- Can be mounted directly to the panel through a chase nipple connection to reduce lead length and impedance



### Wired-In Branch Panel Protection 100,000 Peak Amp Capacity (Type 2 SPD)

	, , , , , ,	,
Service Voltage	Configuration	Catalog Number
120/240V AC Single Phase	1Ph. 3-wire +G	HBL3W100C
120/208V AC Wye*	3Ph. Wye 4-wire +G	HBL4W100C
240V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL5W100C
240/120V AC Delta split phase	3Ph. Delta 4-wire +G 'High Leg'	HBL6W100C
277/480V AC Wye**	3Ph. Wye 4-wire +G	HBL8W100C
480V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL9W100C
347/600V AC Wye	3Ph. Wye 4-wire +G	HBL10W100C
600V AC Delta	3Ph. Delta 3-wire Corner Gnd <sup>∆</sup>	HBL11W100C

Note: \*120/208 Wye also applies to 127/220 Wye.

### **Electrical Specifications**

				Voltage Protecti	on Rating (VPR)		
SCCR♦	In	MCOV †	L-N	L-G	N-G	L-L	
200kA	20kA	150/270	900	1200	700	1500	
200kA	20kA	150/270	900	1200	700	1500	
200kA	20kA	300	N/A	N/A	N/A	1500	
200kA	20kA	275/150	1000	1200	700	1500	
200kA	20kA	320/640	1200	2000	1000	2500	
200kA	20kA	640	N/A	N/A	N/A	3000	
200kA	20kA	390/780	1500	2500	1500	3000	
200kA	20kA	780	N/A	N/A	N/A	3000	
	200kA 200kA 200kA 200kA 200kA 200kA 200kA	200kA 20kA 200kA 20kA 200kA 20kA 200kA 20kA 200kA 20kA 200kA 20kA 200kA 20kA 200kA 20kA	200kA 20kA 150/270 200kA 20kA 150/270 200kA 20kA 300 200kA 20kA 275/150 200kA 20kA 320/640 200kA 20kA 640 200kA 20kA 390/780	200kA 20kA 150/270 900 200kA 20kA 150/270 900 200kA 20kA 300 N/A 200kA 20kA 275/150 1000 200kA 20kA 320/640 1200 200kA 20kA 640 N/A 200kA 20kA 390/780 1500	SCCR ◊         In         MCOV †         L-N         L-G           200kA         20kA         150/270         900         1200           200kA         20kA         150/270         900         1200           200kA         20kA         300         N/A         N/A           200kA         20kA         275/150         1000         1200           200kA         20kA         320/640         1200         2000           200kA         20kA         640         N/A         N/A           200kA         20kA         390/780         1500         2500	SCCR ◊         In         MCOV †         L-N         L-G         N-G           200kA         20kA         150/270         900         1200         700           200kA         20kA         150/270         900         1200         700           200kA         20kA         300         N/A         N/A         N/A           200kA         20kA         275/150         1000         1200         700           200kA         20kA         320/640         1200         2000         1000           200kA         20kA         640         N/A         N/A         N/A           200kA         20kA         390/780         1500         2500         1500	200kA         20kA         150/270         900         1200         700         1500           200kA         20kA         150/270         900         1200         700         1500           200kA         20kA         300         N/A         N/A         N/A         1500           200kA         20kA         275/150         1000         1200         700         1500           200kA         20kA         320/640         1200         2000         1000         2500           200kA         20kA         640         N/A         N/A         N/A         N/A         3000           200kA         20kA         390/780         1500         2500         1500         3000

Note: ♦ SCCR - Short Circuit Current Rating.

### **Product Specifications**

Max. Surge Current per Phase: 100kA

Max. Operating Temperature: -40°F to 140°F (-40°C to 60°C)

Diagnostics Indicators: Green Status LED's, Audible Alarm, Dry Contacts

Dimensions: 9.9"W x 4.8"H x 3.1"D

Weight: 4.78 lbs.

Terminal Accommodation: #10 AWG 18.0" Wire Leads

Frequency: 50/60 Hz
EMI/RFI: Up to -30dB
Housing Rating: Type 4X

Listing: cULus UL 1449 4th edition type 2 SPD, UL1283 (Wye prod. only), CSA C22.2 NO. 8-M1986

Warranty: 10 year

<sup>\*\*277/480</sup> Wye also applies to 220/380 Wye, 230/400 Wye and 240/415 Wye.

<sup>△</sup>Also can be used on ungrounded systems.

<sup>†</sup> MCOV - Maximum Continuous Operating Voltage.

In - Nominal discharge current.



### **Wired-In Surge Arrestors and Protective Devices**

Surge Arrestors are a low cost solution that may be installed on the line side or load side of the service entrance. These are also excellent for OEM applications where size is an important variable.

Hubbell's 50kA single phase wired-in high-quality surge protective device features a compact design, NEMA 4X rating and are UL1449 4th edition listed.

- 36,000, 40,000 and 50,000 Peak Amperage Capacity
- Surge arrestors are a low cost solution that may be installed on the line side or load side of the service entrance
- Excellent for OEM applications where size is an important variable
- Single phase wired-in surge protective devices feature a compact design





BL3W5U



**HBLSDSA36** 

### Wired-In High-Quality Surge Protective Device (Type 1 SPD)

Service Voltage	Configuration	Peak Amp Capacity	Mounting Means	Catalog Number
120/240V AC Single Phase	1Ph. 3-wire + G	50kA	Side Nipple Mount	HBL3W50

### Wired-In Surge Arrestors, Single Phase and Three Phase (Type 1 SPD)

Service Voltage	Configuration	Peak Amp Capacity	Mounting Means	Catalog Number
120/240V AC Single Phase	1Ph. 3-wire	36kA	Back Nipple Mount	HBLSDSA36
120/208V AC Wye*	3Ph. 4-wire	40kA	Back Nipple Mount	HBL4SA40
240V AC Delta	3Ph. 3-wire	40kA	Back Nipple Mount	HBL5SA40
277/480V AC Wye**	3Ph. 4-wire	40kA	Back Nipple Mount	HBL8SA40
480V AC Delta	3Ph. 3-wire	40kA	Back Nipple Mount	HBL9SA40
347/600V AC Wye	3Ph. 4-wire	40kA	Back Nipple Mount	HBL10SA40
600V AC Delta	3Ph. 3-wire	40kA	Back Nipple Mount	HBL11SA40

### **Electrical Specifications**

				Voltage Protection Rating (VPR)				
Catalog Number	SCCR♦	I <sub>n</sub>	MCOV†	L-N	L-G	N-G	L-L	
HBL3W50	25kA	10kA	150 (L-N, L-G), 300 (L-L)	700	800	N/A	1200	
HBLSDSA36	22kA	10kA	150	700	N/A	N/A	1200	
HBL4SA40	200kA	10kA	180 (L-N), 360 (L-L)	700	N/A	N/A	1200	
HBL5SA40	200kA	10kA	360 (L-L)	N/A	N/A	N/A	1200	
HBL8SA40	200kA	10kA	420 (L-N), 840 (L-L)	1500	N/A	N/A	2500	
HBL9SA40	200kA	10kA	840 (L-L)	N/A	N/A	N/A	2500	
HBL10SA40	200kA	10kA	510 (L-N), 1020 (L-L)	1800	N/A	N/A	3000	
HBL11SA40	200kA	10kA	1020 (L-L)	N/A	N/A	N/A	3000	

Note: ♦ SCCR - Short Circuit Current Rating. † MCOV - Maximum Continuous Operating Voltage. In - Nominal discharge current.

### **Product Specifications**

0 : 1/ !!	0: 1 B	0'   D	FI D
Service Voltage	Single Phase	Single Phase	Three Phase
Max. Surge Current per Phase:	50kA	36kA	40kA
Max. Operating Temperature:	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)
Diagnostics Indicators:	Green Status LED per line	Green Status LED per line	Green Status LED per line
Dimensions:	3.0"W x 3.6"H x 2.67"D	2.25"W x 2.25"H x 1.94"D	3.60"W x 3.0"H x 2.64"D
Weight:	1.8 lbs.	.72 lbs.	1.8 lbs.
Terminal Accommodation:	#12 AWG Wire Leads	#14 AWG Wire Leads	#12 AWG Wire Leads
Frequency:	50/60 Hz	50/60 Hz	50/60 Hz
EMI/RFI:	Up to -30dB	Up to -30dB	Up to -30dB
Housing Rating:	Type 4X	Type 4X	Type 4X
Listing:	UL1449 4th edition	UL1449 4th edition	UL1449 4th edition
Warranty:	10 year	2 year	2 year

### **Features and Benefits**





### **Housing Design**

- First UL2930 product ever sold
- 15A and 20A 125V versions
- Surge protected models in all configurations
- Non-surge protected RPT models in all configurations



HBL6MGRPT620 RPT HCOA

### Contacts

• Equipment grounding terminal



### Safety

- Tamper-resistant flip covers
- Green LED indicates surge protection working



- 6 ft. or 15 ft. cord length
- 12/3 AWG cord on 15A and 20A models
- 45° angle plug (15A series)
- 90° angle plug (20A series)



### **UL2930 Healthcare Outlet Assembly (HCOA)**

Description	# of Outlets	Joule Rating	Cord Length	Color	15 Amp	20 Amp
UL 2930 HCOA	6	550	6'	White	HBL6MG6	HBL6MG620
with L-N Surge Protection	6	550	15'	White	HBL6MG15	HBL6MG1520
UL 2930 HCOA	6	N/A	6'	White	HBL6MGRPT6	HBL6MGRPT620
Relocatable Power Tap (RPT)	6	N/A	15'	White	HBL6MGRPT15	HBL6MGRPT1520



SpikeShield® Surge Protective Devices (SPD) with Tamper-Resistant Receptacles and Heavy Duty Plug

	# of	Joule	Cord		Healthca	re Industry	Indus	trial Grade
Description				Color	15 Amp	20 Amp	15 Amp	20 Amp
UL Type 3 SPD, Heavy Duty	6	1100	6'	White	HBL6HG6	HBL6HG620	HBL6SS6	HBL6SS620
Metal Housing	6	1100	15'	White	HBL6HG15	HBL6HG1520	HBL6SS15	HBL6SS1520
UL Type 3 SPD, Heavy Duty Metal Housing with 2-port USB	4	1100	6'	White	HBL6HGUSB6	_	-	_

**Metallic Surge Protection Strips** 

Description	# of Outlets	Joule Rating	Peak AMP Rating	Cord Length	Color	Down Line Warranty	Catalog Number
Metal Power Strip (No surge protection)	6	N/A	N/A	6'	Off. White	N/A	HBL6MPS
Metal Power Strip (No surge protection)	6	N/A	N/A	15'	Off. White	N/A	HBL6MPS15
Metal SPD	6	1050	19.5kA	6'	Off. White	\$2,500	HBL6MPS1050
Metal SPD	6	1050	19.5kA	15'	Off. White	\$2,500	HBL6MPS105015
SPD with Wire Management	6	350	6.5kA	6'	Yellow	\$2,500	HBL6PS350YL
SPD with Wire Management	8	350	6.5kA	6'	Yellow	\$2,500	HBL8PS350YL



Description	# of Outlets	Joule Rating	Peak AMP Rating	Cord Length	Color	Down Line Warranty	Catalog Number
Power Strip (No surge protection)	6	N/A	N/A	6'	Off. White	N/A	HBL6PPS
SPD	6	350	6.5kA	6'	Off. White	\$2,500	HBL6PS350A
SPD	6	350	6.5kA	15'	Off. White	\$2,500	HBL6PS35015A
SPD with Fax/Modem	6	1050	19.5kA	6'	Off. White	\$2,500	HBL6PS1050MA
SPD	7	1050	19.5kA	6'	Off. White	\$10,000	HBL7PS1050A
SPD with Fax/Modem	7	1050	19.5kA	6'	Off. White	\$10,000	HBL7PS1050MA
SPD	7	1050	19.5kA	15'	Off. White	\$10,000	HBL7PS105015A
SPD with Fax/Modem/CATV	8	2100	39kA	6'	Off. White	\$25,000	HBL8PS2100MA
SPD with Two USB Ports and 90° Angle Plug.	4	1050	19.5kA	6'	Black	\$10,000	HBL4PS1050USBA



### **Features and Benefits**

### **Surge Protection Receptacles**

Hubbell offers a broad range SPD receptacles with technology that is unsurpassed. Inside Hubbell SPD receptacles are two 22mm square MOVs providing 240 joules of surge protection for each mode. The nylon component shield protects the printed circuit board from contaminants. An all-glass, conformably coated PC board provides superior moisture immunity for longer life in humid environments.

- Alarmed and non-alarmed versions
- Available in 15A and 20A versions
- Commercial Specification Grade and Hospital Grade
- IG available in all versions



IG8362SA

Note: The effectiveness of SPD devices diminishes with the increase in distance between the device and the equipment to be protected.



### Housing Design

- Meets UL Standards 1449 4th Edition and 498: CSA Certified
- Impact-resistant nylon face
- Available in Hospital Grade, 4-PLEX®, SNAPConnect® and Tamper-Resistant
- Fits standard wall box



### **Terminals**

 Back and side wiring capability provides easy installation with stranded or solid wire



### One-Piece Mounting Strap

- Wrap-around, locked on steel mounting strap provides additional support strength for receptacle assembly
- Automatic self-grounding staple attached to bridge meets NEC<sup>®</sup> requirements



### Contacts

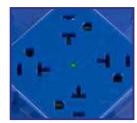
 Green grounding screw connected directly to the grounding contacts



### Identification

- Distinctive surge symbol provides quick visual identification
- Surge protection indicator light
- Muting screw allows damage-alert alarm to be silenced until device is replaced





### 4-PLEX Surge Receptacles

- Distinctive surge symbol
- Surge protection indicator light

Circuit Guard®, Specification Grade



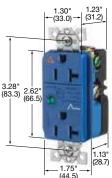


20A 125
NEMA 5-2
UI CSA

Duplex Receptacles		NEMA 5-15R UL CSA	NEMA 5-20R UL CSA
Description	Color	Catalog Number	
Surge protection receptacles with light,	Blue	HBL5260SA	HBL5360SA
240 joules, 15kA peak current.	lvory	HBL5260ISA	HBL5360ISA
	Office White	HBL5260OWSA	HBL5360OWSA
	White	HBL5260WSA	HBL5360WSA
Surge protection receptacles with light	Almond	HBL5262ALSA	HBL5362ALSA
and alarm, 240 joules, 15kA peak current.	Blue	HBL5262SA	HBL5362SA
	Gray	HBL5262GYSA	HBL5362GYSA
	lvory	HBL5262ISA	HBL5362ISA
	Office White	HBL5262OWSA	HBL5362OWSA
	White	HBL5262WSA	HBL5362WSA
Isolated ground, surge protection	Blue	IG5262SA	IG5362SA
receptacles with light and alarm,	Gray	IG5262GYSA	IG5362GYSA
240 joules, 15kA peak current.	lvory	IG5262ISA	IG5362ISA
	Office White	IG5262OWSA	IG5362OWSA
	Orange	IG5262OSA	IG5362OSA
	White	IG5262WSA	IG5362WSA
4-PLEX® surge protection receptacles	Blue	HBL415S	HBL420S
with lights, 80 joules, 6.5kA peak current.	lvory	HBL415IS	HBL420IS



HBL5262GYSA



IG5362SA

3.28" | (83.3) 2.62' (66.5

# 3.28" | (83.3) 2.62" (66.5)

HBL8362ISA

### Circuit Guard®, Hospital Grade Duplex Receptacles

Description	Color	Catalog Number	
Surge protection receptacles with light	Almond	HBL8262ALSA	HBL8362ALSA
and alarm, 240 joules, 15kA peak current.	Blue	HBL8262SA	HBL8362SA
	Gray	HBL8262GYSA	HBL8362GYSA
	lvory	HBL8262ISA	HBL8362ISA
	Red	HBL8262RSA	HBL8362RSA
	White	HBL8262WSA	HBL8362WSA
Isolated ground, surge protection	Blue	IG8262SA	IG8362SA
receptacles with light and alarm,	Gray	IG8262GYSA	IG8362GYSA
240 joules, 15kA peak current.	lvory	IG8262ISA	IG8362ISA
	Orange	IG8262OSA	IG8362OSA
	Red	IG8262RSA	IG8362RSA
	White	IG8262WSA	IG8362WSA
4-PLEX surge protection receptacles	Blue	_	HBL420HS
with lights, 80 joules, 6.5kA peak current.	lvory	_	HBL420HIS
	Red	_	HBL420HRS

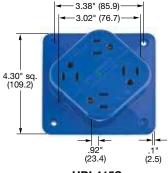
### 4-PLEX® Accessories

Description	Color	Catalog Number
4-PLEX adapter plates for 1- and 2-gang	Blue	HBL4APBL
(4-PLEX mount directly to 4" (101.6) square	lvory	HBL4API
device boxes).	Red	HBL4APR
4-PLEX portable box. Portable 4" (101.6) square box	lvory	HBL4PBI
with one cord grip. Accepts up to .66" (16.8) dia. cord.		

Note: 4-PLEX box is not UL Listed.

### Wallplates (Sold Separately)

	(						
		High-Impact Nyl	on			Stainless S	teel (S/S)
Configuration	Color	Standard	Mid-Size	Plated	Steel	Bras	SS
	Almond	NP26AL	NPJ26AL	Chrome	SCH26	Smooth S/S	SS26
	Blue	_	NPJ26CBL*	Brass	SBP26	Smooth S/S	SSJ26 <sup>*</sup>
Jan Sent	Blue	_	NPJ26BL	Plated		Smooth	SB26
100	Gray	NP26GY	NPJ26GY			Brass	
	Ivory	_	NPJ26C*				
	Ivory	NP26I	NPJ26I				
	Off. White	NP26OW	NPJ26OW				
1.0	Orange	NP260IG**	<del>-</del>				
1-Gang	Red	NP26R	NPJ26R				
	White	NP26W	NPJ26W				



**HBL415S** 

Dimensions in Inches (mm)

Note: \*Premarked "COMPUTER ONLY." Lettering is block 1/4" high.

- \*\*Premarked "ISOLATED GROUND." Lettering is block 1/4" high.
- ▲ Jumbo size plate.

See section O for additional wallplates.

### **Features and Benefits**

### SNAPConnect® Surge Protection and Isolated Ground **Receptacles Heavy Duty Specification Grade**

Hubbell's SNAPConnect® Isolated Ground devices are available in a variety of styles.

- All SNAPConnect® IG receptacles include Hubbell's industry best tamper resistant shutter
- 15A and 20A models are available in Hospital Grade. HG Decorator, Commercial Specification Grade, and Commercial Decorator versions
- SNAPConnect® IG devices are also available with a power indicating LED version in all the aforementioned grades. The power indicating product is also available in a non TR shutter design
- SNAPConnect® connectors come standard with solid or stranded 12 AWG THHN





SNAP5362IGLTR

Note: The effectiveness of SPD devices diminishes with the increase in distance between the device and the equipment to be protected.



### Protection

- Hubbell surge receptacles offer 240 joules of protection and 15 kA peak current rating
- Surge protection LED indicator flashes when surge protection is lost
- Audible alarm also provides user notification that surge protection has been lost. Muting screw allows user to turn alarm OFF once replacement has been scheduled



### **Isolated Ground**

- IG triangle on the face of the receptacle clearly indicates isolated ground device
- LED Power-ON indicator available on all models
- Hubbell's patented TR shutter design is utilize on all IG receptacles that feature the Tamper-Resistant option



### Installation

- SNAPConnect® devices reduce labor time during installation and when being serviced in the future
- Connectors available with solid or stranded leads
- Custom length leads available
- Push on wire option also available on SNAPConnect® connectors



### Installation

- SNAPConnect® Isolated ground devices are available in standard duplex design or decorator shape
- 15A and 20A version in Commercial Specification Grade and Hospital Grade
- SNAPConnect® Isolated Ground devices provide a clean ground path for sensitive equipment





### SNAPConnect® Tamper-Resistant Surge Protection **Receptacle with Power Indicating LED**





Description	Color	Catalog Number	
Hospital Grade ● SNAPConnect® Tamper-Resistant, surge supression duplex receptacle, smooth face, 240 joules, 15kA peak current.	Blue	SNAP8262S	SNAP8362S
	Gray	SNAP8262GYS	SNAP8362GYS
	Ivory	SNAP8262IS	SNAP8362IS
	Light Almond	SNAP8262LAS	SNAP8362LAS
	Red	SNAP8262RS	SNAP8362RS
	White	SNAP8262WS	SNAP8362WS
Commercial Grade SNAPConnect® Tamper-Resistant, surge supression duplex receptacle, smooth face, 240 joules, 15kA peak current.	Blue	SNAP5262S	SNAP5362S
	Gray	SNAP5262GYS	SNAP5362GYS
	Ivory	SNAP5262IS	SNAP5362IS
	Light Almond	SNAP5262LAS	SNAP5362LAS
	White	SNAP5262WS	SNAP5362WS



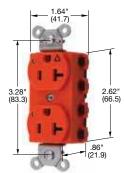
**SNAP5262S** 

_	1.64"	
3.28" (83.3)		2.62' (66.5
		.86" (21.9)

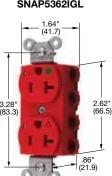
SNAPConnect® Tamper-Resistant Isolated Ground Receptacle

Description	Color	Catalog Number	
Hospital Grade • SNAPConnect® Tamper-Resistant, isolated ground, smooth face, duplex.	Orange Red	SNAP8200IGTRA SNAP8200RIGTRA	SNAP8300IGTRA SNAP8300RIGTRA
Hospital Grade • Style Line® decorator SNAPConnect® Tamper-Resistant, isolated ground, smooth face, duplex.	Orange Red	SNAP2172IGTRA SNAP2172RIGTRA	SNAP2182IGTRA SNAP2182RIGTRA
Commercial Grade, isolated ground.	Orange	SNAP5262IGTRA	SNAP5362IGTRA
Style Line® decorator.	Orange	SNAP2152IGTRA	SNAP2162IGTRA

**SNAP2182RIGTRA** 



SNAP5362IGL



SNAP8300RIGLTRA



SNAP1RA

Description	Color	Catalog Number	
Hospital Grade • SNAPConnect® Tamper-Resistant, isolated ground, smooth face, duplex.	Orange Red	SNAP8200IGTRA SNAP8200RIGTRA	SNAP8300IGTRA SNAP8300RIGTRA
Hospital Grade • Style Line® decorator SNAPConnect® Tamper-Resistant, isolated ground, smooth face, duplex.	Orange Red	SNAP2172IGTRA SNAP2172RIGTRA	SNAP2182IGTRA SNAP2182RIGTRA
Commercial Grade, isolated ground.	Orange	SNAP5262IGTRA	SNAP5362IGTRA
Style Line® decorator.	Orange	SNAP2152IGTRA	SNAP2162IGTRA

## SNAPConnect® Isolated Ground Receptacle with Power Indicating LED

with Fower indicating LED			
Description	Color	Catalog Number	
Hospital Grade ● SNAPConnect® Tamper-Resistant, isolated ground, smooth face, duplex.	Orange Red	SNAP8200IGL SNAP8200RIGL	SNAP8300IGL SNAP8300RIGL
Hospital Grade ● Style Line® decorator SNAPConnect® Tamper-Resistant, isolated ground, smooth face, duplex.	Orange Red	SNAP2172IGL SNAP2172RIGL	SNAP2182IGL SNAP2182RIGL
Commercial Grade, isolated ground.	Orange	SNAP5262IGL	SNAP5362IGL
Style Line® decorator.	Orange	SNAP2152IGL	SNAP2162IGL

SNAPConnect® Tamper-Resistant Isolated Ground **Receptacle with Power Indicating LED** 

Description	Color	Catalog Number	
Hospital Grade ● SNAPConnect® Tamper-Resistant, isolated ground, smooth face, duplex.	Orange Red	SNAP8200IGLTRA SNAP8200RIGLTRA	SNAP8300IGLTRA SNAP8300RIGLTRA
Commercial Grade Style Line® decorator.	Orange Red	SNAP2172IGLTRA SNAP2172RIGLTRA	SNAP2182IGLTRA SNAP2182RIGLTRA
Commercial Grade, isolated ground.	Orange	SNAP5262IGLTRA	SNAP5362IGLTRA
Style Line® decorator.	Orange	SNAP2152IGLTRA	SNAP2162IGLTRA

SNAPConnect® Right Angle Pigtailed Connector for General Use

Description	Solid Wire	Stranded Wire
Clear right angle terminal with 6 inch leads #12 AWG THHN/THWN-2, 600V, Polycarbonate housing material.	SNAP1RA	SNAP2RA

Note: See page Tech-10 for Tamper-Resistant and LED Power Indicators descriptions.

### **Features and Benefits**

### **Straight Blade Isolated Ground Receptacles**

In February 1968, Hubbell patented the first isolated ground receptacle. Today —when a clean, noise-free ground is more important than ever—Hubbell is still setting the standard.

Hubbell uses insulation barrier construction on many models to isolate the ground contacts from the mounting strap. The green grounding screw is connected directly to the grounding contacts. In this way, ground contacts are separated from the mounting strap and also from the conventional grounding system. The isolated ground circuit is completed by running a dedicated insulated ground wire from the system ground buss to the green grounding screw.

### And there's more to the Hubbell line:

- Available in 19 NEMA configurations and a total of 60 different type receptacles.
- Versatility and mobility: With Hubbell's grounding method, Hubbell's IG devices can be mounted in boxes, on metal panels almost anywhere.
- Hubbell quality: Every Hubbell IG device meets and exceeds all applicable codes and standards, specially the toughest standard of all, the Hubbell standard of excellence.



IG5362



### **Housing Design**

- Dimensionally stable, reinforced thermoplastic polyester provides impact strength in addition to heat and flame resistance
- Impact-resistant nylon face
- Straight blade 15A and 20A, 125V duplex receptacles are available in a variety of colors



### Terminals

 Back and side wiring capability provides easy installation with stranded or solid wire



### One-Piece Mounting Strap

- Wrap-around, locked on brass mounting strap provides additional support strength for receptacle assembly
- Automatic self-grounding clip assures ground continuity between mounting strap and metal wall box



### Contacts

- Green grounding screw connected directly to the grounding contacts
- Insulation barrier construction first patented by Hubbell — isolates ground contacts from the mounting strap



### Identification

- IG triangle on the face of the receptacle clearly indicates isolated ground device
- Amperage and voltage clearly indicated



### Center Rivet

 Square head, 10-thread bronze center rivet won't rotate, reduces stripping and resists corrosion



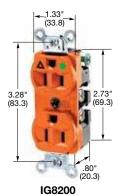


### Hospital Grade , HBL® Extra Heavy Duty, **Isolated Ground Receptacles**





Description	Color	Catalog Number	
Flush, thermoplastic polyester face, duplex, back and side wired, multiple drive screws.	Orange Red	IG8200 IG8200R	IG8300 IG8300R
Style Line® decorator.	Orange	_	IG2182
•	lvory	_	IG2182I
	White	_	IG2182WA
Flush, thermoplastic polyester face, single.	Orange	IG8210	IG8310



### 15A and 20A, 125V HBL® Extra Heavy Duty, Specification Grade, **Isolated Ground Receptacles**





20A 125V NEMA 5-20F UL CSA 1 HP

Description	Color	Catalog Number	
Flush, nylon face, duplex, back and side wired,	Orange	IG5262	IG5362
	Gray	IG5262GY	IG5362GY
multiple drive screws.	Ivory	IG5262I	IG5362I
	Red	IG5262R	IG5362R
	White	—	IG5362W
Weather Resistant, duplex,	Orange	IG5262WR	IG5362WR



IG5262

isolated ground. Gray **IG5262IWR IG5362IWR** Ivory IG5362RWR Red IG5262RWR White IG5362WWR **CR5252IG** CR5352IG Finder groove, nylon face, duplex, Orange

Blue

Gray

Ivory

Gray



**IG5261WR** 



back and side wired.			
4-PLEX® receptacle.	Orange	IG415	IG420*
Flush, nylon face, single, back and side wired.	Orange	IG5261	IG5361

Orange

CR5252IG

Weather Resistant, single, Isolated ground.

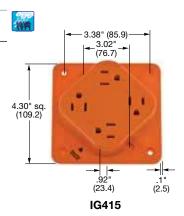
back and side wired.

Style Line® decorator,

flush, nylon face,

Note: \*Not Fed. Spec. Listed. See page Tech-10 for Weather Resistant description.

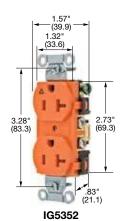
See page A-47 and A-48 for accessories. See page A-28 for 4-PLEX accessories.

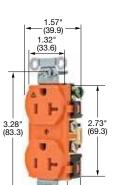


Dimensions in Inches (mm)

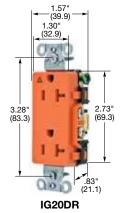
IG5361WR

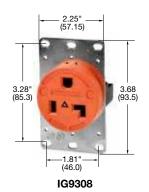






IG20CR





## Hubbell-PRO Heavy Duty Specification Grade





atalog Number	
EMA 5-15R	NEM/
UL CSA	UL
0.5 HP	1

Description	Color	Catalog Number	
Smooth face, duplex, back and side wired.	Orange	IG5252	IG5352
	Almond	IG5252AL	IG5352AL
	Gray	IG5252GY	IG5352GY
	Ivory	IG5252I	IG5352I
	Light Almond	IG5252LA	IG5352LA
	White	IG5252W	IG5352W
Tamper-Resistant,	Orange	IG5252TR	IG5352TR
smooth face, duplex,	Ivory	IG5252ITR	IG5352ITR
back and side wired.	White	IG5252WTR	IG5352WTR

Note: See page Tech-10 for Tamper-Resistant description.

### **Commercial Specification Grade**

Description	Color	Catalog Number	
Smooth face, duplex,	Orange	IG15CR	IG20CR
side wired.	Almond	IG15CRAL	IG20CRAL
	Gray	IG15CRGRY	<b>IG20CRGRY</b>
	lvory	IG15CRI	IG20CRI
	Light Almond	IG15CRLA	IG20CRLA
	White	IG15CRWHI	IG20CRWHI
Style Line <sup>®</sup> decorator;	Orange	IG15DR	IG20DR
smooth face; back and	Almond	IG15DRAL	IG20DRAL
side wired.	Gray	<b>IG15DRGRY</b>	<b>IG20DRGRY</b>
	lvory	IG15DRI	IG20DRI
	Light Almond	IG15DRLA	IG20DRLA
	White	IG15DRWHI	IG20DRWHI

15A and 20A, 250V HBL® Extra Heavy Duty, Specification Grade, Isolated Ground Receptacles		15A 250V NEMA 6-15R UL CSA 1.5 FIP	20A 250V NEMA 6-20R UL CSA 2 HP
Description	Color	Catalog Number	
Flush, nylon face, duplex, back and side wired, multiple drive screws.	Orange	IG5662	IG5462
Flush hylon face single	Orange	IG5661	IG5461

30A, 125V and 250V Isolated Ground Receptacles	IP20 SUITABILITY	30A 125V NEMA 5-30R UL CSA 2 HP	30A 250V NEMA 6-30R UL CSA 2 HP
Description	Color	Catalog Number	
Single receptacle, 2 pole, 3 wire grounding.	Orange	IG9308	IG9330

Dimensions in Inches (mm)

□G

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### **Features and Benefits**

### Isolated Ground Twist-Lock® Receptacles

Hubbell uses insulation barrier construction to isolate the ground contacts from the mounting strip, providing a clean, noise-free ground for sensitive equipment.

Face color-coding by voltage facilitates locating and mating of proper devices.











IG2310



### **Housing Design**

- Impact-resistant nylon face
- Boss diameter is 1.56 in. (39.6) on 20 and 30A devices, simplifying installation
- Glass-filled thermoplastic polyester base is heat and impact resistant, providing dimensional stability and strength



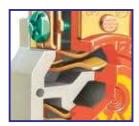
### **Terminals**

 Back and side wiring capability provides easy installation with stranded or solid wire



### Mounting Strap

- All-brass mounting and grounding system provides a low resistance ground path
- Automatic self-grounding clip assures ground continuity between mounting strap and metal wall box



### Contacts

- Insulation barrier construction first patented by Hubbell isolates ground contact from the mounting strap
- Wire restraint recess for both back and side wiring reduces terminal loosening
- One-piece contact with long spring arm (low stress) and oxide cutting nibs; prevents stress and overheating



### Identification

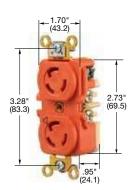
- Color-coding by voltage rating helps ensure mating of proper devices
- Amperage and voltage clearly indicated



### Wirina

- #10 silicon bronze terminal screw provides excellent strength and resistance to corrosion and stripping
- External back wiring allows visual inspection of terminations





### IG4700A

### 15A, 125V and 250V **Back and Side Wired**







Description	Poles/Wires	Color	Catalog Number	
Flush, RTP face, duplex.	2 pole, 3 wire	Orange	IG4700A*	IG4550A*
Flush, RTP face, single.	2 pole, 3 wire	Orange	IG4710	IG4560

Note: RTP is an abbreviation for reinforced thermoplastic polyester. \*Supplied with break-off tabs for split circuit wiring.







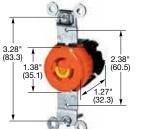
IG2340

### 20A, 125V, 250V and 480V AC **Back**

Back and Side Wired			1 HP
Description	Poles/Wires	Color	Catalog Number
Flush, nylon face, single.	2 pole, 3 wire	Orange	IG2310

IG2320





IG4710

### 30A, 125V and 250V **Back and Side Wired**

**Back and Side Wired** 

Flush, nylon face, single.

Description	Poles/Wires	Color	Catalog Number
Flush nylon face single	2 pole 3 wire	Orange	IG2610



_	_
	250V
NEMA	L6-30
UL/	CSA
2	HP

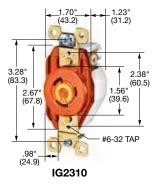
IG2620

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Y

20A 125/250V AC NEMA L14-20R UL/CSA 2 (1) HP



Description	Poles/Wires	Color	Catalog Number	er	
Flush, nylon face, single.	3 pole, 4 wire	Orange	IG2410	IG2420	



### 30A Bac

20A, 125V/250V and 3Ø 250V AC

N, 125V/250V and 3 ok and Side Wired	Ø 250V AC		30A 125/250V A NEMA L14-30F UL/CSA 2 (2) HP
uintian	Dalas Mires	Color	Catalag Nu

Dw	$G(\mathcal{T})$
250V AC	30A 3Ø 250V AC
.14-30R	NEMA L15-30R
.14-30R DSA	UL/CSA
HP	3 HP

Description	Poles/Wires	Color	Catalog Number	r
Flush, nylon face, single.	3 pole, 4 wire	Orange	IG2710	IG2720



(X)
(w(L O DY)
( بِ الْحِدُ )
30A 3ØY
120/208V AC

### 20A and 30A, 3ØY 120/208V AC **Back and Side Wired**

Description	Poles/Wires	Color	Catalog Numb	er	
Flush, nylon face, single.	4 pole, 5 wire	Orange	IG2510	IG2810	

# SECTION O

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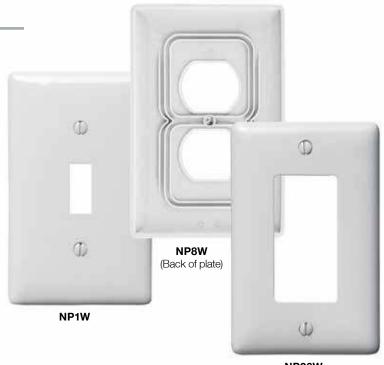
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### **Features and Benefits**

### **Nylon Wallplates**

Our line of nylon wallplates features larger standard sized wallplates to provide extra coverage to hide rough box opening, improved aesthetics, greater strength, impact resistance, along with excellent cleanability in all different types of environments.

- Standard size is 1/s inch larger to give you extra coverage to hide rough box openings. Also available in mid-size, jumbo and pre-marked
- Curved corners for improved aesthetics, for use in any application
- Reinforcement ribs for extra strength
- Captive screw feature holds mounting screw in place for quick and easy installation
- High-impact, self-extinguishing nylon material, which is virtually unbreakable
- Smooth, easy to clean finish is highly resistant to solvents and cleaning solutions, providing long life in the harshest environments



NP26W

Hubbell's standard sized wallplates are 1/4 inch larger to provide you that extra coverage to hide rough box openings. The depth is 1/4 inch so that it will comfortably fit over the device even on imperfect installations or on retrofit work. See page O-30 for details and dimensions.

### **Nylon Wallplates**



### **Nylon Pre-Marked Wallplates**



### **Metal Wallplates**











Pre-Marked



### **Features and Benefits**

### **Stainless Steel Wallplates**

Provide solutions for a variety of industrial and commercial applications.

### 302/304 Type Stainless Steel

Non-magnetic: 18.0% Chromium 8.0% Nickel

- Ideal for highly corrosive environments such as food processing, hospitals, static free requirements and more
- Environments subjected to heavy abuse

### 430 Type Stainless Steel

Magnetic: 17.0% Chromium Less than 0.5% Nickel

- Aesthetically identical to the 302/304 type stainless steel wallplates and are best suited for environments where corrosion resistance is less critical
- Standard commercial use

### **Smooth Solid Brass**

- Provides a plush appearance with the durability of metal
- Finish is lacquer coated to inhibit oxidation

### **Anodized Aluminum**

- Non-magnetic and corrosion resistance for a wide range of applications
- Finish is lacquer coated to inhibit oxidation





SS262

(Protective plastic film helps to prevent scratches and damage)

### **Extra-Duty Metallic While-in-Use Covers**

These covers are designed for use whenever protection is required while an outlet is in use. Covers meet or exceed the extra-duty rating per UL 514D, and are NEMA 3R rated.

- Die-cast aluminum construction
- Powder coated "chip resistant" paint corrosion protection
- Unique plug management provision for securing device and cord

### 2017 National Electrical Code (NEC®) Requirement

406.9 Receptacles in Damp or Wet Locations.

(B) Wet Locations.

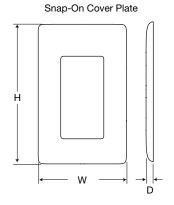
(1) 15 and 20 Ampere Receptacles in a Wet Location. 15 and 20 ampere, 125 and 250 volt receptacles installed in a wet location shall have an enclosure that is weatherproof whether or not the attachment plug cap is inserted. An outlet box hood installed for this purpose shall be listed, and shall be identified as "extra-duty." Other listed products, enclosures, or assemblies providing weatherproof protection that do not utilize an outlet box need not be marked "extra-duty." All 15 and 20 ampere, 125 and 250 volt nonlocking-type receptacles shall be listed weather-resistant type.

Exception: 15 and 20 ampere, 125 through 250 volt receptacles installed in a wet location and subject to routine high-pressure spray washing shall be permitted to have an enclosure that is weatherproof when the attachment plug is removed.

- (2) Other Receptacles. All other receptacles installed in a wet location shall comply with (B)(2)(a) or (B)(2)(b).
- (a) A receptacle installed in a wet location, where the product intended to be plugged into it is not attended while in use, shall have an enclosure that is weatherproof with the attachment plug cap inserted or removed.
- (b) A receptacle installed in a wet location where the product intended to be plugged into it will be attended while in use (e.g., portable tools) shall have an enclosure that is weatherproof when the attachment plug is removed.

### **Snap-On Wallplates**

- Clean, elegant look
- No visible screws
- Snap-on cover plate completely covers sub-plate eliminating dirt build-up around the edges
- Snap-on cover plate hides any paint or scratches on sub-plate caused during installation
- Appearance is consistent with other Hubbell wallplates
- Meets UL and CSA standards





Gang	Height (H)	Width (W)	Depth (D)
1	4.75" (120.6)	3.00" (76.2)	.25" (6.35)
2	4.75" (120.6)	4.81" (122.2)	.25" (6.35)
3	4.75" (120.6)	6.62" (168.2)	.25" (6.35)
4	4.75" (120.6)	8.44" (214.3)	.25" (6.35)

### **Snap-On Wallplates**

Description		Color	Decorator Catalog Number	Toggle Catalog Number
1-Gang, 1-Decorator	1-Gang, 1-Toggle	lvory Light Almond White	NPS26I NPS26LA NPS26W	NPS1I NPS1LA NPS1W
2-Gang, 2-Decorator	2-Gang, 2-Toggle	lvory Light Almond White	NPS262I NPS262LA NPS262W	NPS2I NPS2LA NPS2W
3-Gang, 3-Decorator	3-Gang, 3-Toggle	lvory Light Almond White	NPS263I NPS263LA NPS263W	NPS3I NPS3LA NPS3W
4-Gang, 4-Decorator		lvory Light Almond White	NPS264I NPS264LA NPS264W	- - -
1-Gang, 1-Duplex		lvory Light Almond White	NPS8I NPS8LA NPS8W	=





Toggle Switch Wallplates						
Description	Color	Nylon Standard	Nylon Mid-Size	Nylon Jumbo	Material	Metal Catalog Numbe
1-Gang, 1-Toggle	Almond Black Brown Gray Ivory Light Almond Office White Red White	NP1AL NP1BK NP1 NP1GY NP1I NP1LA NP1OW NP1R NP1W	NPJ1AL NPJ1BK NPJ1 NPJ1GY NPJ1I NPJ1LA NPJ1LA NPJ1R NPJ1W	- - NPJJ1I NPJJ1LA - - NPJJ1W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SA1 SB1 SBP1 SCH1 SS1 SS1L SP1AL* SP1G*
2-Gang, 2-Toggle	Almond Black Brown Gray Ivory Light Almond Office White Red White	NP2AL NP2BK NP2 NP2GY NP2I NP2LA NP2OW NP2R NP2W	NPJ2AL NPJ2BK NPJ2 NPJ2GY NPJ2I NPJ2LA NPJ2OW NPJ2R NPJ2W	- - NPJJ2I NPJJ2LA - - NPJJ2W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SA2 SB2 SBP2 SCH2 SS2 SS2L SP2AL* SP2G*
3-Gang, 3-Toggle	Almond Black Brown Gray Ivory Light Almond Office White Red White	NP3AL NP3BK NP3 NP3GY NP3I NP3LA NP3OW - NP3W	NPJ3AL NPJ3BK NPJ3 NPJ3GY NPJ3LA NPJ3OW NPJ3R NPJ3W	-	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	© SB3 SBP3 SCH3 SS3 SS3L SP3AL*
4-Gang, 4-Toggle	Black Brown Gray Ivory Light Almond Office White White	NP4BK NP4 NP4GY NP4I NP4LA NP4OW NP4W	NPJ4BK NPJ4 NPJ4GY NPJ4I NPJ4LA NPJ4OW NPJ4W	- - - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① SB4 SBP4 ① SS4 SS4L SP4AL*
5-Gang, 5-Toggle	Black Brown Gray Ivory Light Almond White	NP5BK NP5 NP5GY NP5I NP5LA NP5W	- - - - -	- - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① SB5 ① SS5 - SP5AL*
6-Gang, 6-Toggle	Brown Gray Ivory Light Almond White	NP6 NP6GY NP6I NP6LA NP6W	- - - -	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	© SB6 © SS6 — SP6AL*
7-Gang, 7-Toggle	Brown Gray Ivory	- - -	- - -	- - -	Aluminum Brass Brass Plated	① ① ①

8-Gang, 8-Toggle

2-Gang, 1-Toggle

Brown Gray Ivory Light Almond White

Light Almond

White

Brown Gray Ivory Light Almond White

Brass ① Brass Plated 1 Chrome S/S 302/304 1 **SS608** S/S 430 Aluminum Brass

Chrome

S/S 430 Aluminum

S/S 302/304

Brass Plated Chrome S/S 302/304 **SS740** S/S 430

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations. \*Powder coat paint finish.

Dimensions in Inches (mm)

①

**SS607** 

1



### **Duplex Receptacle Wallplates**

Description	Color	Nylon Standard	Nylon Mid-Size	Nylon Jumbo	Material	Metal Catalog Number
1-Gang, 1-Duplex	Almond Black Blue Brown Gray Ivory Light Almond Office White Orange Red White	NP8AL NP8BK - NP8 NP8GY NP8I NP8LA NP8OW NP8OR NP8R NP8R	NPJ8AL NPJ8BK NPJ8BL NPJ8 NPJ8GY NPJ8I NPJ8LA NPJ8OW - NPJ8R NPJ8W	- - - NPJJ8I NPJJ8LA - - - NPJJ8W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SA8 SB8 SBP8 SCH8 SS8 SS8L SP8AL* SP8G*
2-Gang, 2-Duplex	Black Brown Gray Ivory Light Almond Office White Orange Red White	NP82BK NP82 NP82GY NP82I NP82LA NP82OW NP82OR NP82R NP82W	NPJ82BK NPJ82 NPJ82GY NPJ82I NPJ82LA NPJ82OW - NPJ82R NPJ82W	- - - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SA82 SB82 SBP82 SCH82 SS82 SS82L SP82AL* SP82G*
3-Gang, 3-Duplex	Brown Ivory White	NP83 NP83I NP83W	- - -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① ① ① ① ① SS83 - SP83AL*
4-Gang, 4-Duplex	Brown Ivory White	NP84 NP84I NP84W	=	=	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① ① SS84
2-Gang, 1-Duplex	Brown Ivory White	=	=======================================	Ē	Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - SS748 -

### Single 15/20A Straight Blade or 15A Twist-Lock® Receptacle Wallplates

Description	Color	Nylon Standard	Nylon Mid-Size	Nylon Jumbo	Material	Metal Catalog Number
1-Gang, 1-Single 1.40 in. (35.6) Dia. Hole	Black Brown Gray Ivory Light Almond Office White Red White	NP7BK NP7 NP7GY NP7I NP7LA NP7OW NP7R NP7W	NPJ7BK NPJ7 NPJ7GY NPJ7I NPJ7LA NPJ7OW NPJ7R NPJ7W	- - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SA7 SB7 SBP7 SCH7 SS7 SS7L SP7AL* SP7G*
2-Gang, 1-Single 1.40 in. (35.6) Dia. Hole	Brown Ivory White	- - -	- -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS747
2-Gang, 2-Single 1.40 in. (35.6) Dia. Hole	Brown Ivory White	Ē	- -	- -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	© © © SS72

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.

<sup>\*</sup>Powder coat paint finish.





Di-ki	0-1	Nylon	Nylon	Matadal	Metal
Description	Color	Standard	Mid-Size	Material	Catalog Number
1-Gang, 1-Single	Black	NP720BK	_	Aluminum	SA720
1.60 in. (40.6) Dia. Hole	Brown	NP720	-	Brass	SB720
	Gray	NP720GY	-	Brass Plated	①
	lvory	NP720I	-	Chrome	①
	Office White	NP720OW	-	S/S 302/304	SS720
	Red	NP720R	-	S/S 430	-
	White	NP720W	-		
1-Gang, 1-Single	Brown	-	-	Aluminum	_
1.74 in. (44.2) Dia. Hole	Ivory	_	_	Brass	_
	White	_	_	Brass Plated	_
The state of the s				Chrome	-
A STATE OF THE STA				S/S 302/304	SS725
2-Gang, 1-Single	Brown	-	-	Aluminum	_
1.60 in. (40.6) Dia.Hole	Ivory	_	_	Brass	_
	White	_	_	Brass Plated	-
The state of the s				Chrome	_
				S/S 302/304	SS749
3-Gang, 2-Single	Brown	-	<del>-</del> .	Aluminum	①
1.60 in. (40.6) Dia. Hole	Ivory	_	_	Brass	①
	White	_	_	Brass Plated	①
				Chrome	①
				S/S 302/304	SS320

### **Single Receptacle Wallplates**

Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
1-Gang, 1-Single 1.97 in. (50.0) Dia. Hole	Brown Ivory White	- -	-	Aluminum Brass Chrome S/S 302/304 S/S 430	- - - SS737
1-Gang, 1-Single 2.16 in. (54.9) Dia. Hole	Black Brown Gray Ivory White	NP724BK NP724 NP724GY NP724I NP724W	NPJ724BK NPJ724 NPJ724GY NPJ724I NPJ724W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	SA723 ① ① SCH723 SS723 SS723L
2-Gang, 1-Single 2.16 in. (54.9) Dia. Hole	Brown Ivory White	- -	- - -	Aluminum Brass Chrome S/S 302/304 S/S 430	- SCH702 SS702 -
2-Gang, 1-Single 2.16 in. (54.9) Dia. Hole	Black Brown Gray Ivory White	NP703BK NP703 NP703GY NP703I NP703W	NPJ703BK NPJ703 - NPJ703I NPJ703W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS703 SS703L
2-Gang, 1-Single 2.48 in. (63.0) Dia. Hole	Brown Ivory White		- - -	Aluminum Brass Chrome S/S 302/304 S/S 430	- - - SS701
2-Gang, 1-Single 2.66 in. (67.6) Dia. Hole	Brown Ivory White	-	- - -	Aluminum Brass Chrome S/S 302/304 S/S 430	- - - SS716 -

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.



### **Blank Wallplates, Box Mount**

Description		Color	Nylon Standard	Nylon Mid-Size	Nylon Jumbo	Material	Metal Catalog Number
2	1-Gang, 1-Blank, Box Mount	Almond Black Brown Gray Ivory Light Almond Office White White	NP13AL NP13BK NP13 NP13GY NP13I NP13LA NP13OW NP13W	NPJ13AL NPJ13BK NPJ13 NPJ13GY NPJ13I NPJ13LA NPJ13OW NPJ13W	- - - NPJJ13I NPJJ13LA - NPJJ13W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SA13A SB13 SBP13 SCH13 SS13 SS13L SP14BAL* SP14BG*
# #: # #:	2-Gang, 2-Blank, Box Mount	Almond Black Brown Gray Ivory Light Almond White	NP23AL NP23BK NP23 NP23GY NP23I NP23LA NP23W	NPJ23AL  - NPJ23  - NPJ23I NPJ23LA NPJ23W	- - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SA23 SB23 ① SCH23 SS23 SS23L SP24BAL* SP24BG*
16 16	3-Gang, 3-Blank, Box Mount	Brown Ivory White	NP33 NP33I NP33W	- - -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① ① ① ① ① SS33 - SP34BAL*
H H	4-Gang, 4-Blank, Box Mount	Brown Ivory White	NP43 NP43I NP43W	- - -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS43

### **Blank Wallplates, Strap Mount**

1-Gang, 1-Blank, Strap Mount	Black Brown Gray Ivory Office White Red White	NP14BK NP14 NP14GY NP14I NP14OW NP14R NP14W	- - - - - - - -	- - - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	① SB14 ① ① SS14 SS14L SP14AL* SP14G*
2-Gang, 2-Blank, Strap Mount	Black Brown Gray Ivory Office White Red White	NP24BK NP24 NP24GY NP24I NP24OW NP24R NP24W	-	- - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	① ① ① ① ① SS24 SS24L SP24AL* SP24G*
3-Gang, 3-Blank, Strap Mount	Brown Ivory White	NP34 NP34I NP34W	- - -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① ① ① ① ① SS34 - SP34AL*
4-Gang, 4-Blank, Strap Mount	Brown Ivory White	NP44 NP44I NP44W	- - -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS44

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

DAvailable as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.

<sup>\*</sup>Powder coat paint finish.





### GFCI, Surge Receptacles and Style Line® Device Wallplates

Description	Color	Nylon Standard	Nylon Mid-Size	Nylon Jumbo	Material	Metal Catalog Number
1-Gang, 1-Decorator	Almond Black Blue Brown Gray Ivory Light Almond Office White Red White	NP26AL NP26BK - NP26 NP26GY NP26I NP26LA NP26OW NP26R NP26W	NPJ26AL NPJ26BK NPJ26BL NPJ26 NPJ26GY NPJ26LA NPJ26CW NPJ26R NPJ26W	- - - - NPJJ26I NPJJ26LA - - - NPJJ26W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	SB26 SBP26 SCH26 SS26 SS26L PHPS1AL* PHPS1G*
2-Gang, 2-Decorator	Almond Black Brown Gray Ivory Light Almond Office White Red White	NP262AL NP262BK NP262 NP262GY NP262I NP262LA NP262OW NP262R NP262W	NPJ262AL NPJ262BK NPJ262 NPJ262GY NPJ262I NPJ262LA NPJ262OW NPJ262R NPJ262W	- - - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	© SB262 SBP262 SCH262 SCS262 SS262L PHPS2AL* PHPS2G*
3-Gang, 3-Decorator	Almond Black Brown Gray Ivory Light Almond Office White Red White	NP263AL NP263BK NP263 NP263GY NP263I NP263LA NP263OW NP263R NP263W	NPJ263AL NPJ263BK NPJ263 NPJ263GY NPJ263LA - NPJ263W	- - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	© SBP263 © SS263 - PHPS3AL*
4-Gang, 4-Decorator	Almond Black Brown Gray Ivory Light Almond Office White White	NP264AL NP264BK NP264 NP264GY NP264I NP264LA NP264OW NP264W	NPJ264AL NPJ264BK NPJ264 NPJ264GY NPJ264I NPJ264LA - NPJ264W	- - - - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① ① ① SS264 - PHPS4AL*
5-Gang, 5-Decorator	Black Brown Gray Ivory Light Almond White	NP265BK NP265 NP265GY NP265I NP265LA NP265W	- - - - -	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① ① ① ① ① ① SS265 - PHPS5AL*
6-Gang, 6-Decorator	Black Brown Gray Ivory Light Almond White	NP266BK NP266 NP266GY NP266I NP266LA NP266W	- - - - -	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① ① ① ① ① SS266 - PHPS6AL*

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.

\*Powder coat paint finish.



### 347 Volt Toggle Wallplates with 2.25" (57.2) Spacing Between Gangs, Stamped "347V"

Description	Color	Nylon Catalog Number	_ Material	Metal Catalog Number
1-Gang, 1-Toggle 2.25 in. (57.2) Spacing	Black Gray Ivory White	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - ssic -
2-Gang, 2-Toggle 2.25 in. (57.2) Spacing	Black Gray Ivory White	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS2C
3-Gang, 3-Toggle 2.25 in. (57.2) Spacing	Black Gray Ivory White	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - ss3c -
4-Gang, 4-Toggle 2.25 in. (57.2) Spacing	Black Gray Ivory White	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS4C
5-Gang, 5-Toggle 2.25 in. (57.2) Spacing	Black Gray Ivory White	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS5C
6-Gang, 6-Toggle 2.25 in. (57.2) Spacing	Black Gray Ivory White	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS6C

### **347 Volt Decorator Wallplates**

Description	Color	Nylon Catalog Number	Material	Metal Catalog Number
1-Gang, 1-Decorator	Black Gray Ivory White	HPS1347BK HPS1347GY HPS1347I HPS1347W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - -
2-Gang, 2-Decorator	Black Gray Ivory White	HPS2347BK HPS2347GY HPS2347I HPS2347W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - - -
3-Gang, 3-Decorator	lvory White	HPS3347I HPS3347W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - -

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.





Combination Wallplates, 2-Gang	)				
Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
2-Gang, 1-Toggle, 1-Duplex	Almond Black Brown Gray Ivory Light Almond Office White Red White	NP18AL NP18BK NP18 NP18GY NP18I NP18LA NP18OW NP18R NP18W	NPJ18AL NPJ18BK NPJ18 NPJ18GY NPJ18I NPJ18LA - NPJ18R NPJ18W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	© SBP18 SCH18 SS18 SS18L SP18AL* SP18G*
2-Gang, 1-Duplex, 1-Decorator	Almond Black Brown Gray Ivory Light Almond Office White White	NP826AL NP826BK NP826 NP826GY NP826I NP826LA NP826OW NP826W	NPJ826AL NPJ826BK NPJ826 NPJ826GY NPJ826I NPJ826LA - NPJ826W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	© SB826 © © SS826
2-Gang, 1-Toggle, 1-Decorator	Almond Black Brown Gray Ivory Light Almond White	NP126AL NP126BK NP126 NP126GY NP126I NP126LA NP126W	NPJ126AL NPJ126BK NPJ126 NPJ126GY NPJ126I NPJ126LA NPJ126W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond Steel, Gray	① SB126 SBP126 ① SS126 SS126L PJS126AL* PJS126G*
2-Gang, 1-Duplex, 1-Telephone .406 in. (10.3) Hole Strap Mount	Black Brown Gray Ivory White	NP128BK NP128 NP128GY NP128I NP128W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - -
2-Gang, 1-Toggle, 1-Telephone .406 in. (10.3) Hole Strap Mount	Black Brown Gray Ivory Office White White	NP112BK NP112 NP112GY NP112I NP112OW NP112W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - -
2-Gang, 1-Decorator, 1-Telephone .406 in. (10.3) Hole Strap Mount	Black Brown Gray Ivory White	NP1226BK NP1226 NP1226GY NP1226I NP1226W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - -
2-Gang, 1-Single Receptacle 1.40 in. (35.6) Hole, 1-Duplex	Brown Gray Ivory White	NP78 NP78GY NP78I NP78W	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS78

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations. \*Powder coat paint finish.

Brown

Gray

lvory

White

Dimensions in Inches (mm)

① ①

1

①

SS8720

Aluminum

Brass Plated

Brass

Chrome S/S 302/304

S/S 430

2-Gang, 1-Single Recept.

1.60 in. (40.6) Hole,

1-Duplex



**Combination Wallplates, 2-Gang** 

Combination Wallplates, 2-Gang					
Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
2-Gang, 1-Toggle, 1-Single Receptacle 1.40 in. (35.6) Hole	Black Brown Gray Ivory White	NP17BK NP17 NP17GY NP17I NP17W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS17
2-Gang, 1-Toggle, 1-Blank, Box Mount	Black Brown Gray Ivory Light Almond White	NP113BK NP113 NP113GY NP113I NP113LA NP113W	- NPJ113 - NPJ113I - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS113
2-Gang, 1-Toggle, 1-Blank, Strap Mount	Black Gray Ivory White	- - - - - -	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS114
2-Gang, 1-Blank, 1-Duplex, Box Mount	Black Brown Gray Ivory Light Almond White	NP138BK NP138 NP138GY NP138I NP138LA NP138W	_ NPJ138 _ NPJ138I _ NPJ138W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS138
2-Gang, 1-Blank, 1-Duplex, Strap Mount	Black Gray Ivory White	- - - - -	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS148
2-Gang, 1-Blank, 1-Decorator, Box Mount	Black Brown Gray Ivory Light Almond White	NP1326BK NP1326 NP1326GY NP1326I NP1326LA NP1326W	NPJ1326BK NPJ1326 NPJ1326GY NPJ1326I NPJ1326LA NPJ1326W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS1426*
2-Gang, 1-Telephone, .406 in. (10.3) Hole, 1-Blank, Strap Mount	Black Brown Gray Ivory White	NP1214BK NP1214 NP1214GY NP1214I NP1214W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - -
2-Gang, 1-Single Receptacle 1.40 in. (35.6) Hole 1-Blank, Strap Mount	Black Brown Gray Ivory White	NP147BK NP147 NP147GY NP147I NP147W	-	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	0 0 0 0 0

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.

\*Strap Mount.





Combination wallplates, 3-Gar		Nylon	Nylon		Metal
Description	Color	Standard	Mid-Size	Material	Catalog Number
3-Gang, 2-Toggle, 1-Duplex	Brown Gray Ivory Light Almond White	NP28 NP28GY NP28I NP28LA NP28W	NPJ28 - NPJ28I NPJ28LA NPJ28W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Almond	① ① SBP28 ① - - SP28AL*
3-Gang, 1-Toggle, 2-Duplex	Black Brown Gray Ivory White	NP182BK NP182 NP182GY NP182I NP182W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	\$P28G*  ① ① ① ① ① ③ S\$182
3-Gang, 2-Toggle, 1-Decorator	Black Brown Gray Ivory Light Almond White	NP226BK NP226 NP226GY NP226I NP226LA NP226W	NPJ226BK NPJ226 NPJ226GY NPJ226I NPJ226LA NPJ226W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430 Steel, Gray	① ① ① ① ① ① SS226 - PJS226G*
3-Gang, 1-Toggle, 2-Decorator	Black Brown Gray Ivory Light Almond White	NP1262BK NP1262 NP1262GY NP1262I NP1262LA NP1262W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	0 0 0 0 0
3-Gang, 2-Duplex, 1-Blank	Black Gray Ivory White	- - - -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS211
3-Gang, 1-Duplex, 1-Blank, 1-Duplex	Black Gray Ivory White	- - -		Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	© © © SS8147
3-Gang, 2-Toggle, 1-Blank	Black Gray Ivory White	- - - -	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ③ SS213

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations. \*Powder coat paint finish.



## Combination Plates, 4- and 5-Gang

Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
4-Gang, 3-Toggle, 1-Duplex	Brown Ivory Light Almond White	NP38 NP38I NP38LA NP38W	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① SS38 -
4-Gang, 3-Toggle, 1-Decorator	Black Brown Gray Ivory Light Almond White	NP326BK NP326 NP326GY NP326I NP326LA NP326W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	① ① ① ① ⑤ SS326
4-Gang, 2-Toggle, 2-Decorator	Black Brown Gray Ivory Light Almond White	NP2262BK NP2262 NP2262GY NP2262I NP2262LA NP2262W	- - - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	0 0 0 0 0
5-Gang, 4-Toggle, 1-Duplex	Brown Ivory White	NP48 NP48I NP48W	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	0 0 0 0 0

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.

## **Specifications**

Listings

Non-Metallic Plates
UL Standard 514D.
Metallic Plates
UL Standard 514D.
UL Files #E31999,E92074.
CSA Standard C22.2 No. 42.1.
CSA File 1733174.

Product	Thickness	Mounting Screw(s)	Appearance
Nylon Plate	.06 in. (1.5).	Steel (painted slotted screw head).	Smooth gloss finish.
302/304 Stainless Steel Plate (18% Chromium,8% Nickel)	.035 in. (0.9) nominal.	302/304 stainless steel (18% chromium, 8% nickel). Slotted screw head.	Horizontal brushed finish.
430 Stainless Steel Plate (17% Chromium, less than 0.5% Nickel)	.035 in. (0.9) nominal.	302/304 stainless steel (17% chromium, less than 0.5% nickel). Slotted screw head.	Horizontal brushed finish.
Brass Plate (70% Copper, 30% Zinc)	.04 in. (1.0).	Brass (70% Coppper,30% Zinc). Slotted screw head.	Horizontal brushed finish.
Aluminum Plate	.05 in. (1.3).	302/304 stainless steel (17% chromium, less than 0.5% nickel). Slotted screw head.	Horizontal brushed finish.
Brass Plated Steel Plate	.03 in. (0.8) nominal.	Brass slotted head.	Polished, coated to inhibit oxidation.
Chrome Plated Steel Plate	.03 in. (0.8) nominal.	302/304 stainless steel (17% chromium, less than 0.5% nickel). Slotted screw head.	Polished, coated to inhibit oxidation.
Steel Painted Plate	.03 in. (0.8) nominal.	Steel (painted slotted screw head).	Powder coat paint.

Note: All nylon plates include captive mount screws.

Nylon plates have an operating temperature of -40°C to 85°C.





## **Telephone and Coaxial Outlet Plates**

Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
1-Gang, 1-Tel Nylon .406 in. (10.3) Hole, Metal .640 in. (16.3) Hole, Box Mount	Almond Black Brown Gray Ivory Light Almond Red White	NP11AL NP11BK NP11 NP11GY NP11I NP11LA NP11R NP11W	NPJ11AL  NPJ11  NPJ11I  NPJ11I  NPJ11LA  NPJ11W	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	© 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1-Gang, 1-Tel Nylon .406 in. (10.3) Hole, Metal .640 in. (16.3) Hole, Strap Mount	Black Brown Gray Ivory White	NP12BK NP12 NP12GY NP12I NP12W	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	© SB12* SBP12* SCH12* SS12*
1-Gang, 1-Tel .625 in. (15.9) Hole, Box Mount	Almond Brown Ivory White	NP737AL NP737 NP737I NP737W	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - -
1-Gang, 1-Tel .625 in. (15.9) Hole, Strap Mount	Brown Ivory White	NP730 NP730I NP730W		Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - -
1-Gang, 1-Tel .380 in. (9.7) Hole, Box Mount or Strap Mount	Black Gray Ivory White	- - - -	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 302/304, Strap Mount S/S 430	① ① ① ① SS739 SS738
2-Gang, 2-Tel Nylon .406 in. (10.3) Hole, Metal .640 in. (16.3) Hole, Box Mount	Black Brown Gray Ivory White	NP21BK NP21 NP21GY NP21I NP21W	- - - -	Aluminum Brass Brass Plated Chrome S/S 302/304, Strap Mount S/S 430	① ① ① ① SS22*
2-Gang, 1-Tel .640 in. (16.3) Hole, Box Mount	Black Gray Ivory White	- - -	- - -	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - SS741*

Note: All nylon wallplates feature pre-inserted captive screws for faster assembly, up to 6-gang.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.

\*.50" (12.7) I.D. nylon bushing provided.



## Jumbo, Smooth, Stainless Steel Type 302/304 Wallplates

Configuration	Catalog Number	Configuration	Catalog Number
1-Gang, 1-Toggle	SSJ1	1-Gang, 1-Single Receptacle for 2.09–2.13 in. (53.1–54.1) Dia. Face	SSJ723
2-Gang, 2-Toggle	SSJ2	1-Gang, 1-Blank, Box Mount	SSJ13
1-Gang, 1-Duplex	SSJ8	1-Gang, 1-Telephone Opening, .640 in. (16.3) Box Mount	SSJ11*
2-Gang, 2-Duplex	SSJ82	2-Gang, 1-Toggle, 1-Duplex	SSJ18
1-Gang, 1-Decorator	SSJ26	2-Gang, 1-Toggle, 1-Decorator	SSJ126
2-Gang, 2-Decorator	SSJ262	3.50"	
1-Gang, 1-Single Receptacle for 1.36–1.39 in. (34.5–35.3) Dia. Face	SSJ7	5.25" (133.4)	

Note: \*.50 in. (12.7) I.D. nylon bushing provided.
Specifications are subject to change without notice.

## **Jumbo Wallplate**

Oversize dimensions (see page O-30 for more details). 1-Gang, 5.25 in. x 3.50 in. (133.4 x 88.9). 2-Gang, 5.25 in. x 5.31 in. (133.4 x 134.9).



## **Pre-Marked "EMERGENCY" Wallplates**

Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
1-Gang, 1-Duplex, paint filled white lettering	Red	-	NPJ8RMEV	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS8MEV -
1-Gang, 1-Toggle, paint filled white lettering	Red	-	NPJ1RME	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS1ME -
2-Gang, 2 Duplex, paint filled red lettering	Red	-	-	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - SS82MEV -

Note: See page O-30 for mid-size plate dimensions. All lettering .25 in. (6.3) high.



## **Stainless Steel Barrel Key Switch Wallplates**

Description	1-Gang, with on/off markings	1-Gang, with position markings	2-Gang, with on/off markings	2-Gang, with position markings
Stainless steel, 302/304, smooth.	SS12RKL	SS12RKLM	SS22RKL	SS22RKLM
			6.6	0.0
			0 0	0 0

Note: See page D-6 for barrel key switch selection.

## **Single Count Screws and Accessories**

Description	Catalog Number
Stainless steel screw, standard slot, .38 in. (9.7) long.	HBL7341SS
Security spanner head screws, 6-32 thread, 100 count.	HBL7342RKL
Screwdriver with spanner head security bit.	HBL7372RKL





## Pre-Marked "ISOLATED GROUND" Wallplates

Description	Color	Nylon Standard	Nylon No Marking	Material	Metal Catalog Number
1-Gang, 1-Duplex, paint filled black	Orange	NP8OIG	NP8OR	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - -
1-Gang, 1-Decorator, paint filled black	Orange	NP26OIG	-	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - -
1-Gang, 1-Single Receptacle 1.40 in. (35.6) Hole for 1.36–1.39 in. (34.5–35.3) Dia. face, paint filled black	Orange	NP7OIG	-	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - - -
1-Gang, 1-Single Receptacle 1.60 in. (40.6) Hole for 20 and 30A Twist-Lock® with 1.55–1.58 in. (39.4–40.1) Dia. face, paint filled black	Orange	NP720OIG	-	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - -

## **Pre-Marked "COMPUTER ONLY" Wallplates**

Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
1-Gang, 1-Duplex, paint filled black	Orange Ivory	- -	NPJ8CO NPJ8C	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - -
2-Gang, 2-Duplex, paint filled black	Orange	-	NPJ82CO	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - - -
1-Gang, 1-Decorator, paint filled black	Blue Ivory	-	NPJ26CBL NPJ26C	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	- - - - -

## Louver Plate, 1-Gang, Box Mount

Description	Color	Nylon Standard	Nylon Mid-Size	Material	Metal Catalog Number
1-Gang, Vertical Mounted Louver	lvory Orange	-	-	Aluminum Brass Brass Plated Chrome S/S 302/304 S/S 430	© SB771 SBP771 © SS771

Note: \*See page O-30 for mid-size plate dimensions.

①Available as a custom wallplate, see pages O-31 to O-34. Consult custom wallplates section for additional openings and combinations.



1-Gang Security Wallplates, White

Description	Catalog Number
1-Toggle switch	SWP1
1-Duplex receptacle	SWP8
1-GFCI/Style Line® opening	SWP26
1-Telephone or TV opening .640 in. (16.3)	SWP12
1-Blank	SWP13





SWP1

SWP8

### 2-Gang Security Wallplates, White

Description	Catalog Number
2-Toggle switches	SWP2
2-Duplex receptacles	SWP82
1-Toggle switch, 1-Duplex receptacle	SWP18
2-GFCI/Style Line® openings	SWP262
1-Toggle switch, 1-GFCI/Style Line® opening	SWP126
1-Duplex receptacle, 1-Telephone or TV	SWP812
1-Duplex receptacle, 1-Blank	SWP813
2-Blank	SWP23



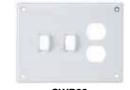


SWP82

SWP18

### 3-Gang Security Wallplates, White

3-Gang Security Wanplates, White	5-daily Security Waiiplates, Wilite						
Description	Catalog Number						
3-Toggle switches	SWP3						
2-Toggle switches, 1-Duplex receptacle	SWP28						
3-GFCI/Style Line® openings	SWP263						



SWP28

## 4-Gang Security Wallplates, White

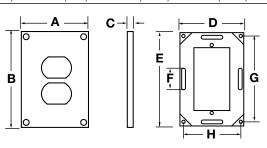
Description			Catalog Number
4-Toggle switch	nes		SWP4



SWP4

## **Dimensions** Inches (mm)

סופוושוום	inches (mm)							
	Α	В	С	D	E	F	G	Н
1-Gang	3.77"	5.52"	.55"	3.37"	5.13"	1.00"	4.63"	2.88"
	(95.8)	(140.2)	(14.0)	(85.6)	(130.3)	(25.4)	(117.6)	(73.2)
2-Gang	5.52"	5.52"	.55"	5.13"	5.13"	1.00"	4.63"	4.63"
	(140.2)	(140.2)	(14.0)	(130.3)	(130.3)	(25.4)	(117.6)	(117.6)
3-Gang	7.39"	5.52"	.55"	7.00"	5.13"	1.00"	4.63"	6.50"
	(187.7)	(140.2)	(14.0)	(177.8)	(130.3)	(25.4)	(117.6)	(165.1)
4-Gang	9.20"	5.56"	.55"	8.75"	5.13"	1.00"	4.63"	8.30"
	(233.7)	(141.2)	(14.0)	(222.3)	(130.3)	(25.4)	(117.6)	(210.8)



## **Specifications**

Tamper resistant wallplate 1-gang duplex receptacle shall be of the following construction:

Cover plate: One piece #14 cold rolled zinc plated steel. Plate shall have a five stage baked white polyester powder enamel finish. Gloss: 85%; reflectance: 93%; hardness minimum: 2H and pass 600 hour salt spray test.

Back plate: #10 cold rolled galvanized steel. Plate assembly shall use four (4) #8-32 X  $^{1}$ 2 inch stainless steel T-15 TORX® head screws with center pin reject. Plate must be UL listed to UL 514D and comply with the NEC®.

TORX® is a registered trademark of Textron Inc.
NEC® is a registered trademark of the The National Electrical Code.



## **Brass Locking Cover Plate**

Description	Catalog Number
Locking cover plate for single 15 and 20A straight blade receptacles and 15A Twist-Lock® receptacles.	HBL96067
Straight cylinder type lock. All cylinder locks keyed alike.	

#### **Weather Shield Plate**

Description	Catalog Number
20° angle plate for duplex receptacles.	HBL6187



HBL96067 Shown with receptacle (sold separately)



**HBL6187** Shown with receptacle and back box (sold separately)

## Catalog Number of Receptacles in Groups A through E below

Gro	up A		Group B			Group D	Group E
1.36"	diameter to 1.39" to 35.3)		Boss diameter 1.55" to 1.58" (39.4 to 40.1)		Boss diameter 1.68" to 1.72" (42.7 to 43.7)	Boss diameter 2.09" to 2.13" 2.28" to 2.4 (53.1 to 54.1) (57.9 to 62	
HBL23000HG HBL23030 HBL4560 HBL4710 HBL4760 HBL5251 HBL52CM61 HBL5261 HBL5361 HBL5361 HBL5361 HBL5461 HBL5552B	HBL5661 HBL6810 HBL7210B HBL7250 HBL7310B HBL7535 HBL7535 HBL7582 HBL8210 HBL8310 HBL8410 HBL8440	HBL23CM10 HBL2310 HBL2320 HBL2330 HBL2340 HBL2410 HBL2420 HBL2430 HBL2440 HBL2450 HBL2460 HBL2510 HBL2520	HBL2530 HBL26CM10 HBL2610 HBL2620 HBL2630 HBL2640 HBL2710 HBL2710 HBL2720 HBL2730 HBL2740 HBL2750 HBL2750	HBL2770 HBL2810 HBL2820 HBL2830 HBL3330 HBL3430 HBL3430 HBL3430 HBL3520 HBL7410B HBL7410BG	HBL45105 HBL45205 HBL45305 HBL45905	HBL7962 HBL9350 HBL9308 HBL9315 HBL9360• HBL9365• HBL9367•	HBL7301A HBL8330A HBL8350A HBL8430A HBL8450A HBL9430A HBL9450A HBL9460A

Note: •50A 2P 3W.

#### **Wallplates for Single Receptacles**

	Group A  Boss diameter 1.36" to 1.39" (34.5 to 35.3) 1-Gang 2-Gang		Gro	Group B		Group C		up D	Group E
Description			Boss diameter 1.55" to 1.58" (39.4 to 40.1) 1-Gang 2-Gang		Boss diameter 1.68" to 1.72" (42.7 to 43.7) 1-Gang 2-Gang		Boss diameter 2.09" to 2.13" (53.1 to 54.1) 1-Gang 2-Gang		Boss diameter 2.28" to 2.44" (57.9 to 62.0) 2-Gang
Smooth nylon, brown.	NP7*	-	NP720*	_	_	-	NP724*	NP703*	-
Cast aluminum.	HBL7320	_	HBL7320	_	HBL3394	-	HBL9419	_	-
Stainless steel, 302/304, smooth.	SS7**	SS72	SS720	-	SS725	-	SS723	SS703	SS701

Note: See pages O-6 and O-7 for complete plate descriptions.

### Weatherproof Lift Covers for WDL "Closed" and WDL "Open", Wet Locations, 1-Gang

	Group A	Group B	Group C	Group D		
Description	Boss diameter 1.36" to 1.39" (34.5 to 35.3)	Boss diameter 1.55" to 1.58" (39.4 to 40.1)	Boss diameter 1.68" to 1.72" (42.7 to 43.7)	Boss diameter 2.09" to 2.13" (53.1 to 54.1)	50A Twist-Lock <sup>®</sup> Receptacles	30A 4W Hubbellock <sup>®</sup> Receptacles
Thermoplastic, with cover "open", gray.	HBL7423WO	HBL7425WOA	HBL7424WO	-	HBL7774WO▲	-
Thermoplastic, with cover "open", yellow.	HBL74CM23WO	HBL74CM25WOA	HBL74CM24WO	-	HBL77CM74WO▲	-
Cast aluminum, with cover "closed".	HBL7420	HBL7420	HBL3393	HBL9420 HBL9425•	HBL7770	HBL20405 <sup>†</sup> HBL20446 <sup>†</sup>

<sup>\*</sup>Catalog number indicated is Brown, add with the following to designate color: "AL" (Almond), "BK" (Black), "GY" (Gray), "I" (Ivory), and "W" (white).

<sup>\*\*</sup>Catalog number indicated is Stainless Steel, replace "SS" with the following prefix to designate material: "SA" for Anodized Aluminum, "SB" for Solid Brass.

Note: •50A 2P 3W.

▲The "CS" versions of 50A Twist-Lock® receptacles will only fit these thermoplastic plates.

THBL20446 plate painted red for use with HBL20443 only. HBL20405 plate is for use with HBL20403 only. See page B-65 for devices.





## **Weatherproof Thermoplastic Cover** For Flanged Inlets and Flanged Receptacles

Description **Catalog Number** WP1

Flanged Receptacles

For use with 15 and 20A, 2 pole, 2 wire and 2 pole, 3 wire Insulgrip® flanged inlets and flanged receptacles below.

Straight Blade, 2 pole, 3 wire Flanged Inlets

**HBL5278C HBL5378C** 



**HBL5279C HBL5379C** HBL5479C **HBL5679C** 



IP44

Twist-Lock®, 2 pole, 2 wire and 2 pole, 3 wire Flanged Inlets Flanged Receptacles



**HBL8815C HBL7524C** HBL4716C **HBL4586C HBL4786C** 

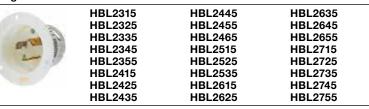


HBL8809C **HBL7526C** HBL4715C **HBL4585C HBL4785C** 



Weatherproof Thermoplastic Cover For Flanged Inlets and Flanged Recentacles

Description				Catalog Number
For use with 20 a and flanged rece	, , ,	vire Insulgrip flanged in	nlets	WP2
Twist-Lock <sup>®</sup> , 2 Flanged Inlets	pole, 3 wire; 3 pole, HBL2315	4 wire; 4 pole, 4 wir	e; 4 pole, 5 wire HBL2635	HBL2765
	HBL2325	HBL2455	HBL2645	HBL2775
G &	HBL2335	HBL2465	HBL2655	HBL2815
世	HBL2335 HBL2345 HBL2355	HBL2465 HBL2515 HBL2525	HBL2655 HBL2715 HBL2725	HBL2815 HBL2825 HBL2835







**HBL3334C** 

**HBL7408C** 

Flanged Receptacles

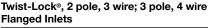


HBL2316 **HBL2446 HBL2636** HBL2766 HBL2326 HBL2456 HBL2776 **HBL2646** HBL2336 HBL2466 **HBL2656** HBL2816 HBL2346 HBL2516 HBL2716 HBL2826 HBL2356 HBL2526 HBL2726 HBL2836 HBL2416 HBL2536 HBL2736 **HBL3326C** HBL2426 **HBL2616** HBL2746 HBL3335C HBL2436 **HBL2626** HBL2756 **HBL7409C** 

WP2

Weatherproof Thermoplastic Cover For Flanged Inlets 50 Amp CS Series

Description	Catalog Number
For use with 50A locking inlets with trimmed sides only.	HBL7780
T to the dealer O code O to O code A to	





HBL3777 **HBL3775 HBL7958** 



HBL7780







HBL7777A

HBL9420

HBL7774WO

#### For Receptacles with Face Diameters of 2.28–2.44 in. (57.9–62.0)

Description	Catalog Number
Thermoplastic, 2-gang, wet and damp locations with cover "closed", gray.	HBL7777A▲
Thermoplastic, 2-gang, wet and damp locations with cover "closed", yellow.	HBL77CM77A▲

### For Receptacles with Face Diameters of 2.09-2.13 in. (53.1-54.1)

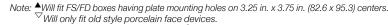
Description	Catalog Number
Cast aluminum, wet locations only when cover "closed" and damp locations.	HBL9420
Cast aluminum, no lift cover. NOT weatherproof.	HBL9419

## For 50A Twist-Lock® Single Receptacles

Description	Catalog Number
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7774WO*
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL77CM74WO*
Cast aluminum, wet locations only when cover "closed" and damp locations.	HBL7770
Galvanized Steel, fits 4" square or 2-gang box.	HBL50SC**
Stainless steel, single gang, wallplate. NOT weatherproof.	SS750 <sup>4</sup>

## For 30A, 4 Wire Hubbellock® Receptacles

Description	Catalog Number
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7428WOG*
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL7428WOY*
Thermoplastic, wet and damp locations with cover "open", red.	HBL7428WOR*
Cast aluminum, wet locations only when cover "closed" and damp locations, lift cover plate.	HBL20405
Cast aluminum, wet locations only when cover "closed" and damp locations, red finish.	HBL20446
Cast aluminum, no lift cover. NOT weatherproof.	HBL20406



\*The "CS" versions of 50A Twist-Lock® will only fit these plates.



### Weatherproof Covers for Single Receptacles for Use on FS/FD Boxes

Note: All weatherproof plates are UL Listed for WET LOCATIONS WITH COVER CLOSED, for intermittent use in wet locations or use in damp locations. Those with suffix "WO" are listed for WET LOCATIONS with cover open in continuous use. All plates are gasketed and self-closing.



#### **Accessories**

Description	Catalog Number
Sub-plate for mounting and weatherproofing flanged devices with mounting centers of 1.76", 1.94" or 2.13" such as HBL7556, HBL4716, etc. when used with a HBL7420 or HBL7425WOA type weatherproof plate.	7452°
Adapter plate for mounting HBL7423WO, HBL7424WO, HBL7425WOA or HBL7420 plates to standard boxes.	HBL7349 <sup>●</sup>

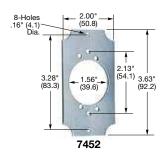
Note: \*Not UL Listed.

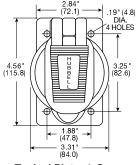


HBL20405



HBL7349





Typical Plate, 1-Gang





## **IP44**

### For Receptacles with Face Diameters of 1.36–1.39 in. (34.5–35.3)

Description	Catalog Number
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7423WO
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL74CM23WO
Cast aluminum, wet location only when cover "closed" and damp locations.	HBL7420
Cast aluminum, no lift cover, NOT weatherproof.	HBL7320*



**HBL7423WO** 

#### For Switches and Receptacles with Face Diameters of 1.55-1.58 in. (39.4-40.1)

Description	Catalog Number
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7425WOA
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL74CM25WOA
Thermoplastic, wet and damp locations with cover "open", white.	HBL74CM25WOAW
Cast aluminum, wet and damp locations with cover "closed."	HBL7420*
Cast aluminum, no lift cover, NOT weatherproof.	HBL7320*
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7428WOG**
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL7428WOY**
Thermoplastic, wet and damp locations with cover "open", red.	HBL7428WOR**



HBL7425WOA

### For Receptacles with Face Diameters of 1.68–1.72 in. (42.7–43.7)

Description	Catalog Number
Thermoplastic, wet and damp locations with cover "open", gray.	HBL7424WO
Thermoplastic, wet and damp locations with cover "open", yellow.	HBL74CM24WO
Cast aluminum, wet location only when cover "closed" and damp locations.	HBL3393
Cast aluminum, no lift cover, NOT weatherproof.	HBL3394*



HBL7420

Note: \*Cast aluminum lift cover with fibershield for standard toggle and PresSwitch® Switches.

- \*Features two #6-32 threaded inserts to back mount device to cover.
- ▲IP20 SUITABILITY.

All weatherproof lift cover plates on this page are UL Listed as "WDL Closed" for use in wet locations with cover closed and in damp locations.

#### Weatherproof Covers for Single Receptacles on FS/FD Boxes

All weatherproof plates are UL Listed for WET LOCATIONS WITH COVER CLOSED for intermittent use in wet locations or use in damp locations. Those with suffix "WO" are listed for WET LOCATIONS with cover open in continuous use. All plates are gasketed and self-closing.



HBL7320

## 2017 National Electrical Code (NEC®) Requirement

#### 406.9 Receptacles in Damp or Wet Locations.

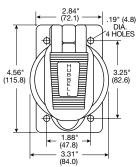
(A) Damp Locations. A receptacle installed outdoors in a location protected from the weather or in other damp locations shall have an enclosure for the receptacle that is weatherproof when the receptacle is covered (attachment plug cap not inserted and receptacle covers closed). An installation suitable for wet locations shall also be considered suitable for damp locations. A receptacle shall be considered to be in a location protected from the weather where located under roofed open porches, canopies, marquees, and the like, and will not be subjected to a beating rain or water runoff. All 15 and 20A, 125 and 250V nonlocking receptacles shall be listed weather-resistant type.



HBL7424WO

#### (B) Wet Locations.

(1) 15 and 20 Ampere Receptacles in a Wet Location. 15 and 20 ampere. 125 and 250 volt receptacles installed in a wet location shall have an enclosure that is weatherproof whether or not the attachment plug cap is inserted. An outlet box hood installed for this purpose shall be listed, and shall be identified as "extra-duty." Other listed products, enclosures, or assemblies providing weatherproof protection that do not utilize an outlet box need not be marked "extra-duty." All 15 and 20 ampere, 125 and 250 volt nonlocking-type receptacles shall be listed weather-resistant type.



Typical Plate, 1-Gang



HBL3393

Dimensions in Inches (mm)

NEC® is a registered trademark of the The National Electrical Code.





HBL1795



HBL1750



HBL1785



HBL7420



HBL96061 shown with wallplate and switch (sold separately)



**Weatherproof Plates** 

······································		
Description	Catalog Number	
Clear bubble plate, silicone rubber for use with all general purpose AC toggle and PresSwitch® Switches. Fits both FS/FD and standard boxes.	HBL1795	

### **Weatherproof Plates**

Description	Catalog Number
Gray neoprene PresSwitch® Plate. Fits FS/FD and standard boxes.	HBL1750*
Same as above except yellow.	HBL17CM50*

Note: \*Not UL Listed.

## **Weatherproof Plates**

Description	Catalog Number
Gray neoprene PresSwitch® Plate with 125V red pilot light. Fits only FS/FD boxes.	HBL1785*
Same as above except yellow.	HBL17CM85*

Note: \*Not UL Listed.

### **Weatherproof Covers**

Description	Catalog Number
Cast aluminum lift cover plate with fiber shield. For standard toggle and PresSwitch® Switches. Fits only FS/FD boxes.	HBL7420

## **Brass Locking Covers Attachment for Switches**

Description	Catalog Number
Straight keying (all locks alike) appropriate for most applications. Straight cylinder type lock, each HBL96061 ordered operates on the same key–all locks are keyed alike.	HBL96061*
Same as above except in dull chrome finish to match stainless steel plates.	HBL96061DCH*
Straight keying (individual). Straight cylinder type lock, each HBL96062 ordered operates on a different key. All locks are keyed differently and individually. This type cannot be master keyed.	HBL96062*

Note: \*Not UL Listed.

### **Locking Device**

Description	Catalog Number
Locking device for weatherproof covers.	HBLWLC





**Duplex Covers For Vertical Mounting** 

Description	Dimensions Height x Width x Depth	Catalog Number
Thermoplastic, gray, for FS/FD box mounting.	4.56" x 2.89" x 1.08" (115.8 x 73.4 x 27.4)	HBL5221
Thermoplastic, yellow, for FS/FD box mounting.	4.56" x 2.89" x 1.08" (115.8 x 73.4 x 27.4)	HBL52CM21
Thermoplastic, white, for FS/FD box mounting.	4.56" x 2.89" x 1.08" (115.8 x 73.4 x 27.4)	HBL52CM21W
Thermoplastic, gray, for device mounting.	4.56" x 2.89" x 1.08" (115.8 x 73.4 x 27.4)	HBL5222
Thermoplastic, yellow, for device mounting.	4.56" x 2.89" x 1.08" (115.8 x 73.4 x 27.4)	HBL52CM22
Die cast aluminum, gray, commercial grade, vertical position, device mount.	4.56" x 2.81" x 0.75" (115.8 x 71.4 x 19.1)	WP8V



IP44 SUITABILITY

HBL5221



WP8V



Description	Dimensions Height x Width x Depth	Catalog Number
Cast aluminum, for device mounting.	2.88" x 4.56" x 0.79" (73.2 x 115.8 x 20.1)	HBL5205WO
Cast aluminum, for FS/FD box mounting.	2.88" x 4.56" x 0.79" (73.2 x 115.8 x 20.1)	HBL5206WO
Die cast aluminum, gray, commercial grade, horizontal position, device mount.	2.90" x 4.60" x 0.75" (73.7 x 116.8 x 19.1)	WP8H



HBL5206WO



WP8H

## GFCI, Surge and Style Line® Covers

Description	Dimensions Height x Width x Depth	Catalog Number
Thermoplastic, gray, for FS/FD box mounting.	4.56" x 2.84" x 1.27" (115.8 x 72.2 x 32.3)	HBL5226
Die cast aluminum, gray, commercial grade, vertical position, device mount.	4.56" x 2.81" x 0.75" (115.8 x 71.4 x 19.1)	WP26V
Die cast aluminum, gray, commercial grade, horizontal position, device mount.	2.30" x 4.75" x 0.73" (58.4 x 120.7 x 18.5)	WP26H



HBL5226

## **Toggle Cover**

Description	Dimensions Height x Width x Depth	Catalog Number
Thermoplastic, gray, for FS/FD box mounting.	4.56" x 2.89" x 1.08" (115.8 x 73.4 x 27.4)	HBL5201



WP26V

Note: All weatherproof plates are UL Listed for WET LOCATIONS WITH COVER CLOSED, for intermittent use in wet locations or use in damp locations. Those with Suffix "WO" are listed for WET LOCATIONS with cover open in continuous use. All plates are gasketed and self-closing.





#### **Features and Benefits**

#### Weatherproof Metallic While-In-Use Covers

The NEMA 3R Rated EXTRA DUTY® Metallic and Non-metallic While-in-Use Covers offer weather protection for outlets when they are in use.

- Patented keyhole mounting system allows installation in under a minute
- Pre-configured for GFCI with patented technology for alternate devices
- Lockable tab for OSHA compliance
- Sealed-in-place gasket
- Premium powder coat
- External cord retention chamber
- Each box contains three or six adapters to make a variety of configurations (8 or 55)



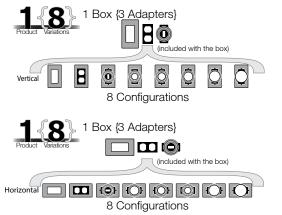


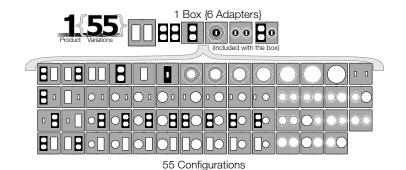


**WP262E** 

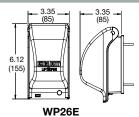
Metallic EXTRA DUTY® While-In-Use Covers

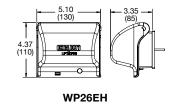
Description		Dimensions Height x Width x Depth	Catalog Number
Heavy duty die-cast aluminum 1-gang box with gray lid for vertical mounting offers superior commercial quality 8-in-1 configurations.	1 8	6.12" X 3.37" X 3.5" (155.4 X 85.6 X 89.0)	WP26E
Heavy duty die-cast metal 1-gang box with gray lid for horizontal mounting; 8-in-1 configurations.	1 8	4.37" X 5.12" X 3.5" 111.0 X 130.0 X 89.0)	WP26EH
Heavy duty die-cast metal 2-gang box with gray lid for vertical mounting; 55-in-1 configurations.	1{55}	6.12" X 5.12" X 3.5" (155.4 X 130.0 X 89.0)	WP262E

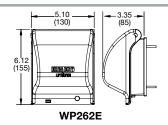




## Metallic Cover Dimensions - inches (mm)









#### **Features and Benefits**

#### Weatherproof Non-Metallic While-In-Use Covers

The NEMA 3R Rated EXTRA DUTY® Metallic and Non-metallic While-in-Use Covers offer weather protection for outlets when they are in use.

- Patented keyhole mounting system allows installation in under a minute
- Pre-configured for GFCI with patented technology for alternate devices
- Lockable tab for OSHA compliance
- Sealed-in-place gasket
- High-impact polycarbonate construction provides maximum durability
- Each box contains three or six adapters to make a variety of configurations (16 or 55)



## Non-Metallic While-In-Use Covers

Description	Dimensions Height x Width x Depth	Standard	EXTRA DUTY®
Standard 1-gang box with clear tinted cover, for horizontal or vertical mounting; 16-in-1 configurations.	5.90" X 4.18" X 2.75" (149.8 X 106.1 X 69.9)	RW57300	RW58300
Extra deep 1-gang box with clear tinted cover, for horizontal or vertical mounting; 16-in-1 configurations.	5.92" X 4.20" X 4.75" (150.4 X 106.7 X 120.7)	RW57350	RW58350
Standard 2-gang box, clear tinted cover, for horizontal or vertical mounting; 55-in-1 configurations.	5.54" X 5.43" X 2.75" (140.7 X 138.0 X 69.9)	RW57750	RW58750





RW57300

RW58300





RW57350

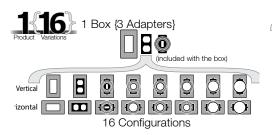
RW58350

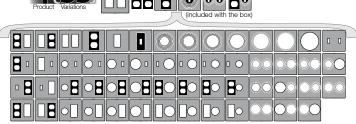




RW57750

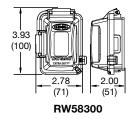
RW58750

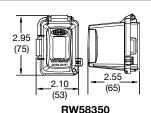


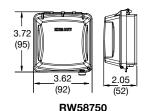


55 Configurations

## Non-Metallic Cover Dimensions - inches (mm)



















1-Gang Weatherproof Covers for Vertical Mounting

Description	Dimensions Height x Width x Depth	Catalog Number
Zinc die cast, gray, duplex cover for box mounting.	4.58" x 2.82" x 0.57" (116.3 x 71.6 x 14.5)	RW51470
Zinc die cast, gray, 1.40 in. (35.6) cover for single receptacle or toggle switch for device mounting.	4.56" x 2.81" x 0.88" (115.8 x 71.4 x 22.4)	RW51550*
Zinc die cast, gray, GFCI, Surge and Style Line® cover for device mounting.	4.58" x 2.81" x 0.57" (116.3 x 71.4 x 14.5)	RW51040



RW51810

RW51020





RW51520

1-Gang Weatherproof Covers for Horizontal Mounting

Description	Dimensions Height x Width x Depth	Catalog Number
Zinc die cast, gray, duplex cover for device mounting.	2.82" x 4.57" x 0.79" (71.6 x 116.1 x 20.1)	RW51810
Zinc die cast, gray, 1.40 in. (35.6) cover for single receptacle or toggle switch for device mounting.	2.81" x 4.56" x 0.99" (71.4 x 115.8 x 25.1)	RW51520*
Zinc die cast, gray, GFCI, Surge and Style Line® cover for device mounting.	2.82" x 4.56" x 0.52" (71.6 x 115.8 x 13.2)	RW51020





RW51380

2-Gang Weatherproof Covers for Vertical Mounting

Description	Height x Width x Depth	Catalog Number
Zinc die cast, gray, duplex cover for device mounting.	4.54" x 4.54" x 0.75" (115.3 x 115.3 x 19.1)	RW51320
Zinc die cast, gray, one duplex/one GFCI, Surge and Style Line® cover for box mounting.	4.54" x 4.54" x 0.77" (115.3 x 115.3 x 19.6)	RW51330
Zinc die cast, gray, 1.40 in. (35.6) cover for single receptacle or toggle switch for device mounting.	4.54" x 4.54" x 0.77" (115.3 x 115.3 x 19.6)	RW51380
Zinc die cast, gray, two GFCI, Surge and Style Line <sup>®</sup> cover for box mounting.	4.54" x 4.56" x 0.73" (115.3 x 115.8 x 18.5)	RW51450

Dimensions





RW51450

Note: All weatherproof plates are UL Listed for WET LOCATIONS WITH COVER CLOSED, for intermittent use in wet locations or use in damp locations. All plates are gasketed and self-closing. \*cULus Listed.

## Screws, 6-32 Thread, 100 Count

Description	Color/Material	Catalog Number
Decorator Wallplate Screws, Oval Head Milled Slot, % in. Long – 6-32 Thread, 100 per Box (Order 1 to receive a box of 100).	Black Brown Gray Ivory Light Almond White Stainless Steel	RA38BKPK100 RA38PK100 RA38GYPK100 RA38IPK100 RA38LAPK100 RA38WPK100 RA38SSPK100
Brass plated screw, standard slot, .38 in. (9.7) long.	Brass	HBL7341
Standard Wallplate Screws, Oval Head Milled Slot, ½ in. Long – 6-32 Thread, 100 per Box (Order 1 to receive a box of 100).	Black Brown Gray Ivory Light Almond White	RA12BKPK100 RA12PK100 RA12GYPK100 RA12IPK100 RA12LAPK100 RA12WPK100
Standard Wallplate Screws, Oval Head Milled Slot, % in. Long – 6-32 Thread, 100 per Box (Order 1 to receive a box of 100).	lvory White Stainless Steel	- - RA58SSPK100
Standard Wallplate Screws, Oval Head Milled Slot, 1.0 in. Long – 6-32 Thread, 100 per Box (Order 1 to receive a box of 100).	lvory White Stainless Steel	RA88IPK100 RA88WPK100 RA88SSPK100

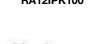


**RA38IPK100** 













**RA88IPK100** 

## **Single Count Screws and Accessories**

Description	Color	Catalog Number
Blank adapter, to fill a toggle opening.	Brown Ivory White	RA756 RA756I RA756W
Blank adapter, to fill a decorator opening.	lvory Light Almond White	NS620I NS620LA NS620W
Blank adapter, .406" (10.30) dia. hole, to fill a decorator opening.	lvory Light Almond White	NS621I NS621LA NS621W
Mounting strap, with screws.	Steel	RA40





**RA756W** 

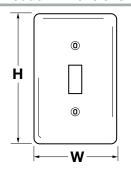
RA40



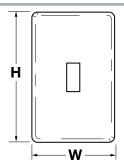
NS620I

NS621I

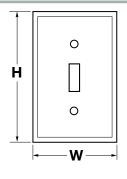
#### **Product Dimensions**



	Standard Nylo	n	Mid-Size Nylo	n	Jumbo-Size Nylon			
Size	Height	Width	Height	Width	Height	Width		
1-Gang	4.63" (117.6)	2.88" (73.2)	4.88" (124.0)	3.13" (79.5)	5.25" (133.4)	3.50" (88.9)		
2-Gang	4.63" (117.6)	4.69" (119.1)	4.88" (124.0)	4.94" (125.4)	5.25" (133.4)	5.31" (134.9)		
3-Gang	4.63" (117.6)	6.50" (165.1)	4.88" (124.0)	6.75" (171.5)				
4-Gang	4.63" (117.6)	8.31" (211.1)	4.88" (124.0)	8.56" (217.4)				
5-Gang	4.63" (117.6)	10.12" (256.1)						
6-Gang	4.63" (117.6)	11.93" (303.0)						



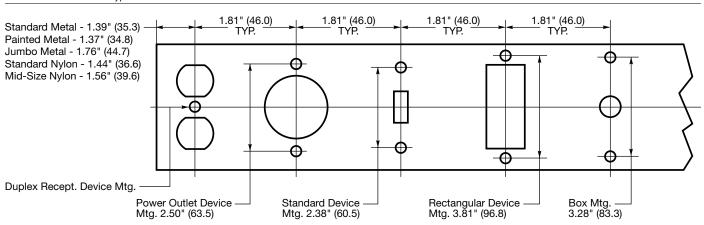
	Snap-On Nylo	on	
Size	Height	Width	Depth
1-Gang	4.75" (120.6)	3.00" (76.2)	.25" (6.35)
2-Gang	4.75" (120.6)	4.81" (122.2)	.25" (6.35)
3-Gang	4.75" (120.6)	6.62" (168.2)	.25" (6.35)
4-Gang	4.75" (120.6)	8.44" (214.3)	.25" (6.35)



	Standard Meta	al	Painted Metal		Jumbo Metal	
Size	Height	Width	Height	Width	Height	Width
1-Gang	4.50" (114.3)	2.87" (72.9)	4.50" (114.3)	2.75" (69.8)	5.25" (133.4)	3.50" (88.9)
2-Gang	4.50" (114.3)	4.60" (116.8)	4.50" (114.3)	4.56" (115.8)	5.25" (133.4)	5.31" (134.9)
3-Gang	4.50" (114.3)	6.41" (162.8)	4.50" (114.3)	6.38" (162.1)		
4-Gang	4.50" (114.3)	8.22" (208.8)	4.50" (114.3)	8.18" (207.8)		
5-Gang	4.50" (114.3)	10.03" (254.8)	4.50" (114.3)	10.00" (254.0)		
6-Gang	4.50" (114.3)	11.81" (300.0)	4.50" (114.3)	11.81" (300.0)		
7-Gang	4.50" (114.3)	13.68" (347.5)				
8-Gang	4.50" (114.3)	15.44" (392.1)				

## **Wallplate Openings and Mounting Dimensions**

#6-32 Oval Head Screws Typical



Note: Specifications are subject to change without notice.

## **Custom Metal Wallplates**

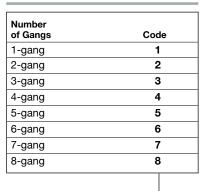
How To Select A Custom Metal Wallplate

## Step 1:

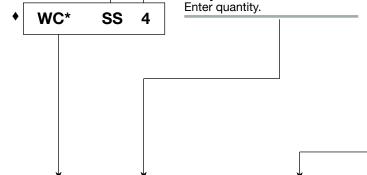
Determine wallplate material and enter in box marked "Catalog Number"

Smooth Metal
Material
Code
Anodized Aluminum
AL
Brass plated steel
BP
Solid brass
BR
Chrome plated steel
CH
Stainless steel 302/304
SS

Determine number of gangs required and enter in box marked "Catalog Number" next to material.



Enter
Catalog Number Step 2:



**Step 3:**Select the custom metal wallplate configuration.

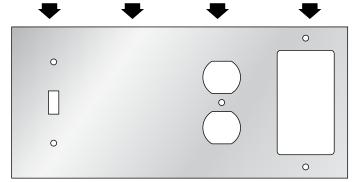
Refer to the custom wallplate configuration chart to select a configuration for each gang in the wallplate. Each configuration has a specific 3-digit code located in the right hand side of the chart on pages O-32 to O-34. Enter this 3-digit configuration code in the corresponding box on the order form grid to match the position required on the finished custom wallplate.

Item No.	Catalog Number	Quantity	Code	Position 1	Position 2	Position 3	Position 4
1	WCSS4		H*	001	149	800	026
2							

Note: \*WC and H are preprinted on the distributor order form.

♦Number to use for pricing.

The 3-digit numbers listed at the upper right of the Sample Order Form (001, 149, etc.) represent the custom metal wallplate selected on the right. See Configuration Chart and Hubbell Configuration Selector Guide on pages O-32 to O-34 for additional configuration choices.

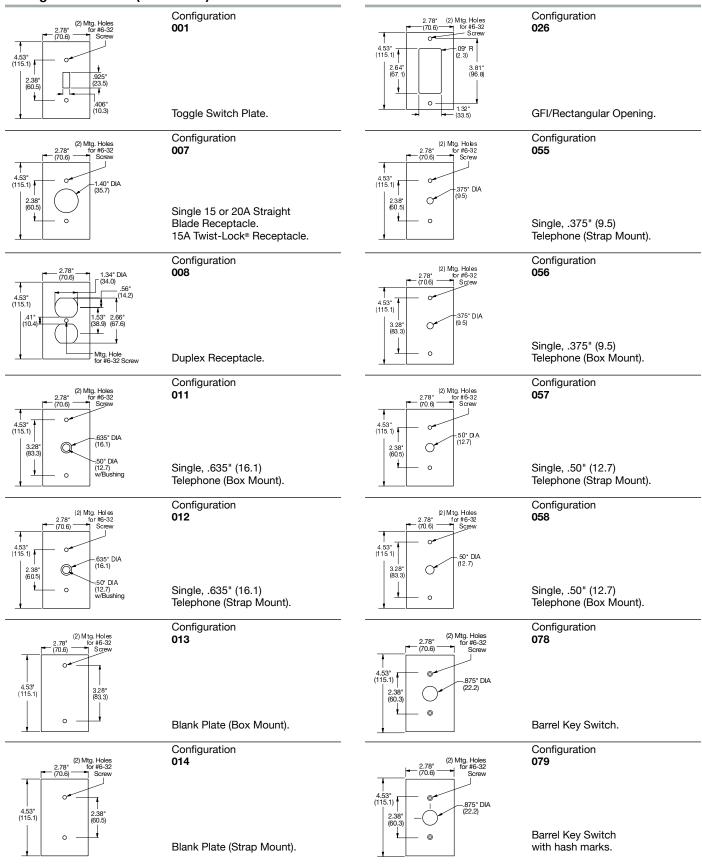


#### **Configuration Chart** 001 Switch. Barrel Key Switch. 0 007 079 Single Receptacle. Barrel Key Switch with -0 1.40" ID (35.6) Hole. hash marks. 008 080 Duplex Receptacle. Barrel Key Switch with OFF ON ON/OFF and hash marks. 011 091 0 1-gang .635" ID (16.1) Single Receptacle. 0 Hole Box Mounted with 1.60" ID .50" ID (12.7) Nylon Bushing. (40.5) Hole. o 012 098 0 1-gang .635" ID (16.1) Hole Strap Mtd. incl. Strap Single Receptacle. 0 with .50" ID (12.7) Nylon Bushing. 2.16" ID (54.7) Hole. 0 013 Blank Box Mounted. Vertical Mounted Louver. 0 014 149 0 Blank Strap Mounted Totally Blank incl. Strap. (no mounting holes). 0 026 Rectangular Opening. Coax/Twinax and Modular Jack Openings 456 .375" (9.5) Dia. 0 0 Round Box Mounted. 055 0 1-gang .375" ID (9.5) Hole Strap Mounted incl. Strap. .500" (12.7) Dia. 0 Round Box Mounted. 0 0 .635" (16.1) Dia. 1-gang .375" ID (9.5) Hole Round Box Mounted. 0 Box Mounted. 0 057 1-gang .50" ID (12.7) Hole 0 Strap Mounted incl. Strap. 0 058 1-gang .50" ID 0 (12.7) Hole Box Mounted.

Note: For detailed dimensions of the above configurations, see pages O-33 and O-34. Available in smooth metal, standard size only up to and including 8-gang type.

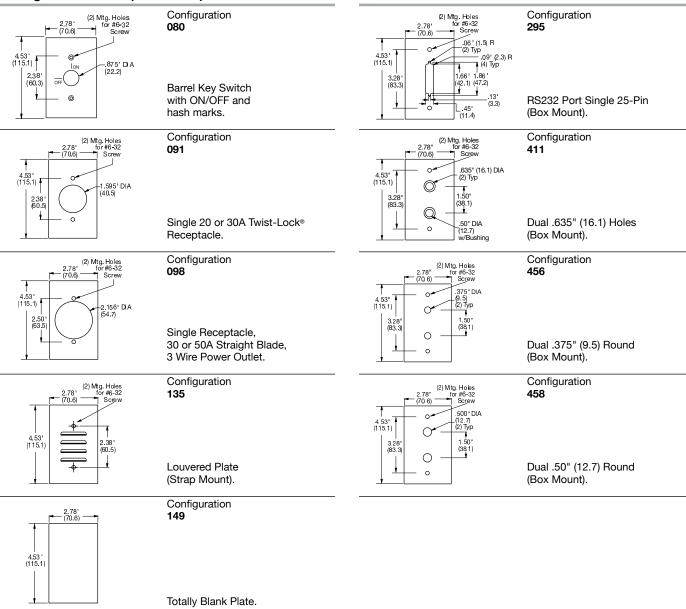
Dimensions in Inches (mm)

## **Configuration Chart (Continued)**



Note: Specifications are subject to change without notice.

## **Configuration Chart (Continued)**



Note: Specifications are subject to change without notice.

# SECTION P

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Furniture and Work Surface Boxes



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## Products at a Glance



#### 2-Gang Recessed

The Hubbell SystemOne 2-Gang Recessed Concrete Floor Box offers eight styles, satisfying the requirements of almost any commercial building application. Rectangular or round covers, as well as furniture feed covers, are available in a variety of finishes to blend with any existing or new décor. A parallel-device layout reduces plug interference, maximizing functionality and performance.



#### 4-Gang Recessed

Similar to the 2-Gang Recessed Concrete Floor Box, Hubbell's SystemOne 4-Gang Recessed Concrete Floor Box is available with rectangular or round covers. Ten different styles make it possible to meet the electrical requirements of most commercial projects - new construction or renovation. The parallel device layout maximizes functionality which can be limited when devices are mounted 90° from one another.



#### 6-Gang Recessed

Increased power, data, and AV capacity is what the Hubbell SystemOne 6-Gang Recessed Concrete Floor Box was designed to handle. Four styles allow the floor box to work within almost any commercial application to enhance connectivity. Rectangular and round covers are available in a variety of finishes that work with any aesthetic or finish.



#### 10-Gang Recessed

With maximum capacity in a small footprint, the 10-Gang box provides a uniform look with rectangular or round covers that are available in several finishes to complement existing décor. Electrical devices are mounted vertically and are mounted to the plate prior to securing it to the box. Two inch knockouts are designed into each box allowing for simple installation of AV cables with pre-connectorized heads and specific bend radius requirements.

#### Cover

- Available in round, rectangular and furniture feed styles
- 180° cover opening
- Two large cable egress doors
- Listed to UL 514A and UL scrub water compliant
- Die cast aluminum cover construction
- All covers are ADA compliant



Post pour adjustment

#### Box

- 16 gauge galvanized sheet metal and cast iron construction
- Optional fusion-bonded, green epoxy paint for on-grade use
- 6 in. solid conductor ground pigtail in each gang
- 3 in. deep version accepts adapter (CFBHUB2) for 2 in. conduit
- Pre pour adjustment
- Meets UL 514A requirements and are UL scrub water compliant
- Patent pending, labor saving, easy mount device plates

#### **Features and Benefits**

### **SystemOne Recessed Concrete Floor Boxes**

Featuring the unique capabilities of Hubbell's SystemOne family design. Hubbell has expanded its floor box offering to provide industry leading flexibility while accommodating an extensive range of applications. Hubbell SystemOne is constructed to give customers the ability to create personal solutions for their most demanding, power, data and audio/video requirements.





## Family Look

Hubbell SystemOne Recessed
 Floor Box line offers a common look
 regardless of capacity or installation.
 This simple concept ensures a
 consistent look throughout a building
 with rectangular or round covers.
 Round covers lend themselves to
 multi-story buildings also using Fire Rated Poke-Through devices



## Covers

 All SystemOne covers are ADA compliant. The doors open to 180° for maximum access. Cables and plugs are protected by recessed connections



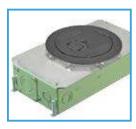
#### 1 Screw 3 Fasteners

 Pre-wired duplex or Style Line<sup>®</sup> receptacles with 8 in. stranded leads are installed into plates to allow for even more labor savings



#### **Easy Mount Device Plates**

- The Easy Mount device plates allow for a device to be mounted to the plate and wired outside of the floor box.
   The device and plate assembly are then easily installed and secured with one stud that locates the plate and one screw to secure it
- This patent pending device fastening method maximizes efficiency while reducing install time and comes standard with all device plates for 2, 4 and 6-gang boxes



#### **CR Version**

 Coated with fusion-bonded epoxy paint to help prevent corrosion and intended for on-grade use

## **Selecting a SystemOne Recessed Concrete Floor Box**

To assist with the floor box selection process, please have the following information available:

Electrical requirements:	Application:	Cover style:
Power (each electrical device requires one gang) Data/AV (consult manufacturers' specification for size/ volume requirements), number required. Add up total number to determine needed capacity. If necessary capacity is not shown round up to next size. Example: 9-Gang rounds up to a 10-Gang floor box	On-grade (OG) Above-grade (AG) Minimum concrete pour depth	Round Rectangular

Once this information is gathered start on the capacity column:

- 1 Capacity: Select necessary box.
- 2 Application: Select the concrete pour depth and on-grade or above-grade application.
- 3 Cover style: Select round or rectangular cover.
- 4 Locate interconnecting point of all three categories and move to right to select correct catalog number.

				A	pplica	tion -	Minim	num P	our D	epth (	2				Corrosion Resistant	lo.	]	
		2 1/2	in.	3	in.	3 1/4	in.	3 ¾	4 in.	5 ½	in.	6 1/4	in.	Steel	orros Sista	Cast Iron		
		AG	OG	AG	OG	AG	OG	AG	OG	AG	OG	AG	OG	Ste	0 g	S		
		•												•			CFB2G25	
			•												•		CFB2G25CR	
	ರಾ			•										•			CFB2G30	
	2-Gang				•										•		CFB2G30CR	
	Φ					•								•			CFB2G25R	
	N						•								•		CFB2G25RCR	
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	Rectangular Rectangular Round Round Rectangular Round										und							
						С	over S	Style(	3									

#### **Features and Benefits**

### **SystemOne Recessed Benefits and Enhancements**

#### **Functionality**

Cables and connections are protected by recessed functionality

• Open architecture sub-plate design

Common door layout regardless of flange for harmonized look

 Meets UL 514A scrub water requirements with ScrubShield® technology

• Easy selection with common look for all floor types

#### Value

- Enhance building décor with numerous finishes
- Increase durability and longevity with cast aluminum covers

#### **Online Resources**

 BIM models, customer drawings and technical specifications are available on www.hubbell-wiring.com





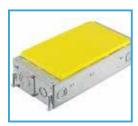
## Safety

- Flush flange available for tile, finished concrete or Terrazzo
- Surface flange available for carpeted floors with 0.15 in. rise meets ADA requirements
- Hideaway egress doors fold under cover while in use
- 180° opening of main door



#### Covers

 All SystemOne covers are ADA compliant. The doors open to 180° for maximum access. Cables and plugs are protected by recessed connections



#### Concrete Pour Pocket Cap

 In concrete applications, all SystemOne Recessed floor boxes include a yellow factory installed, field-removable pour pocket cap provides a pocket in the final floor to accept the covers intended for terrazzo, tile, or finished concrete floor. The cap may not be used for carpet, wood or engineered floors



#### **Extension Caps**

 Pre-pour extension caps allows the box to be recessed up to 1 inch into the concrete floor



#### **CR Version**

 Corrosion resistant epoxy paint intended for on-grade use, the CR version is coated with fusion-bonded epoxy paint to help prevent corrosion



#### 2 Inch Conduit Ready

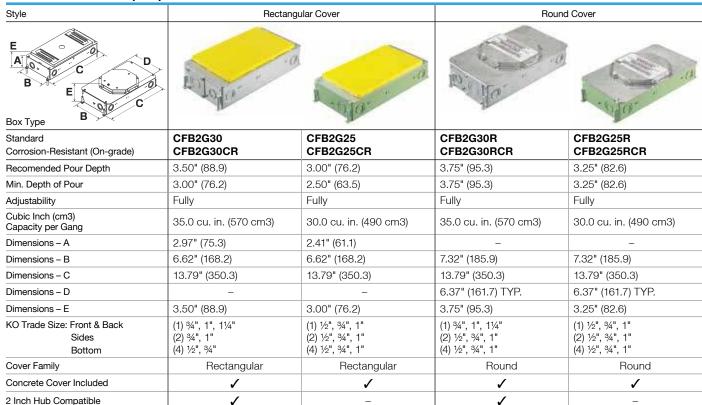
 To meet expanding AV and data needs, the Hubbell SystemOne Recessed Floor Box line readily accepts 2 inch conduits with the use of a 2 inch threaded conduit hub. The offset design allows for less conduit lifting while threading and the hub mounting holes are asymmetrical for installation efficiency





## SystemOne Recessed 2-Gang Floor Boxes and Covers, for Use In Concrete Floors

## **Dimensions Inches (mm)**



## **Rectangular Covers**

- Compatible with CFB2G25, CFB2G25CR, CFB2G30 and CFB2G30CR
- Two large cable egress doors and access 180° opening
- Maximum static load of 800 lbs. with 2x safety factor\*
- Surface style typical applications: Carpet, VCT
- Flush style typical applications: Tile, finished concrete and Terrazzo floors

	Cove	Cover dimensions 1011/16 in. x 63/16 in.					
Finish	Surface	Surface with Insert	Furniture Feed (1 in. and 2 in. Plugs)	Flush	Flush with Insert	Furniture Feed (1 in. and 2 in. Plugs)	
Aluminum Powder Coat Black Powder Coat Brass Powder Coat Bronze Powder Coat Satin Nickel Powder Coat	24GCCVRALU 24GCCVRBK 24GCCVRBRS 24GCCVRBRZ 24GCCVRNK	24GCCVRALUC 24GCCVRBKC 24GCCVRBRSC 24GCCVRBRZC 24GCCVRNKC	24GCFFCVRALU 24GCFFCVRBK 24GCFFCVRBRS 24GCFFCVRBRZ 24GCFFCVRNK	24GTCVRALU 24GTCVRBK 24GTCVRBRS 24GTCVRBRZ 24GTCVRNK	24GTCVRALUC 24GTCVRBKC 24GTCVRBRSC 24GTCVRBRZC 24GTCVRNKC	24GTFFCVRALU 24GTFFCVRBK 24GTFFCVRBRS 24GTFFCVRBRZ 24GTFFCVRNK	













#### **6 Inch Round Covers**

- Compatible with CFB2G25R, CFB2G25RCR, CFB2G30R and CFB2G30RCR
- Cover has a 7½ in. outer diameter and two large cable egress doors and access 180° opening
- Maximum static load of 1,000 lbs. with 2x safety factor\*

Finish	Flush Surface	Furniture Feed (¾ in. and 2 in. Plugs)
Brushed Aluminum	CFBS1R6CVRALU	CFBS1R6FFCVRALU
Black Powder Coat	CFBS1R6CVRBLK	CFBS1R6FFCVRBLK
Brass Plated	CFBS1R6CVRBRS	CFBS1R6FFCVRBRS
Bronze Plated	CFBS1R6CVRBRZ	CFBS1R6FFCVRBRZ
Gray Powder Coat	CFBS1R6CVRGRY	CFBS1R6FFCVRGRY
Satin Nickel Plated	CFBS1R6CVRNKL	CFBS1R6FFCVRNKL





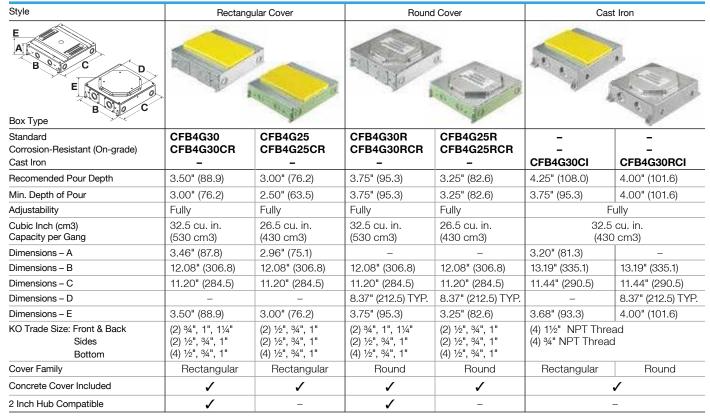
Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.





## SystemOne Recessed 4-Gang Floor Boxes and Covers, for Use In Concrete Floors

#### **Dimensions Inches (mm)**



## **Rectangular Covers**

- Compatible with CFB4G25, CFB4G25CR, CFB4G30 and CFB4G30CR
- Two large cable egress doors and access 180° opening
- Maximum static load of 800 lbs. with 2x safety factor\*
- Surface style typical applications: Carpet, VCT
- Flush style typical applications: Tile, finished concrete and Terrazzo floors

	Cover dimensions 1111/16 in. x 73/16 in.		Cover dimensions 1011/16 in. x 63/16 in.			
Finish	Surface	Surface with Insert	Furniture Feed (1 in. and 2 in. Plugs)	Flush	Flush with Insert	Furniture Feed (1 in. and 2 in. Plugs)
Aluminum Powder Coat Black Powder Coat Brass Powder Coat Bronze Powder Coat Satin Nickel Powder Coat	24GCCVRALU 24GCCVRBK 24GCCVRBRS 24GCCVRBRZ 24GCCVRNK	24GCCVRALUC 24GCCVRBKC 24GCCVRBRSC 24GCCVRBRZC 24GCCVRNKC	24GCFFCVRALU 24GCFFCVRBK 24GCFFCVRBRS 24GCFFCVRBRZ 24GCFFCVRNK	24GTCVRALU 24GTCVRBK 24GTCVRBRS 24GTCVRBRZ 24GTCVRNK	24GTCVRALUC 24GTCVRBKC 24GTCVRBRSC 24GTCVRBRZC 24GTCVRNKC	24GTFFCVRALU 24GTFFCVRBK 24GTFFCVRBRS 24GTFFCVRBRZ 24GTFFCVRNK









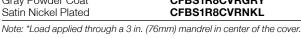




### 8 Inch Round Covers

- Compatible with CFB4G25R, CFB4G25RCR, CFB4G30RC, CFB4G30RCR and CFB4G30RCI
- Cover has a 9½ in. outer diameter and two large cable egress doors and access 180° opening

<ul> <li>Maximum static load of</li> </ul>	<ul> <li>Maximum static load of 1,000 lbs. with 2x safety factor*</li> </ul>				
Finish	Flush Surface				
Brushed Aluminum	CFBS1R8CVRALU				
Black Powder Coat	CFBS1R8CVRBLK				
Brass Plated	CFBS1R8CVRBRS				
Bronze Plated	CFBS1R8CVRBRZ				
Gray Powder Coat	CFBS1R8CVRGRY				
Satin Nickel Plated	CFBS1R8CVRNKL				



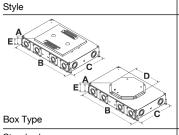




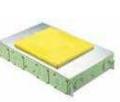


## SystemOne Recessed 6-Gang Floor Boxes and Covers, for Use In Concrete Floors

#### **Dimensions Inches (mm)**











DOX Type					
Standard Corrosion-Resistant (On-grade)	CFB6G30 -	CFB6G30CR	CFB6G30R	- CFB6G30RCR	
Recomended Pour Depth	3.50" (88.9)	3.50" (88.9)	3.75" (95.3)	3.75" (95.3)	
Min. Depth of Pour	3.00" (76.2)	3.00" (76.2)	3.75" (95.3)	3.75" (95.3)	
Adjustability	Fully	Fully	Fully	Fully	
Cubic Inch (cm3) Capacity per Gang	33 cu. in./89 cu. in. (535 cm3/1450 cm3)				
Dimensions – A	3.00" (76.2)	3.00" (76.2)	-	_	
Dimensions – B	18.48" (469.4)	18.48" (469.4)	17.45" (443.2)	17.45" (443.2)	
Dimensions – C	11.62" (295.1)	11.62" (295.1)	11.60" (294.5)	11.60" (294.5)	
Dimensions – D	_	_	8.37" (212.5) TYP.	8.37" (212.5) TYP.	
Dimensions – E	3.46" (87.8)	3.46" (87.8)	3.75" (95.3)	3.75" (95.3)	
KO Trade Size: Front & Back Sides Bottom	(4) ¾", 1", 1½" (2) ¾", 1", 1½", 1½" (4) ¾", 1", 1½", 1½"	(4) ¾", 1", 1½" (2) ¾", 1", 1½", 1½" (4) ¾", 1", 1½", 1½"	(4) ¾", 1", 1½" (2) ¾", 1", 1½", 1½" (4) ¾", 1", 1½", 1½"	(4) 34", 1", 11/4" (2) 34", 1", 11/4", 11/2" (4) 34", 1", 11/4", 11/2"	
Cover Family	Rectangular	Rectangular	Round	Round	
Concrete Cover Included	✓	✓	/	/	
2 Inch Hub Compatible	<b>√</b>	<b>√</b>	<b>✓</b>	✓	

### **Rectangular Covers**

- Compatible with CFB6G30 and CFB6G30CR
- Two large cable egress doors and access 180° opening
- Maximum static load of 1,500 lbs. with 2x safety factor\*
- Surface style typical applications: Carpet, VCT
- Flush style typical applications: Tile, finished concrete and Terrazzo floors

	Cover dimensions 11½ in. x 10 in.		Cover dime	nsions 10½ in. x 9 in.
Finish	Surface	Surface with Insert	Flush	Flush with Insert
Aluminum Powder Coat Black Powder Coat Brass Powder Coat Bronze Powder Coat Satin Nickel Powder Coat	610GCCVRALU 610GCCVRBK 610GCCVRBRS 610GCCVRBRZ 610GCCVRNK	610GCCVRALUC 610GCCVRBKC 610GCCVRBRSC 610GCCVRBRZC 610GCCVRNKC	610GTCVRALU 610GTCVRBK 610GTCVRBRS 610GTCVRBRZ 610GTCVRNK	610GTCVRALUC 610GTCVRBKC 610GTCVRBRSC 610GTCVRBRZC 610GTCVRNKC









#### **8 Inch Round Covers**

- Compatible with CFB6G30R and CFB6G30RCR
- Two large cable egress doors and access 180° opening
- Maximum static load of 1,000 lbs. with 2x safety factor\*

Finish	Surface
Brushed Aluminum	CFBS1R8CVRALU
Black Powder Coat	CFBS1R8CVRBLK
Brass Plated	CFBS1R8CVRBRS
Bronze Plated	CFBS1R8CVRBRZ
Gray Powder Coat	CFBS1R8CVRGRY
Satin Nickel Plated	CFBS1R8CVRNKL



Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.





## SystemOne 2, 4 and 6-Gang Plates and Accessories

## Plates for Use in 2, 4 and 6-Gang Floor Boxes

		_ ,		
• (	Л	514	1A	listed

Plate Style	(1) Decorator Opening	(1) Duplex Opening	(2) Extron <sup>®</sup> MAAP Openings	(2) Extron <sup>®</sup> Openings
Cat. No.	FBMPREC	FBMPDUP	FBMPMAAP	FBMPAAP
		.00		
Plate Style	(2) 1U Hubbell iStation Openings	(1) 1.5U Hubbell iStation Opening	(1) Simplex Opening 1.40 in. Diameter	(1) Twist-Lock <sup>®</sup> Opening 1.60 in. Diameter
Cat. No.	FBMP2IM	FBMP15IM	FBMP139	FBMP156
Plate Style	1-Gang Blank	Cable Feed Through with Bushing	(1) Opening for TracJack <sup>®</sup> or Series II <sup>®</sup>	(1) Opening with Hubbell ISF6 Frame for Keystone Jacks
Cat. No.	FBMPBNK	FBMPFT	FBMPTRAC	FBMP6KS

### **Pre-Wired Device Plates**

- Reduces wiring and installation times
- 8 in. stranded leads mounted to the face plate

Description	Туре	15A	20A
Duplex, Gray.	Standard	PWFBMPCR15GRY	PWFBMPCR20GRY
	Tamper-Resistant	PWFBMPCR15GRYTR	PWFBMPCR20GRYTR
Decorator, Gray.	Standard	PWFBMPDR15GRY	PWFBMPDR20GRY
	Tamper-Resistant	PWFBMPDR15GRYTR	PWFBMPDR20GRYTR

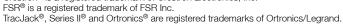
## **Accessories**

Description			Catalog Number
2 in. threaded zinc hub for use with CFB2G30, CF CFB6G30 series floor boxes; replaces CFBKOPL		CFBHUB2	
Replacement knock-out plate.		Standard Epoxy Coating	CFBKOPLATE CFBKOPLATECR
Replacement wire-way, used to pass wires		2-Gang	4 and 6-Gang
from one compartment to the other, for use in rectangular boxes.	CFB2G30/CR CFB4G30/CR CFB4G25/CR	CFB2WW	CFB46WW CFB4WW
Stackable ring to increase box height and concrete pour depth by % in. increments above top plane of floor box. One ring per % in. depth increase.  Must be installed before concrete pour.		CFB6RCVRR075	CFB8RCVRR075
Finished floor height adjustment ring - increase post pour adjustment; use with round cover series.	0 - ¼ in. ¼ in ½ in. ½ in ¾ in.	CFB6RCVRR1* CFB6RCVRR2 CFB6RCVRR3	CFB8RCVRR1** CFB8RCVRR2 CFB8RCVRR3
2 and 4-gang rectangular pre-pour ½ in. extension	caps (2 pack).		24GEXTENDCAP2PK
6 and 10-gang rectangular pre-pour ½ in. extensi	on caps (2 pack)	).	610GEXTENDCAP2PK

Note: \*Included with standard CFB2G30R and CFB2G25R series.
\*\*Included with standard CFB4G30R and CFB4G25R series.

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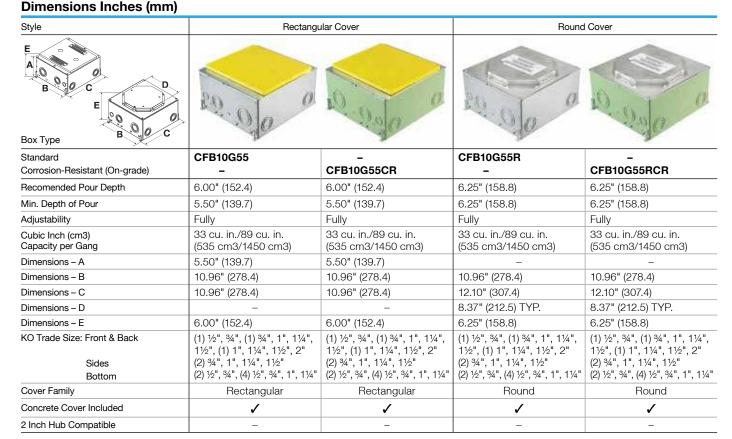


Dimensions in Inches (mm)





# SystemOne Recessed 10-Gang Floor Boxes and Covers, for Use In Concrete Floors



#### **Rectangular Covers**

- Compatible with CFB10G55 and CFB10G55CR
- Two large cable egress doors and access 180° opening
- Maximum static load of 1,500 lbs. with 2x safety factor\*
- Surface style typical applications: Carpet, VCT
- Flush style typical applications: Tile, finished concrete and Terrazzo floors

	Cover dime	Cover dimensions 11½ in. x 10 in.		ensions 10½ in. x 9 in.
Finish	Surface	Surface with Insert	Flush	Flush with Insert
Aluminum Powder Coat Black Powder Coat Brass Powder Coat Bronze Powder Coat Satin Nickel Powder Coat	610GCCVRALU 610GCCVRBK 610GCCVRBRS 610GCCVRBRZ 610GCCVRNK	610GCCVRALUC 610GCCVRBKC 610GCCVRBRSC 610GCCVRBRZC 610GCCVRNKC	610GTCVRALU 610GTCVRBK 610GTCVRBRS 610GTCVRBRZ 610GTCVRNK	610GTCVRALUC 610GTCVRBKC 610GTCVRBRSC 610GTCVRBRZC 610GTCVRNKC









#### **8 Inch Round Covers**

- Compatible with CFB10G55R and CFB10G55RCR
- Two large cable egress doors and access 180° opening
- Maximum static load of 1,000 lbs. with 2x safety factor\*

Finish	Surface	
Brushed Aluminum	CFBS1R8CVRALU	
Black Powder Coat	CFBS1R8CVRBLK	
Brass Plated	CFBS1R8CVRBRS	
Bronze Plated	CFBS1R8CVRBRZ	
Gray Powder Coat	CFBS1R8CVRGRY	
Satin Nickel Plated	CFBS1R8CVRNKL	



Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.





## SystemOne 10-Gang Plates and Accessories

### **CFB10 Series - Plates**

Cat. No.	FB10MPREC	FB10MPDUP	FB10MPBNK	FB10MPKEY	FB10MPTRAC
Style	Opening	Opening	Blank	Including Hubbell ISF6GY	(6) Ortronics TrackJack®
Plate	(1) Decorator	(1) Duplex		Decorator Opening Plate	(2) Openings to Accommodate



Cat. No.	FB10MP2A	FB10MPMAAP	FB10MPAAP	FB10MP2B	FB10MPX	
Style	(2) Decorator	Modules	Modules	iStation Modules	Around Wire-Way	
Plate		(4) Extron® MAAP	(4) Extron® AAP	For (6) 1U Hubbell	Replacement Spacer	





1.60 in. Dia.

(2) Twist-Lock® Opening





Style	(Uses 2-Gangs)	(Uses 2-Gangs)	(Uses 3-Garigs)	(Uses 3-Gangs)	
Cat. No.	FB10TLA	FB10TLX	FB10TLB	FB10TLY	

(1) Simplex Opening

1.40 in. Dia.



(2) Simplex Opening

1.40 in. Dia.



	Contract of the Contract of th
Plate	(3) Twist-Lock® Opening
Style	1.60 in. Dia. (Uses 5-Gangs)

FB10TLC

1.60 in. Dia.

Plate

Cat. No.

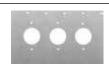
(1) Twist-Lock® Opening

(3) Simplex Opening 1.40 in. Dia. (Uses 5-Gangs) **FB10TLZ** 

(2) 2-Gang. Meets NEMA Spacing. Ideal for Crestron® DM -TX Product and Power (Uses 5-Gangs)

(4) Single Service Openings Utilizing NEMA Wallplate (Uses 5-Gangs)

•••







#### **Pre-Wired Device Plates**

- Reduces wiring and installation times
- 8 inch stranded leads mounted to the face plate

Description	Туре	15A	20A
Duplex, Gray.	Standard	PWFB10MPCR15GRY	PWFB10MPCR20GRY
	Tamper-Resistant	PWFB10MPCR15GRYTR	PWFB10MPCR20GRYTR
Decorator, Gray.	Standard	PWFB10MPDR15GRY	PWFB10MPDR20GRY
	Tamper-Resistant	PWFB10MPDR15GRYTR	PWFB10MPDR20GRYTR



## Accessories

Catalog Number
CFB10WW
CFB8RCVRR075
CFB8RCVRR1* CFB8RCVRR2 CFB8RCVRR3
610GEXTENDCAP2PK

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FSR® is a registered trademark of FSR Inc.

TracJack®, Series II® and Ortronics® are registered trademarks of Ortronics/Legrand.



Dimensions in Inches (mm)



## The Next Big Step In Innovation



Locate installation area and connect conduits



Pour concrete



Cut box top level with concrete



Install flooring



Install Adjustable Mounting Cup and level with finished flooring CFBS1R4CUI



Wire devices into box



Finish with cover CFBS1R4CVR

# Installing the Fully Adjustable Mounting Cup and Level with Finished Flooring

During a concrete pour installation a floor box can become buried, other times the thickness of the floor covering can change. We have solved these issues with the integral, patented, mounting cup which adjusts the device mounting depth to 3 inches, no matter the floor thickness. Additionally, this is helpful for engineered flooring on the concrete; the cup allows for the electrical devices to be adjusted upwards up to 1½ inches.





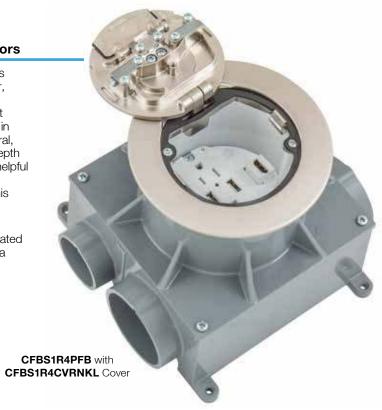


### **Features and Benefits**

# SystemOne Fully Adjustable 4 inch Recessed Floor Boxes and Covers, for Use In Concrete Floors

The Hubbell SystemOne Fully Adjustable Recessed floor box is the next step in a long line of quality products delivering power, data and AV for any application. The challenge of a recessed adjustable floor box is the device depth would vary for different floor thicknesses, other times the floor box can become buried in the concrete pour. We have solved these issues with the integral, patented, mounting cup which adjusts the device mounting depth to 3 inches, no matter the floor thickness. Additionally, this is helpful for engineered flooring on the concrete; the cup allows for the electrical devices to be adjusted upwards up to 1½ inches. This feature is particularly accommodating when the final flooring is unknown at the time concrete is being poured.

Utilizing the same cover design as our 4 inch Recessed Fire-Rated Poke-Throughs, a common look is now possible anywhere in a building, on grade or above.





### Box Design

- Up to 2 inch conduit ready (Cast iron maximum conduit 1½ inches)
- Available in PVC, stamped steel, epoxy coated stamped steel or cast iron construction available
- cULus Listed Scrubwater compliant



#### Covers

- 1,000 lbs, static load rated cover
- Available in six architectural cover finishes
- ADA American's with Disabilities Act – compliant flange thickness of 0.15 inch



### Chamber

- 3 inch deep access chamber
- Patented post pour adjustable mounting cup with teeth spaced in 5/32 inch increments allows for up to 11/2 inches of upward adjustability from the lowest position, ideal for engineered flooring
- High visibility white cup for making easy connections



### **Easy Mount Device Plates**

- Multiple, open architecture mounting plates for power, data and AV
- Recessed connections



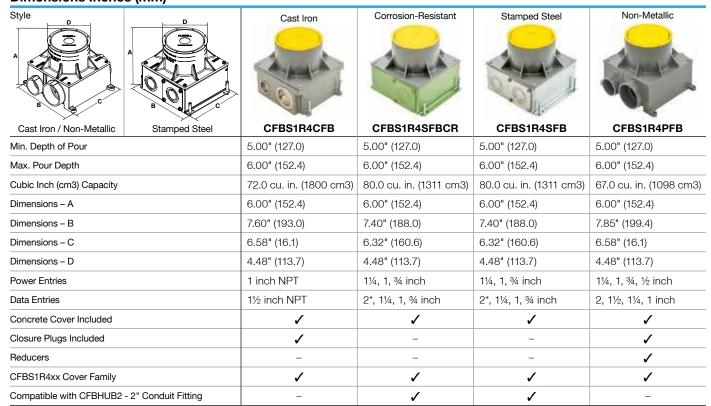
### 2 Inch Conduit Ready

- To meet expanding AV and data needs, the Hubbell SystemOne Recessed Floor Box line readily accepts 2 inch conduits with the use of a 2 inch threaded conduit hub - CFBHUB2 Sold Serarately
- The offset design allows for less conduit lifting while threading, plus the hub mounting holes are asymmetrical to ensure correct mounting





### SystemOne Fully Adjustable 4 inch Recessed Floor Boxes and Covers, for Use In Concrete Floors **Dimensions Inches (mm)**



Note: UL File Number E92074. CSA File Number LR18416. \*Requires CFBHUB2 for 2" conduits.

### Adjustable Mounting Cup - Required, Purchased Separately

The Adjustable Mounting Cup (AMC) is the heart of the CFBS1R4 Floor Box product line, and must be purchased separately from the floor boxes. With teeth spaced in 5/32 inch increments, the adjustable cup allows for installation ease and flexibility. The AMC is dropped into the floor box collar then rotated clockwise to set the height and is adjustable until the ground plate is installed. Once the ground plate is installed, the cup is locked into place preventing unwanted adjustment of height. Lastly, the device mounting plate and electrical devices are installed.









Description	Catalog Number
Adjustable Mounting Cup	CFBS1R4CUP
Includes white cup, grey low voltage dividers and ground plate.	Floor boxes purchased independantly from cup











### SystemOne Fully Adjustable 4 inch Recessed Floor Boxes and Covers, for Use In Concrete Floors

#### Floor Box Covers

The 4 inch recessed cover is available in a number of durable, yet beautiful finishes to match any décor. The flange height of 0.15 inch is ADA compliant and suitable for use on any floor finish. All covers are UL 514A listed and meet UL Scrubwater requirements.

#### **Features**

- Flange diameter is 5.5 inches
- Flange thickness is 0.15 inches thick and complies with ADA requirements
- Cover load rating is 1,000 lbs. with 2x safety factor\* for a static load applied through a 3 inch mandrel
- Available in six finishes
  - Satin nickel, antique bronze and brushed brass are plated finishes
  - Brushed aluminum is the base material brushed and lacquered
  - Black and gray finishes are powder coat



### **Architectural Cover Finishes**

Description	Finish	Catalog Number
Cover with single fold under cable egress door.	Brushed Aluminum Black Powder Coat Plated Brushed Brass Plated Antique Bronze Gray Powder Coat Plated Satin Nickel	CFBS1R4CVRALU CFBS1R4CVRBLK CFBS1R4CVRBRS CFBS1R4CVRBRZ CFBS1R4CVRGRY CFBS1R4CVRNKL

Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.







### **Device Mounting Plates**

Description / Catalog Number	Sub-plate	Description / Catalog Number	Sub-plate	Description / Catalog Number	Sub-plate
2X2 Sub-plate with (1) decorator device opening and (2) keystone jack openings	1	(1) StyleLine® decorator device opening for power or datacom applications		2X2 Sub-plate with (1) decorator device opening and (2) Ortronics® TracJack® openings	1
S1R4SP2X2STYLE	-	S1R4SPSTYLE	47	S1R4SP2X2STYLETJ	41
2X2 Sub-plate with (1) duplex device opening and (2) keystone jack openings	8	(1) Duplex device opening for power or datacom applications	8	2X2 Sub-plate with (1) duplex device opening and (2) Ortronics® TracJack® openings	8
S1R4SP2X2DUPLEX	2.1.4	S1R4SPDUPLEX		S1R4SP2X2DUPLEXTJ	20.0
(4) Single 20A receptacles. Can be wired as single or two circuit with isolated ground capability, 12 inch wire leads	00	(1) 1.60 inch opening for 20 or 30A Twist-Lock <sup>®</sup> receptacle	Ö	(1) 1.40 inch opening for simplex receptacle	Ö
S1R4SPQUAD		S1R4SPTWIST	9	S1R4SPSIMPLEX	

### **Accessories and Replacement Parts**

Description		Catalog Number
Allows the conduit connections for the low voltage portion of the CFBS1R4SFB and CFBS1R4SFBCR to be increased to 2 inch capacity the confidence of the confidence of the conduit float during the concrete part of the conduit float during the concrete part of the conduit float during the concrete part of the conduit float during the conduit float	CFBHUB2	
Set of conduit reducing adapters for use with the CFBS1R4PFB. Includes two each of the following adapters to reducing to the corresponding conduit diameter.	CFBADAPT125 CFBADAPT200	
Replacement low voltage partition for use in all four CFBS1R4 series	CFBS1R4DIV	
Replacement ground bracket for use in all four CFBS1R4 series flo	CFBS1R4GND	
Replacement pre-pour concrete yellow cover for use with all four of t CFBS1R4 series floor boxes.	CFBS1R4COVER	
Abandonment plate, black finish, for all CFBS1R4 series floor boxes	S1R4CFBADMTBK	
Pre-pour PVC stand increases <b>CFBS1R4PFB</b> box height 2.5 in. to 4 within the concrete pour.	PFBSTAND	

TracJack®, Series II® and Ortronics® are registered trademarks of Ortronics/Legrand.



### Products at a Glance

Flush Floor Box Applications feature unique capabilities of Hubbell's SystemOne universal cover and sub-plate design, Hubbell has expanded its floor box offering to provide industry leading flexibility while accommodating an extensive range of applications. Hubbell SystemOne is constructed to give customers the ability to create personal solutions for their most demanding, power, data and audio/video requirements.

## SystemOne Flush Floor Box Applications...



### **Multi-Service Applications**

This Hubbell SystemOne sub-plate incorporates a standard Style Line® decorator opening, which can be used for an active multimedia device. In addition, a 20A outlet is supplied for power and two keystone openings for voice/data services.



### **Multimedia Applications**

Other Hubbell SystemOne sub-plates are designed to meet the growing needs of the audio/video market. Some sub-plates provide power outlets with Hubbell's AV products including 15-pin SVGA, RCA, S-Video, 3.5mm stereo, HDMI and XLR microphone jacks. Other sub-plates can accommodate Extron® Electronics MAAP and AAP series AV modules, as well as FSR IPS plates.



### **4X4 Applications**

Provides maximum power capacity for flush, multi-service applications. This sub-plate features a pre-wired four outlet 20A, 125V receptacle and four openings for flush mount Hubbell modular jacks and audio/video Snap Fit connectors. Receptacle wiring permits dual- circuit, as well as isolated ground applications.

### Traditional Floor Boxes...



#### Flush Applications

Hubbell offers a wide variety of traditional solutions including single and multi-gang cast iron, stamped steel and non-metallic floor boxes in both round and rectangular designs. These boxes can be finished with either brass or aluminum covers and flanges to match any office décor. All Hubbell floor box assemblies exceed UL scrub water exclusion requirements.



### Wooden Floor Applications

Hubbell offers round, single service and rectangular, multi-service floor boxes for wooden floor applications. The rectangular boxes are available in one, two and threegang options and feature removable barriers for maximum capacity while maintaining separation of power and low voltage. A variety of covers and flanges are available in brushed aluminum or brass to meet aesthetic requirements.



### **Heavy Load Rating**

For environments where floor boxes will be subjected to extreme loads, Hubbell offers two different solutions. The Ballroom Box series has a static cover load rating of 20,000 lbs. and can accommodate up to 8 devices. The Convention Center family offers a static cover load rating of 32,000 lbs. and can accommodate up to 100A Pin and Sleeve devices.

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### SystemOne Flush Floor Box Family

### **Cast Iron**



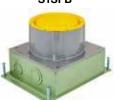
S1CFB

- Corrosion resistant for on-grade applications
- Oversized 1½" NPT threaded conduit access holes for low voltage
- 1" NPT threaded conduit access holes for power

### Steel



S1SFB



S1SFBCR

- Stamped steel construction
- Economical and light weight for above-grade applications
- Concentric knockouts permit various conduit sizes for both power and data services

### S1SFI Steel AV



S1SFBAV



S1SFBAVCR

- Accommodates high-capacity multimedia applications in a 3½" minimum depth of pour
- Oversized 1½" NPT threaded data hub
- ¾", 1" concentric knockouts for power services

#### **Features**

- Easily installed, aesthetic and configurable floor box solution, for open floor plans that require both power and data services
- The Hubbell SystemOne Universal Cover mounts directly to the floor box riser, eliminating the need for an additional adapter collar
- The Hubbell SystemOne Universal Cover features ScrubShield<sup>®</sup> technology that exceeds UL514 scrub water exclusion requirements
- Convenient cubic inch capacity (cm3) markings on interior of box
- · Leveling feet provide before pour adjustability
- Non-metallic riser allows a simple saw cut for adjustment after pour
- Supplied with concrete cover and closure plugs (where applicable)
- Designed to accommodate multi-service applications with the wide offering of Hubbell SystemOne sub-plates
- Hubbell SystemOne Metal Floor Boxes are approved for use in the City of Chicago
- CR versions incorporate fusion bonded epoxy paint for on grade use

### Non-Metallic



S1PFB

- Non-corrosive plastic construction
- Oversized 1½" data conduit hub for increased cable capacity and bend radius
- Parallel conduit hubs reduce labor and material cost, facilitating easier wire pull

### **Features**

- Economical, easy to install, in-floor delivery system for open plan spaces
- The Hubbell SystemOne Universal Cover mounts directly to the floor box riser, eliminating the need for an additional adapter collar
- Concrete cover, conduit reducers and conduit hub plugs included



### SystemOne Flush Covers

### **Universal Flange and Cover Assembly**

Carpet





- Hinged doors open 180° flush to the carpet flange or tile
- Locking studs allow each door to be secured independently
- The universal carpet or tile flange can be used for Hubbell SystemOne Floor Boxes and Fire-Rated Poke-Throughs
- Finishes and colors available:











luminum Brass Finish Finish

s Black

Ivory

### **Features**

- Durable cast aluminum construction available in black, gray, brass, aluminum and ivory powder coat finishes
- Features ScrubShield® technology that exceeds UL514 scrub water exclusion requirements
- Provides consistent look and maximum functionality throughout the installed life
- Meets ADA standards for accessible design

### SystemOne Flush Sub-Plates

Hubbell's modular sub-plate design allows users to economically upgrade Hubbell SystemOne FRPT and Floor Boxes to accommodate future moves, adds and changes. See page P-20 for additional Information.



4x4 Sub-Plate



Datacom and Power Sub-Plate



Extron® AAP/MAAP and Power Sub-Plate



Dual Style Line® Decorator Sub-Plate



Twist-Lock® Sub-Plate



Furniture Feed Cover, Carpet

### **Features**

- Durable cast aluminum construction, powder coat finish
- Hubbell 4X4: four 20A, 125V receptacles, four keystone openings for voice/data jacks and flush multimedia connectors
- Hubbell X-END and Hubbell iSTATION modular connectivity
- Accommodates Extron<sup>®</sup> Electronics Architectural Series audio/video system integration products
- Accommodates GFCI, surge and standard Style Line<sup>®</sup> Decorator receptacles
- Twist-Lock® receptacle with two flush keystone openings
- Large capacity and multi-service furniture feed applications
- Open system sub-plates permit maximum data flexibility

### **Power Devices and Connectivity**



Hubbell-PRO Receptacles



Hubbell iSTATION



Hubbell X-END

#### **Features**

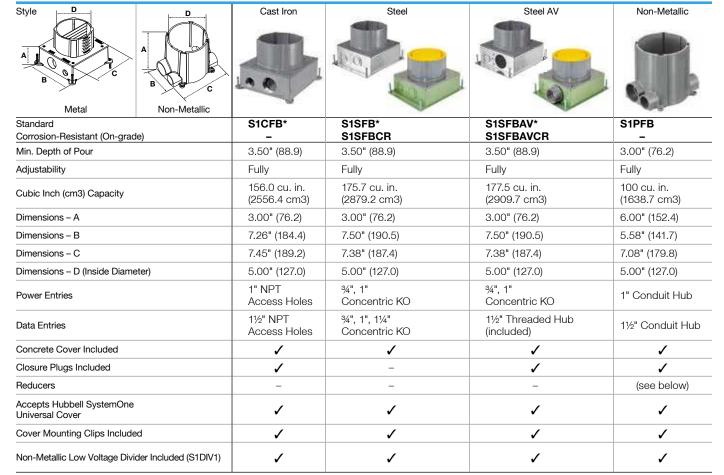
- Choose from Hubbell's industry leading selection of wiring devices for power services
- Hubbell iSTATION connectivity modules integrate with SystemOne to provide comprehensive multimedia solutions
- Hubbell X-END application cables and tails allow for more connectivity in a smaller footprint

Extron® is a registered trademark of Extron Electronics.





### SystemOne Flush Metal and Non-Metallic Floor Boxes and Covers, for Use In Concrete Floors **Dimensions Inches (mm)**



Note: UL File Number E92074. CSA File Number LR18416.

\*S1CFB, S1SFB, S1SFBAV are approved for use in the City of Chicago.

S1PFB reducers included: Qty (2) combo plug/reducers 1" to 3/4"

Qty (2) reducers 11/2" to 11

Qty (2) reducers 11/2" to 3/4"

Qty (2) plugs 11/2"

### SystemOne Universal Covers

- Cast aluminum construction
- Durable powder coat finish





Carpet	Tile
S1CFCAL	S1TFCAL
S1CFCBRS	S1TFCBRS
S1CFCBL	S1TFCBL
S1CFCGY	S1TFCGY
S1CFCI	S1TFCI
	S1CFCAL S1CFCBRS S1CFCBL S1CFCGY



Finish



Finish







### Floor Box Accessories

Description	Color	Catalog Number
Abandonment Plates Used to cover abandoned SystemOne Fire-Rated Poke-Throughs or Floor Boxes.	Black Gray	S1AP4BL S1AP4GY

Replacement Side by Side Divider Used to isolate compartments in S1SP S1SPFFx, S1SPFFTx, S1SPDU, S1SPDUSL, S1SPDU2IM and S1SPSL2IM sub-plates. Included with all SystemOne Floor Boxes.

11/2" Threaded Hub

For use with S1SFBAV ONLY. Permits feedthrough applications. S1SFBAV floor box includes one (1) threaded hub.

Replacement Universal Cover Mounting Clips Used to mount SystemOne Universal Cover to SystemOne metal and non-metallic floor boxes (S1CFB, S1SFB, S1SFBAV, S1PFB).

Pre-pour PVC stand increases S1PFB box height 2.5 in. to 4.0 in. within the concrete pour.



S1AVHUB15

S1DIV1



S1FBCLIP5PK







### SystemOne Flush Sub-Plates

Description	Catalog Number	Description	(	Catalog Number	Description		Catalog Number
Style Line® Decorator/GFCI (2) Style Line® decorator openings for power and/or datacom applications.	W	<b>Duplex/Duplex</b> (2) Duplex openings for power and/or datacom applications.		<b>B</b>	<b>Duplex/Style Line® Decorator</b> (1) Duplex and (1) Style Line® decorator opening for power and/or datacom applications.		<b>(B)</b>
3 Non-Metallic 35 Metal	S1SP	Non-Metallic 3.5	Metal	S1SPDU	Non-Metallic (3	.5 Metal	S1SPDUSL
Hubbell 4 X 4  (4) 20A, 125V receptacles. (4) Keystone openings for Hubbell jacks or flush AV connectors. Power can be wired as single or two circuit with isolated ground capability.		Carpet Furniture F Cover/Flange* (1) %" and (1) 1½" NF holes for power and applications. Univers required. Includes co	PT access /or datacom sal Cover not		Tile Furniture Fee Cover/Flange* (1) ¾" and (1) 1½" N holes for power an applications. Unive required. Includes	IPT access d/or datacom ersal Cover not	•
Includes 🖺 stickers.	S1SP4X4C	3 Non-Metallic	Aluminum Fin. Brass Finish	S1SPFFBRS	3 Non-Metallic	Aluminum Fin. Brass Finish	S1SPFFTAL S1SPFFTBRS
Provided with 15 ft. wire leads Provided with 30 ft. wire leads	S1SP4X415 S1SP4X430	3.5 Metal	Black Gray	S1SPFFBL S1SPFFGY	3.5 Metal	Black Gray	S1SPFFTBL S1SPFFTGY
Single Receptacle + Data Opening for 20 or 30A Twist-Lock® receptacle (1.56" OD) and (2) Keystone openings for Hubbell jacks or flush AV connectors.	S1SPTL	Hubbell DataCom (1) 20A, 125V recepta recessed Hubbell iST. for data, voice, and A	cle and 3-unit ATION opening	O S1SP3IM	(1) Duplex opening openings and 1.5 the Hubbell iSTATION voice and AV appli	S1SPDU2IM	
4		Marked with " Cont	rolled"	S1SP3IMC	<b>5</b>		
Hubbell DataCom + Style Line® Decorator (1) Style Line® decorator opening, (2) flush Keystone openings and 1.5 unit recessed Hubbell iSTATION opening for data, voice and AV applications.	S1SPSL2IM	Hubbell DataCom  1 unit flush Hubbell iSTATION opening and 3-unit recessed Hubbell iSTATION opening for data, voice, and AV applications.		S1SP4IM	Active Multimedia + Power Single 20A, 125V receptacle; (2) flush Keystone openings; (1) rectangular Style Line® decorator opening to accommodate active multimedia modules or low voltage outlet frames.		S1SPAMM20
5		3.5			Marked with "(1) Cor	ntrolled"	S1SPAMM20C
Extron® or FSR + Power (1) 20A, 125V receptacle. Recessed opening for (3) single Extron® MAAP series adapter plates or FSR IPS plates.	S1SPEXT1	Extron® or FSR + Power (1) 20A, 125V receptacle. Recessed opening for (1) single Extron® MAAP and (2) single AAP series adapter plates or FSR IPS plates.		S1SPEXT2	Extron® or FSR Single-Service Recessed opening for (2) single Extron® MAAP and (2) single AAP series adapter plates or FSR IPS plates.		S1SPEXT3
Marked with " Controlled"	S1SPEXT1C	Marked with " Cont	rolled"	S1SPEXT2C	4.5		
Extron® AAP + Power (1) 20A, 125V receptacle. (2) flush Keystone & recessed opening for (2) single Extron® AAP Series	0	Ortronics Series II® + Power (1) 20A, 125V receptacle. Recessed opening for (3) 1 unit Ortronics Series II® modules.		0	Ortronics TracJack® + Power (1) 20A, 125V receptacle. Recessed bezel for (6) Ortronics TracJack® modules.		0
adapter plates.	S1SPEXT4	5		S1SPORT <u>5</u>			S1SPTRAC
Marked with "L" Controlled"	S1SPEXT4C	Marked with " Cont	rolled"	S1SPORTC	Marked with " Cor	ntrolled"	S1SPTRACC
Panduit Mini Com® 4 X 4 (4) 20A, 125V receptacles. (4) Openings for Panduit Mini-Com Connectivity.		SYSTIMAX® 4 X 4 (4) 20A, 125V receptacles. (4) Openings for SYSTIMAX® Connectivity.			Siemon MAX® + Power (1) 20A, 125V receptacle. Recessed bezel for (6) Siemon MAX® modules.		
4	S1SP4X4PA	<b>4</b>		S1SP4X4SYS	5		S1SPMAX
Includes 🖺 stickers.	S1SP4X4PAC	Includes 🖺 stickers.		S1SP4X4SYSC	Marked with " Cor	ntrolled"	S1SPMAXC

Note: \*Furnished with two screws in flexible metal conduit connectors.

Signifies minimum depth of concrete pour in inches for Metal Floor Boxes (S1CFB, S1SFB and S1SFBAV) and Non-Metallic Floor Box (S1PFB).

### **Sub-Plate Accessories**

Description			Description	Catalog Number
Replacement Threader Used with S1SPFFx and Sub-plate is supplied with	S1SPFFTx only.		Replacement for <b>S1SPMAX.</b> Sub-plate is supplied with data frame. Works with Siemon MAX®.	S1DFMAX
Color	1½" Plug	34" Plug	Replacement for <b>S1SPTRAC</b> sub-plate. Sub-plate is supplied with data frame. Works with Ortronics TracJack <sup>®</sup> .	S1DFTRAC
Aluminum Finish Brass Finish Black	S1FP15AL S1FP15BRS S1FP15BL	S1FP34AL S1FP34BRS S1FP34BL	Blank Style Line <sup>®</sup> decorator frame, Black. 2-Port Style Line <sup>®</sup> decorator frame, Black. 4-Port Style Line <sup>®</sup> decorator frame, Black.	NS620BK ISF2BK ISF4BK
Gray	S1FP15GY	S1FP34GY	6-Port Style Line® decorator frame, Black.	ISF6BK

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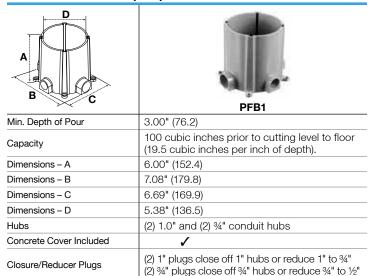


SystemOne	a Flush				Floor	Boxes*			es with UL		
Configurat			Non- Metallic			Metal				4" Core Hole ted Poke-Tl	
(except S1PFI	use in the City of Chicago 3)	<b>).</b>				8			#	517	199==
Sub-Plates S1SP	Style Line® Decorator/GFCI	0	S1PFB	3.5	3.5	S1SFBCR	S1SFBAV	3.5	S1PTFIT	S1PT4X4FIT	S1PTAVFI1
S1SPDU	Duplex/Duplex	0	3	3.5	3.5	3.5	3.5	3.5	<b>/</b> +	X	1
S1SPDUSL	Duplex/Style Line® Decorator	Ø	3	3.5	3.5	3.5	3.5	3.5	<b>/</b> +	X	1
S1SP4X4 S1SP4X4PA S1SP4X4SYS	Hubbell 4 X 4 Panduit Mini-Com® 4 X 4 SYSTIMAX® 4 X 4	<b>A</b>	4	4	4	4	4	4	X	<b>/</b> +	X
S1SP4X4C S1SP4X4PAC S1SP4X4SYSC		•							,	• •	
S1SPTL	Twist-Lock® Receptacle + Data	0	4	4	4	4	4	4	X	<b>/</b> +	X
S1SP3IM	Hubbell DataCom + Power	0	5	5	5	5	5	5	1	X	<b>/</b> +
S1SP4IM	Hubbell DataCom	0	3.5	3.5	3.5	3.5	3.5	3.5	1	X	<b>/</b> +
S1SPDU2IM	Hubbell DataCom + Duplex	<b>(1)</b>	5	5	5	<b>5</b>	5	<b>5</b>	1	X	<b>/</b> +
S1SPSL2IM	Hubbell DataCom + Style Line® Decorator	0	5	5	<b>5</b>	<b>5</b>	5	<b>5</b>	1	X	<b>/</b> +
S1SPFFxx (Carpet) S1SPFFTxx (Tile)	Furniture Feed Cover/Flange (Replace "xx" with BRS (Brass finish), AL (Aluminum finish), BL (Black) or GY (Gray).	0	3	3.5	3.5	3.5	3.5	3.5	1	X	<b>/</b> +
S1SPEXT1 S1SPEXT1C	Extron® or FSR + Power  Marked with " Controlled"	0	4	4	4	4	4	4	1	X	<b>/</b> +
S1SPEXT2 S1SPEXT2C	Extron® or FSR + Power  Marked with " Controlled"	Ŏ	4	4	4	4	4	4	1	X	<b>/</b> +
S1SPEXT3	Extron® or FSR Single-Service	O	4.5	4.5	4.5	4.5	4.5	4.5	1	X	<b>/</b> +
S1SPEXT4 S1SPEXT4C	Extron® or FSR + Power  Marked with " Controlled"	Ŏ	4	4	4	4	4	4	1	X	<b>/</b> +
S1SPORT S1SPORTC	Ortronics Series II® + Power  Marked with "© Controlled"	Ŏ	5	5	5	5	5	5	1	X	<b>/</b> +
S1SPTRAC S1SPTRACC	Ortronics TracJack® + Power  Marked with "© Controlled"	Ŏ	5	5	5	5	5	5	1	X	<b>/</b> +
S1SPMAX S1SPMAXC	Siemon MAX® + Power  Marked with "© Controlled"		<b>5</b>	5	<b>5</b>	5	<b>5</b>	<b>5</b>	1	X	<b>/</b> +
S1SPAMM20	Active Multimedia + Flush Keystone + Power	A	<b>5</b>	5	<b>5</b>	5	<b>5</b>	5	1	X	<b>/</b> +
S1SPAMM20C S1CFCxx (Carpet)	Marked with "D Controlled" SystemOne Floor Boxes and FRPTs use SystemOne				nimum dept	h of concrete			<b>V</b> + Recommended	Alternative	X Not
S1TFCxx (Tile)	Universal Covers (Replace "xx" with BRS (Brass finish), AL (Aluminum finish), BL (Black) or GY (Gray).	Ŏ	Extron® is a Mini-Com® a	registered tra	ademark of E.	xtron Electror	s of Panduit (	Corp. SYSTIM	AX® is a regis	Floor Fitting The Siemon ( stered trademanics/Legrand.	Compatible Company. ark of



## Flush Round Single or Multi-Service Non-Metallic Floor Boxes, for Use In Concrete Floors

### **Dimensions Inches (mm)**



Description	Catalog Number
Adapter Required for all applications.	PFBA1A

#### Low Voltage Divider

Required for use with catalog number PFB1 when used in multi-service applications. Accepts Hubbell standard duplex receptacles or 15A Twist-Lock® duplex receptacles (HBL4700 series).



PFBT1A

### "Y" Adapter

34 in. "Y" adapter to feed parallel runs of ¾ in. conduit.



PFBYA1

Pre-pour PVC stand increases PFB1 box height 2.5 in. to 4.0 in. within the concrete pour.



**PFBSTAND** 

Note: UL File Number E92074. CSA File Number LR18416.

### Flush Round Covers and Flanges

### Multi-Service Cover and Flange Assemblies

Includes floor box cover with duplex flaps. (2) 1/2 in. dia. low voltage feed through holes and matching carpet flange. 6.25 in. Diameter



Brass



**PFBCBRA** 

Brown Non-Metallic

**PFBCBLA** 



Black Non-Metallic

**PFBCGYA** 



Gray Non-Metallic

**PFBCIA** 



Ivory Non-Metallic

### Single Service Covers

Brass Aluminum 3.88 in. Dia.



Duplex Flap

S3725 SA3725



Duplex Screw

S2525 SA2525



21/8" x 3/4" Combination

S2725 SA2725



21/8" x 1" Combination

S2925 SA2925



21/8" Single Receptacle

S3525



2%" Single Receptacle

S3325

21/8" Single Receptacle (Terrazzo Floor)

### Metal Carpet Flange

Use with single service covers for carpet applications. 6.25 in. Diameter

S3082



Brass



SA3082



Brushed Aluminum

### Adapter Ring

Use with single service covers for tile applications.

S5016



Brass



Aluminum

SF2725

### Furniture Feed Plate

Unpainted plate with 1 in. threaded opening.

### PFBP1



Steel

### One Piece Brass Cover and Carpet Flange

Brass Aluminum 6.25 in. Dia.

Note: Adapter ring S5016 is required for mounting SF series covers onto PFBA1A.



SF3925

Duplex Flap

SF2525



21/8" x 3/4" Combination



21/8" x 1" Combination

SF2925

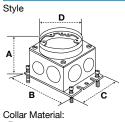


21/8" Single Receptacle



### Flush Round Single Service Metal Floor Boxes, for Use In Concrete Floors

### **Dimensions Inches (mm)**









Cast Iron





Stamped Steel



B	Ton	To a	0	0	3	O TIL O		
Collar Material: Brass Aluminum	B2536 BA2536	B253641 BA253641	B2503 BA2503	B2506 BA2506	B2506415 BA2506415	B2537 BA2537	B2527 BA2527	B2529 BA2529
Min. Depth of Pour	3.25" (82.	6)	3.75" (95.3)	4.75" (120	0.7)	3.00" (76.2)	4.00" (101.6)	3.00" (76.2)
Adjustability	Fully		Fully	Fully		Fully	Fully	Fully
Before Pour External Height Adjustment	1.25" (31.8	3)	_		_	_	1.25" (31.8)	1.25" (31.8)
After Pour Internal Height Adjustment	.38" (9.5)		.63" (15.9)	.63" (15.9	)	.38" (9.5)	.38" (9.5)	.38" (9.5)
Cubic Inch (cm3) Capacity	33.0 cu. ii (540.7 cm		36.0 cu. in. (590.0 cm3)	50.8 cu. i (832.5 cm		30.0 cu. in. (491.6 cm3)	54.0 cu. in. (884.9 cm3)	37.3 cu. in. (611.2 cm3)
Dimensions – A	3.05" (77.	5)	3.75" (95.3)	4.75" (120	0.7)	2.87" (72.9)	3.88" (98.6)	2.91" (73.9)
Dimensions – B	4.84" (122	2.9)	5.00" (127.0)	5.00" (127	7.0)	4.84" (122.9)	6.00" (152.4)	6.00" (152.4)
Dimensions – C	4.84" (122	2.9)	4.63" (117.6)	4.66" (118	3.4)	4.84" (122.9)	4.81" (122.2)	4.81" (122.2)
Dimensions – D	4.19" (106	5.4)	4.19" (106.4)	4.19" (106	6.4)	4.19" (106.4)	4.19" (106.4)	4.19" (106.4)
Threaded Access Holes	(4) 3/4"	(4) 1"	(4) 3/4"	(4) 11/4"	(4) 11/2"	(4) 3/4"	_	_
Knockouts - Sides	-	-	_		_	_	(1) 1" & (1) 3/4"	(2) 1/2" & (1) 3/4"
Knockouts – Ends	-	_	_		_	_	(1) 11/4" & (1) 1/2"	(1) ½" & (1) ¾"
Knockouts – Bottom	-	_	_		_	_	(3) 1/2" & (2) 3/4"	(3) 1/2" & (2) 3/4"
Concrete Cover Included		/	✓		<b>√</b>	✓	✓	1
Closure Plugs Included		/	1		✓	✓	_	_

Note: UL File Number E31999.

CSA File Number LR18416.

Suitable for single service applications only.

### Single Service Covers

Brass Aluminum 3.88 in. Dia.



Flap



Duplex Screw



21/8" x 3/4" Combination



21/8" x 1" Combination

6.25 in. Dia.



21/8" Single Receptacle



2%" Single Receptacle



21/8" Single Receptacle (Terrazzo Floor)

### **Carpet Flanges**

5.25 in. Dia.



Brass

SF3925



Brushed Aluminum

SF2525





Brass



Brushed Aluminum

### **One Piece Brass Cover and Carpet Flange**

Brass Aluminum 6.25 in. Dia.



Duplex Flap



21/8" x 3/4" Combination



SF2725

21/8" x 1" Combination

SF2925

21/8" Single Receptacle



### Flush Rectangular Non-Metallic Floor Boxes with Non-Metallic Covers

### **Dimensions Inches (mm)**



Note: UL File Number E92074.

### Flush Rectangular Non-Metallic Covers and Flanges\*

#### **Required Components for Carpet Applications** Cover with Duplex and Style Line® decorator inserts included Carpet Flanges 2-Gang 3-Gang 6.00" x 11.35" Number of Gangs 1-Gang 6.00" x 4.88" One Required per Gang Dimensions 6.00" x 8.13" 4 15" x 2 97 Black PFBRFBL1 PFBRFBL2 PFBRFBL3 PFBR826BLA Brown PFBRFBR1 PFBRFBR2 PFBRFBR3 PFBR826BRA Grav PFBRFGY1 PFBRFGY2 PFBRFGY3 PFBR826GYA Ivory PFBRFI1 PFBRFI2 PFBRFI3 PFBR826IA Cover **Duplex** Style Line®

### **Required Components for Tile Applications**

Mounting Collar	Cover Frame	Cover with Duplex and Style Line® decorator inserts included
One Required per Gang	One Required per Gang Dim. 4.47" x 3.25"	One Required per Gang 4.15" x 2.97"
PFBRMC	PFBRFRA	PFBR826GYA
ALC: N	100	











Decorator Insert

Note: \*Flush rectangular non-metallic covers and flanges are UL listed only. Not CSA certified.

<sup>\*</sup>Suitable for single service applications only.





### Flush Rectangular Non-Metallic Floor Boxes with Metal Covers

### **Dimensions Inches (mm)**



Note: UL File Number E92074.

### Flush Rectangular Metal Covers and Flanges

### Required Components for Carpet and Tile Applications

Adapter Collar (One required per gang)

**PFBRAC** Gray



Adapter Frame with Grounding Lug (One required per gang) Dim. 4.36" x 3.20

Brass Aluminum

S5017G **SA5017G** 



### Flush Rectangular Metal Covers and Flanges

Required Components for Carpet and Tile Applications

Adapter Collar (One required per gang)

**PFBRAC** Gray



### Carpet Flanges (Not Required for Tile Applications)

### Tapered Flange

Number of Gangs	1-Gang	2-Gang	3-Gang
Dimensions	6.00" x 4.85"	6.00" x 8.13"	6.00" x 11.34"
Brass	SB3083	SB3084	SB3085
Aluminum	SA3083	SA3084	SA3085





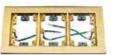


### **Rectangular Flanges (Required)**

1-Gang	2-Gang	3-Gang
6.00" x 4.85"	6.00" x 8.13"	6.00" x 11.34"
SB3083W	SB3084W	SB3085W
SA3083W	SA3084W	SA3085W







### Covers - One Required per Gang

Brass Aluminum **Dimensions** 4.15" x 2.99"



S3825

**Duplex** 

Flap



Screw

S3625

Duplex



S3826

Style Line® **Decorator Opening** 



S2425

21/8" x 3/4" Combination



S2625

SA2625

21/4" x 1" Combination



S2825

21/8" Single Receptacle



S3813

Blank

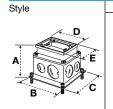
<sup>\*</sup>Suitable for single service applications only.





## Flush Rectangular Cast Iron Floor Boxes, for Use In Concrete Floors

### **Dimensions Inches (mm)**







Cast Iron





1-Gang Shallow



Collar Material:							
Brass Aluminum	B2436* B243641* BA2436* BA243641*	B4233 B423341 BA4233 BA423341	B4333 B433361 BA4333 BA433361	B2437* BA2437*	B2414* BA2414*	B4214 BA4214	B4314 BA4314
Min. Depth of Pour	3.75" (95.3)	3.75" (95.3)	3.75" (95.3)	3.00" (76.2)	2.00" (50.8)	2.00" (50.8)	2.00" (50.8)
Adjustability	Fully	Fully	Fully	Fully	Semi	Semi	Semi
Before Pour External Height Adjustment	1.25" (31.8)	1.25" (31.8)	1.25" (31.8)	1.25" (31.8)	1.25" (31.8)	1.25" (31.8)	1.25" (31.8)
After Pour Internal Height Adjustment	.38" (9.5)	.63" (15.9)	.63" (15.9)	.38" (9.5)	_	_	_
Cubic Inch (cm3) Capacity Per Gang	33.0 cu. in. (540.7 cm <sup>3</sup> )	36.5 cu. in. (598.1 cm <sup>3</sup> )	34.8 cu. in. (570.3 cm <sup>3</sup> )	30.0 cu. in. (491.7 cm <sup>3</sup> )	16.0 cu. in. (262.2 cm <sup>3</sup> )	16.0 cu. in. (262.2 cm <sup>3</sup> )	16.0 cu. in. (262.2 cm <sup>3</sup> )
Dimensions – A	3.20" (81.3)	3.38" (85.9)	3.38" (85.9)	2.90" (73.7)	2.00" (50.8)	2.00" (50.8)	2.00" (50.8)
Dimensions – B	4.69" (119.1)	4.84" (122.9)	4.90" (122.5)	4.69" (119.1)	5.46" (138.7)	5.46" (138.7)	5.46" (138.7)
Dimensions – C	4.69" (119.1)	8.06" (204.7)	11.41" (289.8)	4.69" (119.1)	4.19" (106.4)	7.49" (190.2)	10.7" (271.8)
Dimensions – D	4.36" (110.7)	4.36" (110.7)	4.36" (110.7)	4.36" (110.8)	4.38" (111.3)	4.38" (111.3)	4.38" (111.3)
Dimensions – E	3.19" (81.0)	6.42" (163.1)	9.64" (244.9)	3.20" (81.3)	3.19" (81.0)	6.38" (162.1)	9.56" (242.8)
Threaded Access Holes	(4) 3/4" (4) 1"	(6) ¾" (4) 1" & (2) ¾"	(8) ¾" (6) 1" & (2) ¾"	(4) 3/4"	(2) ¾"	(4) 3/4"	(6) 3/4"
Concrete Cover Included	✓ <b>/</b>	✓	✓	1	1	1	1
Closure Plugs Included	/	✓	✓	1	<b>✓</b>	1	<b>✓</b>
Removable LV Barrier	_	<b>✓</b>	✓	_	_	_	_

Note: UL File Number E92074. CSA File Number LR18416.

### **Carpet Flanges**

Tapered Flange				
Number of Gangs	1-Gang	2-Gang	3-Gang	
Dimensions	6.00" x 4.85"	6.00" x 8.13"	6.00" x 11.34"	
Brass	SB3083	SB3084	SB3085	-1
Aluminum	SA3083	SA3084	SA3085	11
Clear Polycarbonate	S3083	S3084	S3085	

### Covers - One Required per Gang

Brass S3825 S3625 S3826 S2425 S2625 S2825 S3813 Aluminum SA3825 SA3625 SA2425 SA2625 SA3813 SA3826 Dimensions 4.15" x 2.99" Style Line® Duplex Duplex 21/8" x 1" 21/8" Single Blank 21/8" x 3/4" Screw Flap **Decorator Opening** Combination Combination Receptacle

<sup>\*</sup>Suitable for single service applications only.



3.19" (81.0)

(1) 1/2",(1) 11/4"

(1) 3/4",(1) 1"

(3) 1/2",(2) 3/4"

3.19" (81.0)

(2) 1/2",(1) 3/4"

(1) 1/2",(1) 3/4"

(3) 1/2",(2) 3/4"

9.67" (245.6)

(6) 1/2",(1) 3/4"

(2) 1/2",(1) 3/4"

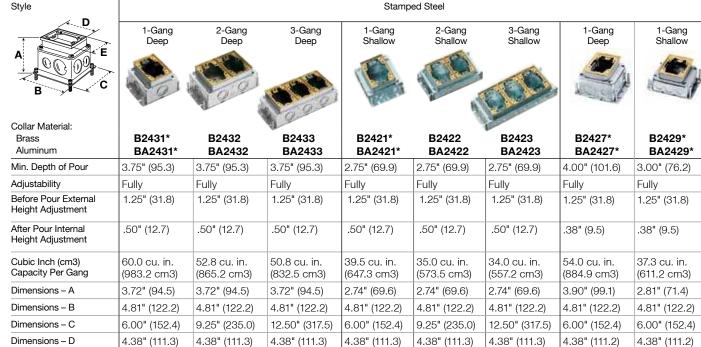
(6) 3/4",1",11/4"

/



## Flush Rectangular Stamped Steel Floor Boxes, for Use In Concrete Floors

# Dimensions Inches (mm) Style



3.19" (81.0)

(2) ½",(1) ¾"

(1) ½",(1) ¾"

(2) 34",1",114"

6.44" (163.6)

(4) 1/2",(1) 3/4"

(2) 1/2",(1) 3/4"

(4) 3/4",1",11/4"

/

9.67" (245.6)

(3) 34",1",114"

(1) 34",1",114"

(6) 34",1",11/4"

/

6.44" (163.6)

(2) 3/4",1",11/4"

(1) ¾",1",1¼"

(4) 3/4",1",11/4"

/

Note: UL File Number E92074. CSA File Number LR18416.

3.19" (81.0)

(1) 34",1",114"

(1) 34",1",114"

(2) 3/4",1",11/4"

### **Carpet Flanges**

Dimensions - F

Knockouts - Sides

Knockouts - Ends

Concrete Cover Included

Closure Plugs
Included

Removable

I V Barrier

Knockouts - Bottom

Tapered Flange			
Number of Gangs	1-Gang	2-Gang	3-Gang
Dimensions	6.00" x 4.85"	6.00" x 8.13"	6.00" x 11.34"
Brass	SB3083	SB3084	SB3085
Aluminum	SA3083	SA3084	SA3085
Clear Polycarbonate	S3083	S3084	S3085

### Covers - One Required per Gang

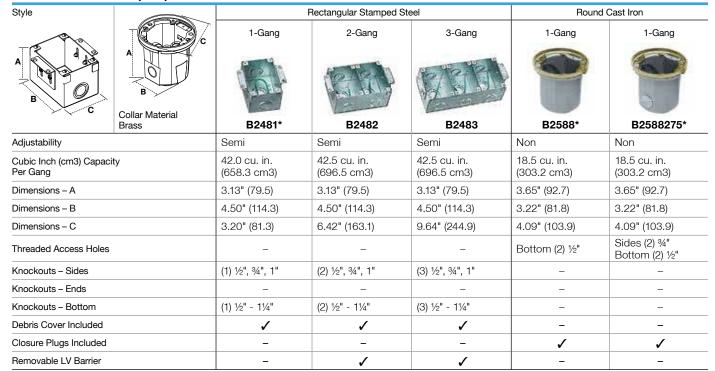
Brass S3825 S3625 S3826 S2425 S2625 S3813 S2825 Aluminum SA3825 SA3625 SA3826 SA2425 SA2625 SA3813 Dimensions 4.15" x 2.99" **Duplex** Style Line® Blank Duplex 21/8" x 3/4" 21/4" x 1" 21/8" Single Flap Screw **Decorator Opening** Combination Combination Receptacle

<sup>\*</sup>Suitable for single service applications only.



### Flush Floor Boxes for Wooden Floors

### **Dimensions Inches (mm)**



Note: UL File Number E31999. CSA File Number LR18416. \*Suitable for single service applications only.

### Deetermuler Flores (Desuired)

Rectangu	lar Flanges (	Required)		Round Flanges	Round Co	<b>vers</b> (3.88" l	Jia.)
Brass Aluminum	SB3083W SA3083W	SB3084W SA3084W	SB3085W SA3085W	S3182 S3082 SA3182 SA3082	S3925 SA3925	S3725 SA3725	S2525 SA2525
	13			0	3	8	6
No. of Gangs Dimensions	1-Gang 6.00" x 4.85"	2-Gang 6.00" x 8.13"	3-Gang 6.00" x 11.34"	5.25" Dia. 6.25" Dia.	Duplex Flap	Duplex Screw	21/8" x 3/4" Comb.

Covers - C	ne Require	d per Gan	g		Round (	Covers			
Brass Aluminum Dimensions	S3825 SA3825	S3625 SA3625	S3826 SA3826	S2425 SA2425	Brass Aluminum 3.88" Dia.	S2725 SA2725	S2925 SA2925	S3525 -	\$3325 -
4.15" x 2.99"	3	8		0		0			
	Duplex Flap	Duplex Screw	Style Line <sup>®</sup> Decorator Opening	21/8" x 3/4" Combination		21/8" x 1" Comb.	21/8" Single Receptacle	2%" Single Receptacle	21/8" Single Rec. (Terrazzo Floor)
					One Pie	ce Brass Cov	er and Ca	arpet Flang	ge
Brass Aluminum Dimensions	S2625 SA2625	S2825 -	S3425 -	S3813 SA3813	Brass Aluminum	SF3925 SFA3925	SF2525 -	SF2725 -	SF2925 -
4.15" x 2.99"	0				6.25" Dia.	60	9		

Duplex Flap

21/8" x 3/4"

Combination

Dimensions in Inches (mm)

21/8" x 1"

Combination

21/4" Single

Receptacle

2%" Single

Receptacle

Blank

21/8" Single

Receptacle

21/8" x 1"

Combination





### Floor Box Cover to Receptacle Compatibility Chart

	er Style		Terrazzo (21/8")	2%"	21/8"	Duplex Flap	Duplex Plug	Style Line®
Round			S3325	S3525	S(A)2925 S(A)2725 S(A)2525	S(A)3925	S(A)3725	
Rectangular				S3425	S2825 S(A)2625 S(A)2425	S(A)3825	S(A)3625	S(A)3826
Rating	NEMA Co							
2P, 3W 15A, 125V	5-15R		HBL5251 HBL5261 IG5261	HBL5251 HBL5261 IG5261	HBL5251 HBL5261 IG5261	5252AB 5262B CR5252IG HBL5252 HBL5262 IG5262	5252AB 5262B CR5252IG HBL5252 HBL5262 IG5262	HBL2152 IG2152 GFRST15 HBL5260SA HBL5262SA
2P,3W 15A, 125V	L5-15R	( )	HBL4710 IG4710	HBL4710 IG4710	HBL4710 IG4710	HBL4700 IG4700A HBL4792 HBL4794 HBL4795	HBL4700 IG4700A HBL4792 HBL4794 HBL4795	
2P, 3W 15A, 250V	6-15R	00	HBL5661 IG5661	HBL5661 IG5661	HBL5661 IG5661	HBL5652 HBL5662 IG5662	HBL5652 HBL5662 IG5662	
2P, 3W 15A, 250V	L6-15R		HBL4560 IG4560	HBL4560 IG4560	HBL4560 IG4560	HBL4550 IG4550A	HBL4550 IG4550A	
2P, 3W 15A, 277V	7-15R	(5°)				HBL5302	HBL5302	
2P, 3W 15A, 277V	L7-15R		HBL4760	HBL4760	HBL4760	HBL4750	HBL4750	
2P, 3W 20A, 125V	5-20R	() () () () () () () () () () () () () (	HBL5361 IG5361	HBL5361 IG5361	HBL5361 IG5361	5352AB 5362B CR5352IG HBL5352 HBL5362 IG5362	5352AB 5362B CR5352IG HBL5352 HBL5362 IG5362	HBL2162 IG2162 GFRST20 HBL5360SA HBL5362SA
2P, 3W 20A, 125V	5-20R					HBL5392	HBL5392	
2P, 3W 20A, 125V	L5-20R		HBL2310 IG2310	HBL2310 IG2310	HBL2310 IG2310			
2P, 3W 20A, 250V	6-20R	(= b)	HBL5461 IG5461	HBL5461 IG5461	HBL5461 IG5461	HBL5462 IG5462	HBL5462 IG5462	
2P, 3W 20A, 250V	L6-20R		HBL2320 IG2320	HBL2320 IG2320	HBL2320 IG2320			
2P, 3W 30A, 125V	L5-30R	( )	HBL2610 IG2610	HBL2610 IG2610	HBL2610 IG2610			
2P, 3W 30A, 250V	L6-30R		HBL2620 IG2620	HBL2620 IG2620	HBL2620 IG2620			
3P, 4W, 20A 125/250V	14-20R	(V) (W)	HBL8410	HBL8410	HBL8410			
	L14-20R		HBL2410 IG2410	HBL2410 IG2410	HBL2410 IG2410			
3P, 4W, 20A 3Ø 250V	15-20R		HBL8420	HBL8420	HBL8420			
	L15-20R		HBL2420 IG2420	HBL2420 IG2420	HBL2420 IG2420			
3P, 4W, 30A 125/250V	L14-30R	( ال الله الله الله الله الله الله الله	HBL2710 IG2710	HBL2710 IG2710	HBL2710 IG2710			
3P, 4W, 30A 3Ø 250V	L15-30R		HBL2720 IG2720	HBL2720 IG2720	HBL2720 IG2720			
3P, 4W, 30A 3Ø 600V	L17-30R		HBL2740	HBL2740	HBL2740			
4P, 5W, 20A 3ØY 120/208V	L21-20R		HBL2510 IG2510	HBL2510 IG2510	HBL2510 IG2510			
4P, 5W, 20A 3ØY 347/600V	L23-20R	الْ الْحِيْنِ الْعِيْنِ الْعِيْنِي الْعِيْنِ الْعِيلِيِ	HBL2530	HBL2530	HBL2530			
4P, 5W, 30A 3ØY 120/208V	L21-30R	( ) 1 ·	HBL2810 IG2810	HBL2810 IG2810	HBL2810 IG2810			
4P, 5W, 30A 3ØY 347/600V	L23-30R	( ) D	HBL2830	HBL2830	HBL2830			

### **Accessories**

Protective Ring for 21/8" Threaded Covers



S3061

Theater Seating Floor Box



F3185

#### Adjustable Tops (Brass)







**Adjustable Tops** 

# Problem Solvers and Replacement Components Protective Ring for 2% Inch Threaded Covers

Description	Catalog Number
<u> </u>	
Provides mechanical and wet mop protection for plugs and receptacles (brass).	S3061

### **Theater Seating Floor Box**

Description	Catalog Number
The theater seating floor box is nonadjustable and provides a % in. threaded hub for conduit connection to theater aisle lights. It permits opening of the enclosure for wiring without disturbing above floor connections. Other features include a cast iron box with a corrosion-resistant finish and a blank steel cover. Knockouts: (% in. surface, % in. sides, % in. bottom) 18.80 cu. in. (380 cubic cm).	F3185

# Adjustable Tops (Brass) Brass Outlet Fittings for Conduit Systems

Future requirements for floor outlets may be accommodated by systematically studding the floor with these fittings, all radiating from one or more floor boxes, from which any changes or additions may be subsequently made by the pulling of wires from box to the outlet. Adjustment tops are male connections to be mounted on elbow or tee fittings. They provide a pre-pour adjustment and an available connection for above-floor service heads.

Description	Α	В	Catalog Number
¾ in. threaded conduit size (male).	1.25" (31.8)	1.44" (36.6)	F1339
1 in. threaded conduit size (male).	1.31" (33.3)	1.75" (44.5)	F1539

Note: Adjustment: ¾ in. and 1 in. fittings permit ½ in. vertical adjustment.

### Coupling (Brass)

Couplings are utilized for straight conduit connections when a floor box is not required. The conduit stub is brought to within approximately 1½ in. of the planned surface, and the coupling is mounted and adjusted prior to the concrete pour. Standard service heads may be mounted to the couplings as required.

Description	Α	В	Catalog Number
3/4 in. threaded conduit size (female).	1.44" (36.6)	1.25" (31.8)	F1340





F1340

### Accessories

Experiencing a problem? Let Hubbell accessories help solve it. Hubbell stacking (adjustable) collars are the answer if the box is set too low. Need a replacement? Choose from a full line of replacement covers and fittings. Hubbell accessories also help you with the protection you need for plugs and receptacles.

### **Problem Solvers and Replacement Components** Stacking (Adjustable) Collars and Frames

Designed to be used if floor box is set too low beneath the floor surface or the adjustable collar and/or adapter on the box is damaged.

If the box number is	Extension Value	Use Collar Number
B2429, B2427, B2436 or B2437	.81" (20.5)	C2400*
B2503, B2506	1.06" (26.9)	C2504*
B2529, B2536, B2527 or B2537	1.06" (26.9)	C2500*
B4233	1.03" (26.2)	C4200*
B4333	1.03" (26.2)	C4300*

Note: \*Only available as sets (collars and adapters). In cases where the adapter on the floor box is not damaged, and only stacking is required, discard the adapter and use only the collar. The adjustable collars listed above can be stacked as required to reach the floor surface. Longer screws will be required if more than one collar is stacked (screws not provided). These screws are commercially available. Flat head #12-24 UNC machine screw x (approx. length). Minor Upward Adjustments: Round or Rectangular cover frames (trim rings) may be stacked if the floor box is only slightly recessed below the floor surface.

### Replacement Components for Floor Box **Covers and Fittings**

			Catalog	Number
Box Type	Dimension	Extension Value	Brass	Aluminum
Round	4.19" (106.4) diameter	.31" (7.9)	S5016	SA5016
Rectangular	3.19" (81.0) x 4.38" (111.2)	.31" (7.9)	S5017A	SA5017A
Rectangular, groundin	ng 3.19" (81.0) x 4.38" (111.2)	.31" (7.9)	S5017G	SA5017G

### **Crown Plugs**

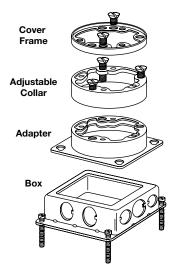
		Catalo	g Number
Description	Used in the following covers	Brass	Aluminum
3/4" thread size.	S2525, SA2525, S881, S2555, S2530, S2425, SA2425, SF2525	S5012	SA5012
1" thread size.	S2725, SA2725, S2755, S2730, S2625, SA2625, SF2725	S5013	SA5013

### Flush Cap Rings

		Catalog Number	
Description	Used in the following covers	Brass	Aluminum
	S2525, SA2525, S881, S2555, S2530, S2425, SA2425, SF2525	S5010	SA5010
21/8" threaded plug with 1" thread size opening.	S2725, SA2725, S2755, S2730, S2625, SA2625, SF2725	S5025	SA5025

### Flush Plugs

		Catalog Number	
Description	Used in the following covers	Brass	Aluminum
3/4" I.P.S. thread size.	F1339, F1340	S5002	-
1" I.P.S. thread size.	F1539	S5003	-
1½" fine thread size.	S3725, SA3725, S3625, SA3625	S5007	SA5007
21/8" fine thread size.	S2925, SA2925, S88, S2930, S2955, SF2925, S2825	S5020	SA5020
2%" fine thread size.	S3525, S3425	S5030	_



Replacement Adjustable Collar



C4200

### **Replacement Cover Frames**





S5016



S5017G

**Crown Plugs** 





S5012

S5013

### Flush Cap Rings



S5010

Flush Plugs



S5007

### **Fire-Classified Floor Box Solutions**



Hubbell's fire-classified floor boxes are an excellent solution when there is not enough capacity in a poke through and the decking must be penetrated for electrical installations. Available in seven or eleven gang versions, our fire rated kits are compatible with our standard CFB7G6 and CFB11G6 series floor boxes.

### **Fire-Classified Floor Box Kits**

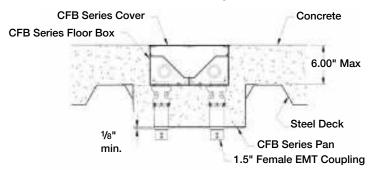
- Preserves 2 or 3 hour fire classified floor rating
- Approved for installations using either light or normal weight concrete
- UL 514 and UL 263 Compliant
- Variety of ADA compliant cover choices for most floor types
- Four 11/2 inch box bottom entry conduits

#### Fire-Resistant Floor Box Kit Includes

• Floor pan, conduit assemblies, hardware, leveling feet and manual Floor box ordered separately

#### Installation

- For Concrete pours from 3¼ in. up to 5½ in. above upper most portion of decking
- Units can be mounted 2 ft. on center
- Fastens to deck with TEK screws or welding



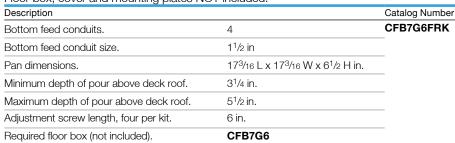
CFB7G6/CFB11G6 Series



CFB7G6 Floor Box above CFB7G6FRK Installed in decking

### Fire-Classified Kit for 7-Gang Floor Box

Floor box, cover and mounting plates NOT included.

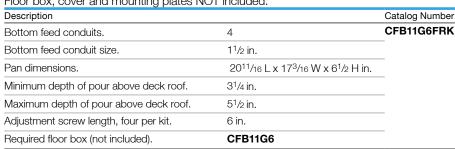




Kit with CFB7G6

### Fire-Classified Kit for 11-Gang Floor Box

Floor box, cover and mounting plates NOT included.



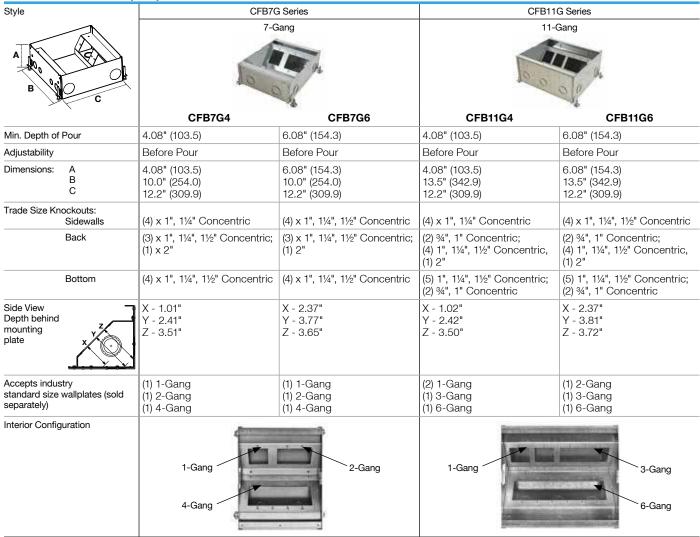


CFB11G6FRK Kit with CFB11G6



### **Recessed 7- and 11-Gang Concrete Floor Boxes**

### **Dimensions Inches (mm)**



Note: UL File Number E31999. CSA File Number LR18416. See page P-34 for CFBOGPAN4 on-grade barrier.

### Floor Box Covers



Note: Covers provide a recessed area, allowing floor covering to be inserted. \*Not UL Listed or CSA Certified.





### **Recessed 8-Gang Ballroom Series Floor Boxes**

### **Dimensions Inches (mm)**

Style	CFB8FC Series		
A O O O	8-Gang  CFB8FC1	8-Gang  CFB8FC2	
Application	Carpet	Tile, Finished Concrete	
Min. Depth of Pour	6.95" [177mm]	7.15" [182mm]	
Adjustability	Before Pour	Before Pour	
Dimensions: A B C	6.95" (176.5) 15.00" (176.5) 13.00" (330.2)	7.15" (181.6) 14.75" (374.7) 12.75" (323.9)	
Trade Size Sidewalls Knockouts: Back Bottom	(4) x 1.5", 1.25", 1" concentric (4) x 1.5", 1.25", 1" concentric (4) x 1.5", 1.25", 1" concentric	(4) x 1.5", 1.25", 1" concentric (4) x 1.5", 1.25", 1" concentric (4) x 1.5", 1.25", 1" concentric	
Side View Depth behind mounting plate	X = 2.27" (57.7) Y = 4.01" (101.9) Z = 3.13" (79.5)	X = 2.27" (57.7) Y = 4.01" (101.9) Z = 3.13" (79.5)	
Accepts industry standard size wallplates (sold separately) 4.63" Maximum Cover Height	One, two, three and four gang plates. Customer configuration dependant.	One, two, three and four gang plates. Customer configuration dependant.	
4.00 Maximum Cover Height	4-Gang	4-Gang	

### **Accessories**

### On-grade Barrier

The on-grade barrier is intended for use on installations at grade level. This accessory is installed prior to the concrete pour and provides a barrier between the soil. The on-grade barrier comes with leveling feet and anchor points.

### CFBOGPAN4





Pour Pan Dimensions: - 15.75 in. sq. 4 in. depth

### **Covers**

	CFB8FC	1 Covers	CFB8FC2	2 Covers
All ballroom floor box covers are machined from Aluminum and have no additional finish options			<b>5 6</b>	
Carpet Cover, with 2 egress doors (0.20" depth)	CFB8CVRALU1	_	-	_
Flush cover, with 2 egress doors	-	-	CFB8CVRALU2	-
Blank box cover	-	CFB8JBC1	-	CFB8JBC2
Cover Load Ratings*: Recommended Loading Maximum Load	20,000 lb 40,000 lb	20,000 lb 40,000 lb	20,000 lb 40,000 lb	20,000 lb 40,000 lb

Note: \*Load applied through 3" (76mm) mandrel in center of cover. Loads are static and don't apply to rolling loads.



### **Above-Floor Service Fittings (Single Service)**

Hubbell offers a variety of above-floor service pedestals to satisfy just about any requirement. Large capacity enables a choice of services—you can even create your own unique pedestal to satisfy specific requirements. Above floor service fittings are ideal for furniture feed applications.

### Pedestals - Metallic - LO-CON (single service only)

Traditional metallic pedestals with die-cast aluminum frame, brushed aluminum housing and stainless steel faceplates. These pedestals are offered as component parts. They mount on floor box covers or floor deck/duct systems with % inch or 1 inch threaded openings.

## Create Pedestal – Create your own pedestal to meet specific service requirements. Order housing, face plates and devices separately.

Description	Catalog Number
Frame, housing, ¾ in. chase nipple, without plates.	SC3098A
Frame, housing, 1 in. chase nipple, without plates.	SC3099A
Blank plate.	SS309B
Telephone bushing with 1 in. I.D. and (2) % in. KO for coax.	SS309T
Single receptacle plate with 1.39 in. (35.3) opening.	SS309S
Duplex receptacle plate.	SS309D
Style Line® decorator plate.	SS309DS

# Furniture Feed Plates – Use with SC3098A or SC3099A housings to feed furniture systems in office settings or display cases in retail applications.

Description	Catalog Number
Aluminum plate with ¾ in. trade size knockout.	SS309SF
Aluminum plate, blank.	SS309BF

Note: When using SS309SF on Hubbell's LO-CON pedestals, SS309BF must be used on the opposite side.

# Pedestals – Specialized Service – Large Capacity Pedestals (single service only)

Designed to accommodate receptacles up to 50A (4-gang only). These brushed aluminum pedestals are furnished with either a % inch or 1 inch hub and are designed for mounting to floor box covers with % inch or 1 inch threaded openings. Create your own unique pedestal with a wide choice of stainless steel plates and devices.

Description (2-Gang Housing)	Catalog Number
2-gang (front and back) with ¾ in. hub.	SA6685
2-gang (front and back) with 1 in. hub.	SA6686

### Plate Option – 1-Gang

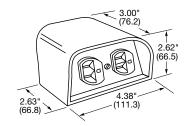
Description	Catalog Number
Duplex opening.	SS8
Style Line® decorator opening.	SS26
Single receptacle opening – boss diameter 1.36 to 1.39 in. (34.5 to 35.3).	SS7
Single receptacle opening – boss diameter 1.55 to 1.58 in. (39.4 to 40.1).	SS720
Blank plate.	SS13
Description (4-Gang Housing)	Catalog Number
4-gang (2 front and 2 back), with ¾ in. hub.	SA6687
4-gang (2 front and 2 back), with 1 in. hub.	SA6688

#### Plate Option - 2-Gang

late option - 2-daily	
Description	Catalog Number
Two duplex openings.	SS82
Two Style Line® decorator openings.	SS262
Two single receptacle openings – boss diameter 1.36 to 1.39 in. (34.5 to 35.3).	SS72
Single receptacle opening – boss diameter 2.41 to 2.44 in. (61.2 to 62.0).	SS701
Single receptacle opening – boss diameter 2.09 to 2.13 in. (53.1 to 54.1).	SS703
Blank plate.	SS23

















### **Features and Benefits**

### **Convention Center Utility Boxes**

### Painted Galvanized Steel Box (14 Gauge G90)

 Cost effective, corrosion resistant paint. Suitable for both on and above-grade applications

### Stainless Steel Box (14 Gauge 304)

 Corrosion resistant enclosure suitable for both on and above-grade applications

#### Listings/Requirements

- UL Listed and CSA Certified
- Meets UL514 requirements for Scrub Water and prevents water, dirt and debris from entering the electrical devices



### Power and Data Panels\*\*

Custom manufactured and pre-wired to your project specifications. Panel options include 100A pin and sleeve, 20A and 30A Twist-Lock®, 20A GFCI, isolated ground or industrial straight blade devices. Optional circuit breaker protection is available. Up to two gangs available for audio/video/data communication requirements. Both power and data panels are shipped separately after the boxes have been set in concrete.

Note: \*\*Contact Hubbell for available configurations of power and data panels.



### **Box Design**

- Separate enclosure to keep water away from electrical components
- Hooks for tying onto rebar
- 2-gang low voltage compartment
- Custom built panels that accept a wide variety of electrical configurations



### **Cover Design**

 Heavy duty covers, 32,000 lb. load capacity with 2x safety factor



### Adjustability

• 4 inch pre-pour adjustability



### Air/Water Only Inside View

- Separate enclosure for compressed air/water utilities, prevents air and water from coming in contact with electrical services
- 2 inch drain



#### Stand Alone Power/Data Box

- Custom manufactured and pre-wired to your project specifications
- Optional circuit breaker protection is available
- Up to 2-gangs available for audio/ video/data communication requirements



### Power/Data Box Inside View

- Up to 2-gangs of data
- 20A and 30A devices
- Circuit breakers
- Up to 100A pin and sleeve
- 150A maximum capacity



### **Convention Center Utility Boxes**

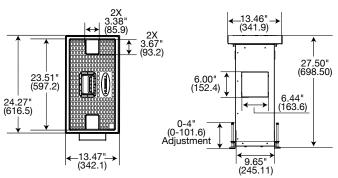
### Metallic Convention Center Utility Boxes\*

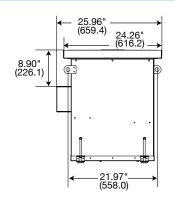
Steel Convention Center Utility Box	Painted Galvanized Steel Box	Stainless Steel Box
with Cover for Power and Data/Communications.	HBLSCCUBPD	HBLSCCUBPDSS
with Cover for Power, Data/Communications and Air/Water Box.	HBLSCCUBPDW	HBLSCCUBPDWSS
with Cover for Air/Water Only.	HBLSCCUBW	HBLSCCUBWSS

Note: \*All boxes provided with temporary galvanized steel concrete covers.

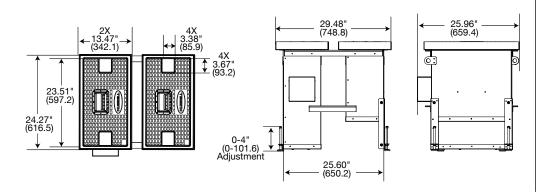
### Painted Galvanized or Stainless Steel Metallic Box

Stand Alone Power/Data
HBLSCCUBPD (Painted Galvanized)
HBLSCCUBPDSS (Stainless Steel)

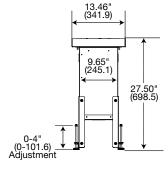




Combination Power/Data/Water
HBLSCCUBPDW (Painted Galvanized)
HBLSCCUBPDWSS (Stainless Steel)

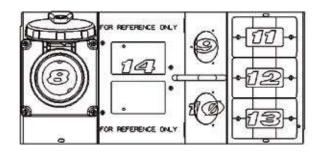


Stand Alone Water/Air Box HBLSCCUBW (Painted Galvanized) HBLSCCUBWSS (Stainless Steel)



### **Pre-Wired Power Panels**

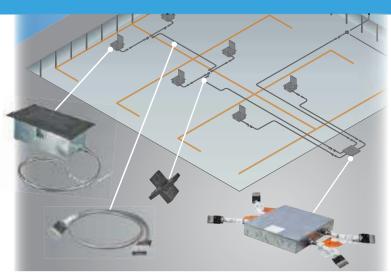
Convention Center Power Panels are custom built to order and pre-wired in the factory to make installation quick and easy. Please contact the factory to configure a power panel for your specific needs.



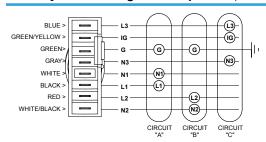
Position	Device Options
8	Qty. (1) Pin and Sleeve Receptacle 100A.
9 & 10	Qty. (2) Twist-Lock® Receptacles (20A or 30A).
11,12,13	Qty. (3) Duplex Receptacles (20A Standard, GFCI or Isolated Ground).
14	Load Center for Circuit Breakers, 8-Pole Positions Max.

### **CONNEXION Zone Distribution System**

The Hubbell CONNEXION 2.0 Zone Distribution System is a factory assembled, flexible, modular plug-n-play system that delivers power in raised floor installations. This unique system increases the value of the infrastructure and meets the challenges posed by new construction and renovation in commercial offices, retail outlets and educational facilities. By improving cable management, enhancing flexibility, and reducing administration expense, the CONNEXION 2.0 Zone Distribution System allows power needs to be addressed in a timely and effective manner. The basic CONNEXION 2.0 building blocks are shown below.



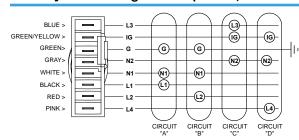
### 3/3/2 System Configuration (3-Hots, 3-Neutrals, 2-Grounds)



Appropriate for a 120/208 volt 3ØY power distribution and dedicated neutrals are desired.

- · Three circuit capacity.
- Isolated ground capability for sensitive equipment.
- · Each circuit has its own #12 AWG neutral.
- Component Rating: 20 amperes at 120/208 volt.
- 8-Wires (3 hots, 3 neutrals, 1 equipment ground, 1 isolated ground).

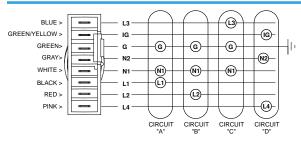
### 4/2/2 System Configuration (4 Hots, 2 Neutrals, 2 Grounds) 2 + 2 Wiring Configuration



Appropriate in areas where shared neutral conductors are utilized.

- Two circuits share one #10 AWG neutral to manage harmonics for general purpose.
- Two additional circuits share one #10 AWG neutral to manage harmonics for general purpose.
- Isolated ground capability for sensitive equipment.
- Component Rating: 20 amperes at 120/208 volt.
- 8-Wires (4 hots, 2 neutrals, 1 equipment ground, 1 isolated ground).

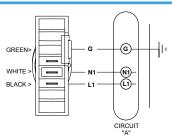
### 4/2/2 System Configuration (4 Hots, 2 Neutrals, 2 Grounds) 3+ 1 Wiring Configuration



Appropriate in areas where shared neutral conductors are utilized.

- Three circuits share #10 AWG neutral to manage harmonics for general purpose.
- One circuit on dedicated #10 AWG neutral for sensitive equipment.
- Isolated ground capability for sensitive equipment.
- Component Rating: 20 amperes at 120/208 volt.
- 8-Wires (4 hots, 2 neutrals, 1 equipment ground, 1 isolated ground).

### 1/1/1 System Configuration (1 Hot, 1 Neutral, 1 Ground)



- One circuit capacity.
- Component Rating: 20 amperes at 120/208 volt.
- 3-Wires (1 hot, 1 neutral, 1 equipment ground).

Note: Contact factory for custom wiring configurations.

### **CONNEXION Zone Distribution System**

### 2.0 Zone Boxes

Z.O ZONE BOXES	14.77	0	T	01 11	
Zone Box Part Number	Wiring Configuration	Whips	Total Number of Circuits per Box	Circuits per Whip	Home Run Connection Type
ZB332C3W1POUT*	332	1	3	3	Wire nuts to open leads
ZB332C6W2P	332	2	6	3	Wire nuts to open leads
ZB332C12W4P	332	4	12	3	Wire nuts to open leads
ZB332C3W2TC	332	2	3	3	Single Screw down terminal block
ZB332C3W4TC	332	4	3	3	Single Screw down terminal block
ZB332C6W2TM	332	2	6	3	Multi Screw down terminal block
ZB332C12W4TM	332	4	12	3	Multi Screw down terminal block
ZB422S2C4W1POUT*	422, 2+2	1	4	4	Wire nuts to open leads
ZB422S2C8W2P	422, 2+2	2	8	4	Wire nuts to open leads
ZB422S2C16W4P	422, 2+2	4	16	4	Wire nuts to open leads
ZB422S2C4W2TC	422, 2+2	2	4	4	Single Screw down terminal block
ZB422S2C4W4TC	422, 2+2	4	4	4	Single Screw down terminal block
ZB422S2C8W2TM	422, 2+2	2	8	4	Multi Screw down terminal block
ZB422S2C16W4TM	422, 2+2	4	16	4	Multi Screw down terminal block
ZB422S3C4W1POUT*	422, 3+1	1	4	4	Wire nuts to open leads
ZB422S3C8W2P	422, 3+1	2	8	4	Wire nuts to open leads
ZB422S3C16W4P	422, 3+1	4	16	4	Wire nuts to open leads
ZB422S3C4W2TC	422, 3+1	2	4	4	Single Screw down terminal block
ZB422S3C4W4TC	422, 3+1	4	4	4	Single Screw down terminal block
ZB422S3C8W2TM	422, 3+1	2	4	4	Multi Screw down terminal block
ZB422S3C16W4TM	422, 3+1	4	16	4	Multi Screw down terminal block
ZB111C1W1POUT*	111	1	1	1	Wire nuts to open leads
ZB111C2W2P	111	2	2	1	Wire nuts to open leads
ZB111C4W4P	111	4	4	1	Wire nuts to open leads
ZB111C6W6P	111	6	6	1	Wire nuts to open leads
ZB111C8W8P	111	8	8	1	Wire nuts to open leads
ZB111C1W2TC	111	2	1	1	Single Screw down terminal block
ZB111C1W4TC	111	4	1	1	Single Screw down terminal block
ZB111C1W6TC	111	6	1	1	Single Screw down terminal block
ZB111C1W8TC	111	8	1	1	Single Screw down terminal block
ZB111C2W2TM	111	2	2	1	Multi Screw down terminal block
ZB111C4W4TM	111	4	4	1	Multi Screw down terminal block
ZB111C6W6TM	111	6	6	1	Multi Screw down terminal block
ZB111C8W8TM	111	8	8	1	Multi Screw down terminal block

 $\textit{Note: {\bf ^*OUT}} \ \textit{suffix denotes single whip output zone box, which will not be further expanded.}$ 

### 2.0 Furniture Feeds

Furniture feeds are junction boxes which come with a pre attached power "IN" connector allowing transition to building hard-wiring underneath the raised floor.

Zone Box Part Number	Wiring Configuration	Output Whips	Total Number of Circuits per Box	Circuits per Whip	Home Run Connection Type
ZB332C3W1PIN	332	1	3	3	Wire nuts to open leads
ZB422S2C4W1PIN	422, 2+2	1	4	4	Wire nuts to open leads
ZB422S3C4W1PIN	422, 3+1	1	4	4	Wire nuts to open leads
ZB111C1W1PIN	111	1	1	1	Wire nuts to open leads

### 2.0 Extender Cables

Hubbell Connexion 2.0 extender cables have male (power "IN") / female (power "OUT") ends allowing them to be connected in the field as needed. Available in three different versions, 422, 332, and 111, in 5 ft. increments up to 30 ft.

422 Family	332 Family	111 Family	Length	Connectors
CEXT422MFL01	CEXT332MFL01	CEXT111MFL01	1 ft.	Male / Female
CEXT422MFL05	CEXT332MFL05	CEXT111MFL05	5 ft.	Male / Female
CEXT422MFL10	CEXT332MFL10	CEXT111MFL10	10 ft.	Male / Female
CEXT422MFL15	CEXT332MFL15	CEXT111MFL15	15 ft.	Male / Female
CEXT422MFL20	CEXT332MFL20	CEXT111MFL20	20 ft.	Male / Female
CEXT422MFL25	CEXT332MFL25	CEXT111MFL25	25 ft.	Male / Female
CEXT422MFL30	CEXT332MFL30	CEXT111MFL30	30 ft.	Male / Female
CEXT422FWL01	CEXT332FWL01	CEXT111FWL01	1 ft.	Female / Open
CEXT422FWL01XP*	CEXT332FWL01XP*	CEXT111FWL01XP*	1 ft.	Female / Open
CEXT422MWL01	CEXT332MWL01	CEXT111MWL01	1 ft.	Male / Open
CEXT422MWL01XP*	CEXT332MWL01XP*	CEXT111MWL01XP*	1 ft.	Male / Open
CEXT422MWL05	CEXT332MWL05	CEXT111MWL05	5 ft.	Male / Open
CEXT422MWL15	CEXT332MWL15	CEXT111MWL15	15 ft.	Male / Open

Note: \*Standard lead length is 12 in. long. XP Suffix denotes 18 in. long leads for installments requiring extra-long wires.



Zone distribution Boxes are the core of the Connexion 2.0 system. They serve as the main interface between the conventionally connected electrical system and the labor saving Connexion 2.0 system. With a large array of knock outs, they can accept most conduit sizes when run from the circuit breaker panel. They also accept labor saving Homerun cables as part of the Connexion 2.0 system. With depth of 3 inches, the zone boxes will fit in almost any raised flooring system. Custom configurations are also available. Contact Hubbell Wiring Systems for ordering information.



### 2.0 Splitters

Distributes all cable conductors to up to three locations (one "IN", three "OUTS") to increase the amount of floor boxes fed from a singe Zone Distribution Box output whip.

Catalog Number	Wires	Hot Circuits
SP31	3	1
SP83	8	3
SP84	8	4



### 2.0 Homerun Cables

The Homerun cable is a dedicated 9-conductor (#10 AWG, THHN / THWN) cable from the panel to the zone box and allows for savings by removing the need to lay conduit and pull wire.

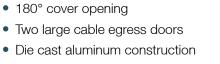
Catalog Number	Length
ZBHR25	25 ft.
ZBHR50	50 ft.
ZBHR75	75 ft.
ZBHR100	100 ft.

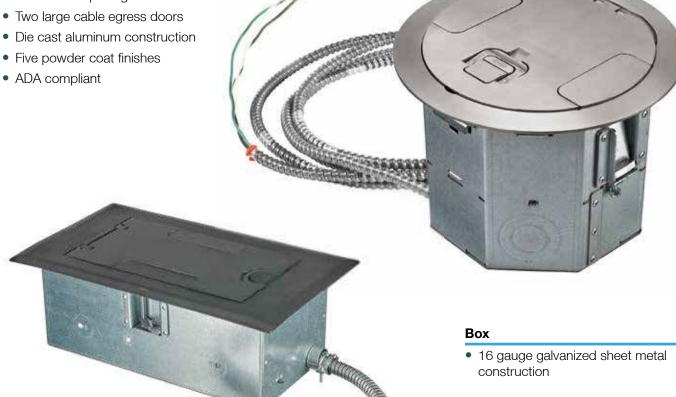




### **Custom Pre-Wired Access Floor Boxes**







**Cable Whip** 

- Wire leads for field termination
- Pre-wired cable whip

### **Features and Benefits**

- Reduce job site fabrication time and installation labor
- Access Floor Box pre-wired to your specifications
  - Choose from Hubbell quality devices
  - Single or multiple circuit wiring configurations
  - Various cable lengths

- Reduce job site waste
- Pigtail terminates beneath raised floor
- Box covers available in five finishes
- UL Listed Wiring Assembly, file number E305156

### Pre-Wired Raised Access Floor Box Options - Contact Hubbell Wiring Systems for Ordering Information

Box Series	Description	Cover Style	Cut Out Dimensions	Conduit Knockouts
AFB2G25PW	2-Gang, 21/2" Depth	Rectangular	6¾" x 13½"	1/2" - 3/4"
AFB2G50PW	2-Gang, 5.0" Depth	Rectangular	6¾" x 13½"	1/2" - 2"
AFB4G25PW	4-Gang, 21/2" Depth	Rectangular	11¼" x 11%"	1/2" — 3/4"
AFB4G50PW	4-Gang, 5.0" Depth	Rectangular	11¼" x 11%"	1/2" - 2"
AFB10G55PW	10-Gang, 51/2" Depth	Rectangular	11" x 11¼"	1/2" - 2"
RAFB4PW	4-Gang, 8.0" Depth	Round	8" Diameter	1/2" - 2"

### Products at a Glance

Featuring the unique capabilities of Hubbell's SystemOne universal cover and sub-plate design, Hubbell has expanded its floor box offering to provide industry leading flexibility while accommodating an extensive range of applications. Hubbell SystemOne is constructed to give customers the ability to create personal solutions for their most demanding, power, data and audio/video requirements.

## SystemOne Recessed Raised Access and Wood Floor Applications...



### 2-Gang Rectangular

Ideal for applications that call for basic power and data/AV requirements. The 2-gang boxes can be used as an access point to electrical or data connections, or as a furniture feed to power interior furniture partitions. Available in two box depths, the 2 ½ in. depth works well in floors using short pedestals; the 5 in. depth is ideal for furniture feed applications. The rectangular covers are available in assorted finishes to enhance any design scheme.

### Cover

- 180° cover opening
- Two large cable egress doors
- Listed to UL 514A and UL scrub water compliant
- Die cast aluminum cover construction
- Available in round, rectangular and furniture feed styles
- All covers are ADA compliant



### 4-Gang Rectangular

The Hubbell SystemOne 4-Gang Recessed Raised Access or Wood Floor Box delivers AV plus power. Similar to the 2-gang recessed raised access floor box, the 4-gang 2 ½ inch box depth provides a solution for floors using short pedestals. The 5 inch depth is ideal for applications with a lot of requirements. Rectangular covers in a variety of finishes will match any existing or new style.

### **Rectangular Boxes**

- 16 gauge galvanized sheet metal
- 6 in. solid conductor ground pigtail in each gang
- Many boxes allow for 2 in. conduits
- Mounts in tiles ¾ in, to 2 in, thick
- Patent pending, labor saving, easy mount device plates



### 4-Gang Round

With an 8 in. diameter, the Hubbell SystemOne 4-Gang Round Recessed Floor Box is ideal for use in raised access floors with pre-cut tile or wood floor coverings. With a variety of finish selections, the round covers blend in with the flooring and overall design of the building. Deep, 2 % in. wiring compartments are ready to accommodate today's most advanced, high-performance power, data and AV needs to supply reliable connectivity.

### **Round Box**

- Fits in 8 in. diameter air diffuser holes
- 16 gauge galvanized sheet metal construction
- Individual grounding screws for each gang
- 2 in. knock-out on the bottom allows for large amounts of data and/or AV devices
- Mounts in tiles ¾ in, to 2 in, thick



### 10-Gang Rectangular

Designed to serve high-capacity, multiservice applications, the 10-gang floor box supports installation with an array of Hubbell power, data and AV devices. Third-party mounting plates are available for other manufacturers' devices, including Extron®, Crestron® and FSR®. A 5 ½ in. box depth offers great capacity for connectivity, with the ability accept 2 in. conduit to meet growing AV and data needs. The rectangular covers come in a variety of colors and finishes to enhance any building's design.

Extron® is a registered trademark of Extron Electronics. Crestron® is a registered trademark of Crestron Electronics, Inc. FSR® is a registered trademark of FSR Inc.

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### Selecting a SystemOne Recessed Raised Access or Wood Floor Box

To assist with the floor box selection process please have the following information available:

Electrical requirements:	Box depth	Cover style:
Power (each electrical device requires one gang) Data/AV (consult manufacturers' specification for size/volume requirements), number required.  Add up total number to determine needed capacity. If necessary	Determine maximum tile thickness and stantion height and add together. Box depth can not exceed total.	Round Rectangular
capacity is not shown round up to next size. Example: 9-Gang rounds up to a 10-Gang floor box.		

Once this information is gathered start on the right column "capacity" select necessary box, then select the concrete pour depth and on-grade or above-grade application, and finally cover style. Locate inter connecting point of all three categories and move to right to select correct catalog number.

- 1 Capacity: Select necessary box.
- 2 Box Depth: Determine maximum possible depth (tile and stantion height total) and select a depth less than the calculated height.
- 3 Cover Style: Select Round or Rectangular, not all box sizes are available in round.
- 4 Locate interconnecting point of all three categories and move to right to select correct catalog number.

				Box De	pth 2				
		2 ½ in.	3 in.	2 ½ in.	5 in.	5 ½ in.	6 ¼ in.		
				•				AFB2G25	
	0.0000			•				AFB2G25CHI	4
	2-Gang				•			AFB2G50	ber
					•			AFB2G50CHI	Number
Ō		•						AFB4G25	
Capacity		•						AFB4G25CHI	Catalog
Сар	4-Gang				•			AFB4G50	
					•			AFB4G50CHI	Correct
							•	RAFB4BASE	Select
	10 Cong					•		AFB10G55	Se
	10-Gang					•		AFB10G55CHI	
		Rectangular	Rectangular	Furniture Feed	Furniture Feed	Rectangular	Round		
				Cover S	Style 3				



### **Features and Benefits**

### SystemOne Recessed Benefits and Enhancements

### **Functionality**

- Cables and connections are protected by recessed functionality
- Open architecture sub-plate design
- Dirt ingress reduced by egress door brushes
- Meets UL 514A scrub water requirements with ScrubShield® technology
- Easy selection with common flange for all floor types
- Round and rectangular box versions available

#### **Value**

- Enhance building décor with numerous finishes
- Increase durability and longevity with cast aluminum covers

#### **Online Resources**

 BIM models, customer drawings and technical specifications are available on www.hubbell-wiring.com





#### Safety

- Low profile flanges meet ADA requirements
- Hide-away egress doors fold under cover while in use
- 180° opening of main doors



#### Covers

- Die cast construction available in five finishes
- Furniture feed includes one 2 in. conduit hub and one 1 in. conduit hub with reducer to 3/4 in.
- Maximum static load of 800 lbs. with 2x safety factor\*

Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.



### Rectangular Floor Boxes

- Standard or Chicago version available
- Temporary cover included



#### Plates

- For use with 2, 4 and 6-gang floor boxes
- UL 514A listed



### **Round Floor Boxes**

- Corrosion resistant epoxy paint
- Temporary cover included



### RAFB4 Plates

 All RAFB4SP series plates are powder coat white

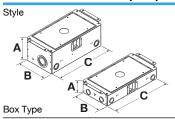
Visit web site for information on Hubbell's Pre-wired, Plug and Play, Connexion System.





### SystemOne Recessed 2-Gang Rectangular Floor Boxes, Covers and Plates For Use In Raised Access or Wood Floors

### **Dimensions Inches (mm)**

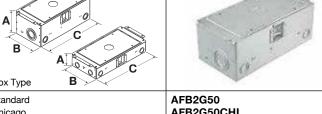












Standard Chicago	AFB2G50 AFB2G50CHI	AFB2G25 AFB2G25CHI
Minimum Depth from Top of Floor Tile	5.00" (127.0)	2.50" (63.5)
Cubic Inch (cm3) Capacity per Gang	60 cu. in. (980 cm3)	30 cu. in. (490 cm3)
Dimensions – A	5.06" (128.5)	2.88" (73.2)
Dimensions – B	6.62" (168.2)	6.62" (168.2)
Dimensions – C	14.08" (357.6)	14.08" (357.6)
KO Trade Size: Front & Back Sides Bottom	(1) 1", 1½", 1½", 2" (2) ¾", 1", 1½" (4) ¾", 1", 1½"	(4) ½", ¾" (2) ½", ¾" (2) ½", ¾", 1"
Cover Family	Rectangular	Rectangular
Temporary Cover Included	✓	✓



### Rectangular Covers (for use with raised access tiles and wood floors)

- Die cast construction available in five finishes
- Furniture feed includes one 2 in. conduit hub and one 1 in. conduit hub with reducer to ¾ in.
- Maximum static load of 800 lbs. with 2x safety factor\*

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	Cover dimensions 15 in. x 8¾ in.				
Finish	Surface	Surface with Insert	Furniture Feed		
Aluminum Powder Coat Black Powder Coat Brass Powder Coat Bronze Powder Coat Satin Nickel Powder Coat	2GAFBCVRALU 2GAFBCVRBK 2GAFBCVRBRS 2GAFBCVRBRZ 2GAFBCVRNK	2GAFBCVRALUC 2GAFBCVRBKC 2GAFBCVRBRSC 2GAFBCVRBRZC 2GAFBCVRNKC	2GAFBFFCVRALU 2GAFBFFCVRBK 2GAFBFFCVRBRS 2GAFBFFCVRBRZ 2GAFBFFCVRNK		

Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.

riales	- 101 use 111 2,	4 and 6-Gang Fl	ooi boxes			
• UL 51	4A listed					
Plate Style	(1) Decorator Opening	(1) Duplex Opening	(2) Extron <sup>®</sup> MAAP Openings	(2) Extron <sup>®</sup> Openings	(2) 1U Hubbell iStation Openings	(1) 1.5U Hubbell iStation Opening
Cat. No.	FBMPREC	FBMPDUP	FBMPMAAP	FBMPAAP	FBMP2IM	FBMP15IM
		00	4			
Plate	(1) Simplex Opening 1.40 in.	(1) Twist-Lock <sup>®</sup> Opening 1.60 in.		Cable Feed Through	(1) Opening for TracJack® or	(1) Opening w/ Hubbell ISF6 Frame
Style	Diameter	Diameter	1-Gang Blank	with Bushing	Series II®	for Keystone Jacks
Cat. No.	FBMP139	FBMP156	FBMPBNK	FBMPFT	<b>FBMPTRAC</b>	FBMP6KS
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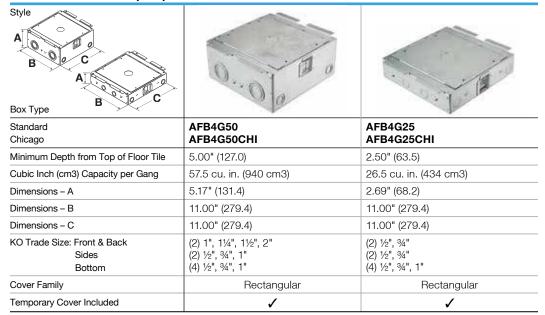
Extron® is a registered trademark of Extron Electronics. Crestron® is a registered trademark of Crestron Electronics, Inc. FSR® is a registered trademark of FSR Inc. TracJack®, Series II® and Ortronics® are registered trademarks of Ortronics/Legrand. Dimensions in Inches (mm)





### SystemOne Recessed 4-Gang Rectangular Floor Boxes, Covers and Plates For Use In Raised Access or Wood Floors

### **Dimensions Inches (mm)**













### Rectangular Covers (for use with raised access tiles and wood floors)

- Die cast construction available in five finishes
- UL 514A listed
- Maximum static load of 1500 lbs. with 2x safety factor\*

	Cover	dimensions 13 in. x 13¼ in.
Finish	Flush Surface	With Insert
Aluminum Powder Coat	4GAFBCVRALU	4GAFBCVRALUC
Black Powder Coat	4GAFBCVRBK	4GAFBCVRBKC
Brass Powder Coat	4GAFBCVRBRS 4GAFBCVRBRSC	
Bronze Powder Coat	4GAFBCVRBRZ 4GAFBCVRBRZC	
Satin Nickel Powder Coat	4GAFBCVRNK	4GAFBCVRNKC

Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.

### Plates - for use in 2 and 4-Gang Floor Boxes

lates	i loi use ili z u	nd +-dang i loc	I BOXC3			
• UL 51	4A listed					
Plate Style	(1) Decorator Opening	(1) Duplex Opening	(2) Extron <sup>®</sup> MAAP Openings	(2) Extron <sup>®</sup> Openings	(2) 1U Hubbell iStation Openings	(1) 1.5U Hubbell iStation Opening
Cat. No.	FBMPREC	FBMPDUP	FBMPMAAP	FBMPAAP	FBMP2IM	FBMP15IM
			111			
Plate Style	(1) Simplex Opening 1.40 in. Diameter	(1) Twist-Lock <sup>®</sup> Opening 1.60 in. Diameter	1-Gang Blank	Cable Feed Through with Bushing	(1) Opening for TracJack <sup>®</sup> or Series II <sup>®</sup>	(1) Opening w/ Hubbell ISF6 Frame for Keystone Jacks
Cat. No.	FBMP139	FBMP156	FBMPBNK	FBMPFT	FBMPTRAC	FBMP6KS
			No. of Street,	0		

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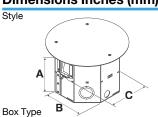


### SystemOne Recessed 4-Gang Round Floor Boxes, Covers and Plates For Use In Raised Access or Wood Floors



RAFB4NKL with Devices

### **Dimensions Inches (mm)**





Box Type				
Round	RAFB4BASE			
Minimum Depth from Top of Floor Tile	6.25" (158.8)			
Cubic Inch (cm3) Capacity per Gang	28.5 cu. in. (460 cm3)			
Dimensions – A	6.41" (162.9)			
Dimensions – B	7.33" (186.2)			
Dimensions – C	8.05" (204.6)			
KO Trade Size: Sides Bottom	(2) ½" (2) ¾", 1½" - Concentric, (2) 1", 1¼" - Concentric (1) 1½", 2" (1) ¾", 1" - Concentric, (1) ¾", 1", 1¼" - Concentric			
Temporary Cover Included	✓			
ADA	Flange thickness is 1/2 inches thick and complies with ADA requirements			



**RAFB4BRS** 











### **RAFB4 Series – Round Floor Box with Cover**

Includes: RAFB4BASE and 8 in. cover					
Cover Finish Catalog Number					
Brushed Aluminum Black Powder Coat Brass Plated Bronze Plated Satin Nickel Plated	RAFB4ALU RAFB4BLK RAFB4BRS RAFB4BRZ RAFB4NKL				

### 8 Inch Round Covers\*

o mon nound oord							
Round covers are suital	Round covers are suitable for use with all floor types						
Plate Style	Catalog Number						
Brushed Aluminum	CFBS1R8CVRALU						
Black Powder Coat	CFBS1R8CVRBLK						
Brass Plated	CFBS1R8CVRBRS						
Bronze Plated Satin Nickel Plated	CFBS1R8CVRBRZ CFBS1R8CVRNKL						
Sauri Nickei Plated	CLDSINOCANNYT						

Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.

### **RAFB4 Series - Plates**

All **RAFB4SP** series plates are powder coat white

Plate Styl	le		(1) Simplex Opening	(1) Twist-Lock® Opening	
	(1) Decorator	(1) Duplex	1.40 in. Diameter	1.60 in. Diameter	Blank
Cat. No.	RAFB4SPDECO	RAFB4SPDUPLEX	RAFB4SPTL14	RAFB4SPTL16	RAFB4SPBLANK











Plate Style (1) Hubbell iStation Opening for 3 Units (3) Extron® MAAP Modules

(2) Extron® **AAP Modules**  Opening to Accept Bezels for Ortronics TracJack®

**RAFB4SP3UIS RAFB4SP3MAAP RAFB4SP2AAP RAFB4SPORT** Cat. No.











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### SystemOne Recessed 10-Gang Rectangular Floor Boxes, Covers and Plates For Use In Raised Access or Wood Floors

AFB10G55CHI

25 cu. in. (400 cm3)

(1) ½", ¾", (1) ¾", 1", 1¼", 1½",

Rectangular

(2) 1/2", 3/4", (4) 1/2", 3/4", 1", 11/4"

5.50" (139.7)

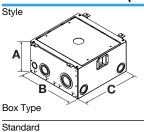
5.74" (145.9)

10.96" (278.4)

12.37" (314.1)

(1) 1", 1¼", 1½", 2" (2) ¾", 1", 1¼", 1½"

### **Dimensions Inches (mm)**



Min. Depth from Top of Floor Tile

KO Trade Size: Front & Back

Sides

**Bottom** 

Chicago

Cubic Inch (cm3)

Dimensions - A

Dimensions - B

Dimensions - C

Cover Family

Plate

Style

Cat. No.

Capacity per Gang



4		,
	· Q.00	





### **Rectangular Covers**

(for use with raised access tiles and wood floors)

- Die cast construction available in five finishes
- UL 514A listed
- Maximum static load of 1500 lbs with 2x safety factor\*

Finish	Surface Style Cover	Surface Style Cover with Insert
Aluminum Powder Coat	10GAFBCVRALU	10GAFBCVRALUC
Black Powder Coat	10GAFBCVRBK	10GAFBCVRBKC
Brass Powder Coat	10GAFBCVRBRS	10GAFBCVRBRSC
Bronze Powder Coat	10GAFBCVRBRZ	10GAFBCVRBRZC
Satin Nickel Powder Coat	10GAFBCVRNK	10GAFBCVRNKC

Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.

### AFB10 Series - Plates

Temporary Cover Included

	Correc Flates				
Plate	(1) Decorator	(1) Duplex		Decorator Opening Plate	(2) Openings to Accommodate
Style	Opening	Opening	Blank	Including Hubbell ISF6GY	(6) Ortronics TrackJack®
Cat. No.	FB10MPREC	FB10MPDUP	FB10MPBNK	FB10MPKEY	FB10MPTRAC
					100
100	101	100 I 100		35 6	
10000	100000	DOS A JUST		THE REAL PROPERTY.	

1	1000				
Plate Style	(2) Decorator	(4) Extron <sup>®</sup> MAAP Modules	(4) Extron <sup>®</sup> AAP Modules	For (6) 1U Hubbell iStation Modules	Replacement Spacer Around Wire-Way
Cat. No.	FB10MP2A	FB10MPMAAP	FB10MPAAP	FB10MP2B	FB10MPX
					10







Style	1.60 in. Dia. (Uses 5-Gangs)	1.40 in. Dia. (Uses 5-Gangs)	and Power (Uses 5-Gangs)	(Uses 5-Gangs)
Cat. No.	FB10TLC	FB10TLZ	CFB10NEMA	FB10MPNEMA4G
			3 4 3 2 3	3 3 3 3 4



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Dimensions in Inches (mm)

(4) Single Service Openings

(2) 2-Gang. Meets NEMA Spacing.

### **Features and Benefits**

### SystemOne 4 inch Recessed Floor Box, for Raised Access and Wood Floors

The AFBS1R4 floor box was designed for use in raised access or wood floors. It installs easily into a 4 inch diameter hole and is retained by two sets of retaining barbs on the side. Electrical connections are made below the walking surface to protect the electrical devices and increase safety by reducing tripping hazards. Intended for areas that require basic power requirements - one duplex, a duplex with two data jacks or a quadplex - the unobtrusive design will blend into any setting. Available in six architectural finishes and utilizing a flange that is ADA compliant at 1/8 inch thick, Hubbell SystemOne Floor Boxes harmonize aesthetics with function and safety.

- UL listed, scrub water compliant
- Plenum rated box assembly



AFBS1R4BRS



### Box Design

- Durable die-cast aluminum box construction
- Flexible single or dual service
- Easily installs in 4 inch diameter hole, 5% inch device depth
- Four ½ inch side knockouts
- One 1, 3/4 and 1/2 inch concentric bottom knockout



#### Covers

- Durable die-cast aluminum cover
- 1,000 lbs, static load rated cover
- Available in six architectural finishes



- Increased safety with recessed connections
- Low profile flanges meet ADA requirements



- Hide-away egress door fold under cover while in use
- 180° opening of main doors



### **Easy Mount Device Plates**

• All S1R4SP series plates are powder coat white



### Applications

 Raised access and wood floor applications in commercial and residential buildings





## SystemOne 4 inch Recessed Floor Box, for Raised Access and Wood Floors

#### 4 inch Recessed Floor Boxes

Description	Catalog Number
Floor Box with temporary installation Cover	AFBS1R4BASE
Floor Box (AFBS1R4BASE) with Brushed Aluminum Finish Cover (AFBS1R4CVRALU)	AFBS1R4ALU
Floor Box (AFBS1R4BASE) with Black Powder Coat Finish (AFBS1R4CVRBLK)	AFBS1R4BLK
Floor Box (AFBS1R4BASE) with Plated Brushed Brass Finish Cover (AFBS1R4CVRBRS)	AFBS1R4BRS
Floor Box (AFBS1R4BASE) with Plated Antique Bronze Finish Cover (AFBS1R4CVRBRZ)	AFBS1R4BRZ
Floor Box (AFBS1R4BASE) with Gray Powder Coat Finish Cover (AFBS1R4CVRGRY)	AFBS1R4GRY
Floor Box (AFBS1R4BASE) with Plated Satin Nickel Finish Cover (AFBS1R4CVRNKL)	AFBS1R4NKL



AFBS1R4BASE



AFBS1R4BLK



## **Replacement Parts**

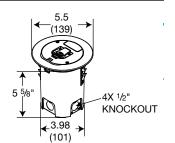
Description	Catalog Number
Low Voltage Divider	AFBS1R4DIV
Replacement Bottom Knockouts	AFBS1R4BOTTOM

### Installation

Hole Diameter	4 inch
Bottom Knock out	1 inch, ¾ inch, ½ inch concentric
Side knock out	(4) ½ inch

#### Covers

- Flange diameter is 5.5 inches
- Flange thickness is 1/8 inches thick and complies with ADA requirements
- Cover load rating is 1,000 lbs, for a static load applied through a 3 inch dia. mandrel with 2x safety factor\*





AFBS1R4DIV



AFBS1R4BOTTOM

#### **Architectural Covers**

Plated Brushed Brass Finish,

Single fold under cable

AFBS1R4CVRBRS

egress door.

Description / Catalog Number	Cover	Description / Catalog Number	Cover
Brushed Aluminum Finish, Single fold under cable egress door.	6	Plated Antique Bronze Finish, Single fold under cable egress door.	T
AFBS1R4CVRALU		AFBS1R4CVRBRZ	



Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.

Plated Satin Nickel Finish, Single fold under cable egress door.

AFBS1R4CVRNKL

receptacle

S1R4SPTWIST



## AFBS1R4CVRBLK

egress door.

Gray Powder Coat Finish, Single fold under cable egress door.

**Powder Coat Covers** Description / Catalog Number

Black Powder Coat Finish, Single fold under cable



Cover

AFBS1R4CVRGRY

S1R4SPSIMPLEX

#### Device Mounting Plates

Device Mounting Plates					
Description / Catalog Number	Sub-plate	Description / Catalog Number	Sub-plate	Description / Catalog Number	Sub-plate
2X2 Sub-plate with (1) StyleLine® decorator device opening and (2) keystone jack openings	1	(1) StyleLine® decorator device opening for power or datacom applications	0	2X2 Sub-plate with (1) decorator device opening and (2) Ortronics® TracJack® openings	1
S1R4SP2X2STYLE	47	S1R4SPSTYLE		S1R4SP2X2STYLETJ	41
2X2 Sub-plate with (1) duplex device opening and (2) keystone jack openings	(2)	(1) Duplex device opening for power or datacom applications	A	2X2 Sub-plate with (1) duplex device opening and (2) Ortronics® TracJack® openings	8
S1R4SP2X2DUPLEX	10.0	S1R4SPDUPLEX	41	S1R4SP2X2DUPLEXTJ	2.0
(4) Single 20A receptacles. Can be wired as single or two	44	(1) 1.60 inch opening for 20 or 30A Twist-Lock®		(1) 1.40 inch opening for simplex receptacle	

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Dimensions in Inches (mm)

circuit with isolated ground

S1R4SPQUAD

capability, 12 inch wire leads



#### **Features and Benefits**

## SystemOne 6 inch Furniture Feed Floor Box, for Raised Access and Wood Floors

The AFBS1R6FF floor box is designed for use in raised access or wood floors. It installs easily into a 6 inch diameter hole and is retained by two pawl arms which swing outwards when tightened by a screw driver. Providing the lowest profile in the industry, the 1/8 inch flange thickness is ADA complaint. The box can also serve as a wiring chamber for power if needed.

Available in six architectural finishes, Hubbell SystemOne Floor Boxes harmonize aesthetics with function and safety.

- UL listed, scrub water compliant
- Plenum rated box assembly



AFBS1R6FFNKL



## **Box Design**

- One high capacity opening in side for passing low voltage cables through
- $\bullet$  One  $\mbox{34}$  and  $\mbox{1/2}$  inch concentric knockout on side and bottom for power
- Installs in raised access floor tiles or wood floors with thicknesses of 1 to 2 inches
- Installs in 6 inch diameter hole
- One 2 inch knockout on bottom



## Covers

- Durable die-cast aluminum cover
- 1,000 lbs, static load rated cover
- Cover features one 2 inch conduit hub for low voltage and one ¾ inch conduit hub for power
- Available in six architectural finishes



#### Safety

- Increased safety with recessed connections
- Low profile flanges meet ADA requirements
  - A F
- Cover load rating is 1,000 lbs, for a static load applied through a 3 inch dia. mandrel



#### **Additional Parts**

- Low voltage divider
- Low Voltage Grommet
- Low Voltage Gate
- 2 inch conduit adapter



#### Applications

• Raised access and wood floor applications in commercial and residential buildings





## SystemOne 6 inch Furniture Feed Floor Box, for Raised Access and Wood Floors

#### 6 inch Recessed Floor Boxes

Description	Catalog Number
Floor Box with Temporary Installation Cover	AFBS1R6BASE
Floor Box (AFBS1R6BASE) with Brushed Aluminum Finish Cover (AFBS1R6FFCVRALU)	AFBS1R6FFALU
Floor Box (AFBS1R6BASE) with Black Powder Coat Finish (AFBS1R6FFCVRBLK)	AFBS1R6FFBLK
Floor Box (AFBS1R6BASE) with Plated Brushed Brass Finish Cover (AFBS1R6FFCVRBRS)	AFBS1R6FFBRS
Floor Box (AFBS1R6BASE) with Plated Antique Bronze Finish Cover (AFBS1R6FFCVRBRZ)	AFBS1R6FFBRZ
Floor Box (AFBS1R6BASE) with Gray Powder Coat Finish Cover (AFBS1R6FFCVRGRY)	AFBS1R6FFGRY
Floor Box (AFBS1R6BASE) with Plated Satin Nickel Finish Cover (AFBS1R6FFCVRNKL)	AFBS1R6FFNKL



AFBS1R6BASE



AFBS1R6FFBLK

## **Replacement Parts**

Description	Catalog Number
Low Voltage Divider	AFBS1R6DIV
Low Voltage Grommet	AFBS1R6GROM
Low Voltage Gate	AFBS1R6GATE

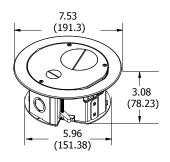




AFBS1R6DIV

#### Installation

Hole Diameter	6 inch
Bottom low Voltage Knock out	2 inch
Side low voltage entry	Removable gate, area equal to 2 inch conduit
Bottom Power Knock out	3/4" 1/2" concentric
Side Power knock out	¾" ½" concentric
Fastening	2 pawl arms







#### **Covers**

- Flange Diameter 7.5 inches
- Flange thickness is 1/8 inches thick and complies with ADA requirements
- Cover load rating is 1,000 lbs, for a static load applied through a 3 inch dia. mandrel with 2x safety factor\*

Cover

hubs.

hubs.

Description / Catalog Number

AFBS1R6FFCVRBRZ

AFBS1R6FFCVRNKL

Plated Satin Nickel Finish,

With 2 inch and 3/4 threaded

Plated Antique Bronze Finish, With 2 inch and 3/4 threaded

#### **Architectural Covers**

Description / Catalog Number
Brushed Aluminum Finish, with 2 inch and ¾ threaded hubs.

## AFBS1R6FFCVRALU

Plated Brushed Brass Finish, With 2 inch and ¾ threaded hubs.

### AFBS1R6FFCVRBRS

Note: \*Load applied through a 3 in. (76mm) mandrel in center of the cover.

## **Powder Coat Covers**

Description / Catalog Number
Black Powder Coat Finish, With 2 inch and ¾ threaded hubs.



#### AFBS1R6FFCVRBLK

Gray Powder Coat Finish, With 2 inch and ¾ threaded hubs.



AFBS1R6FFCVRGRY

Dimensions in Inches (mm)

Cover

## Floor Boxes

## Products at a Glance

This family of furniture and work surface connectivity boxes installs into conference tables and workstations to bring power, voice, data, and multimedia directly to the point of use. In addition, they offer an aesthetic design with improved cable management. Now, users can plug in laptops, projectors and other equipment at the desktop level - no more crawling under the table or moving obstacles to get to the electrical outlet and network connectivity.

## Furniture and Work Surface Connectivity Boxes



#### Flush Mount Boxes

Hubbell offers square and rectangular flush mount boxes in a variety of configurations. These boxes are available in stainless steel, anodized aluminum or painted finishes to match any décor. Boxes are designed for easy installation and are available pre-wired or empty for field wiring.



#### Lift-up Style Boxes

Offering a convenient and attractive method for work surface power and data connections, these boxes are available in several finishes. When not in use, services are concealed by flipping the unit down.



#### 2X2 USB Work Surface Pop-Up Box

Simple push-down method for opening and closing, two 125V receptacles plus two USB charging ports, 3.8 Amps of USB charging, with minimal 5 inch square footprint, pre-wired 5 foot cord, NEMA 5-15P plug. Available in brushed aluminum or black powder coat finishes.

## **Table Top Boxes**



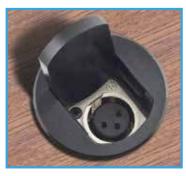
#### **Pre-Wired Boxes**

Round dual-service boxes easily install into a 3½ inch diameter core hole. Power is pre-wired and keystone openings accommodate data or multi-media activation.



#### **Pre-Wired Boxes**

Configured with 15A power outlet, 15-pin feed through and 3.5mm audio jack. This unit allows for further customization by populating two keystone openings.



#### Low Voltage Boxes

Low voltage only units are available pre-loaded with XLR microphone jack or with keystone opening for Hubbell snap-fit modules.

## Furniture and Work Surface Connectivity Boxes

	ì
W	,

## **Square Flush Mount Boxes**

Description	Finish	Dimensions	Catalog Number
2-Gang Square Flush Mount Box with Cover.	Black	6.5"L x 6.5"W x 3.75"H	HBLSHA2
	Stainless Steel		HBLSHA2BSS
Rectangular Flush Mount Boxes			
2-Gang Rectangular Flush Mount with Cover.	Black	10.75"L x 4.06"W x 3.5"H	HBLPHA2
	Stainless Steel		HBLPHA2BSS
4-Gang Rectangular Flush Mount with Cover.	Black	10.75"L x 6.5"W x 3.5"H	HBLPHA4
	Stainless Steel		HBLPHA4BSS
Surface Mount Boxes			
2-Gang Surface Mount Box.	Black	4.19"L x 4.81"W x 2.44"H	HBLCON2
3-Gang Surface Mount Box.	Black	6.19"L x 4.81"W x 2.44"H	HBLCON3
Recessed Mount Boxes			
2-Gang Recessed Mount.	Black	10.25"L x 7.0"W x 5.88"H	HBLMIR2
4-Gang Recessed Mount.	Black	31.0"L x 10.25"W x 5.88"H	HBLMIR4
Under Desk Mount Boxes			
2-Gang Under Desk Mount.	Black	9.19"L x 3.0"W x 2.88"H	HBLMAR2
3-Gang Under Desk Mount.	Black	13.69"L x 3.0"W x 2.88"H	HBLMAR3



**HBLSHA2** 



**HBLPHA2** 



**HBLCON2** 



**HBLMAR2** 

## **Hubbell - Screw Type Face Plates**

Description	Catalog Number
Duplex	HBLST302SBK
Style Line®	HBLDE301SBK
Toggle	HBLTO310SBK
Single Receptacle (1.56" Boss Dia.)	HBLTL318SBK
Single Receptacle (1.39" Boss Dia.)	HBLTL319SBK
Blank	HBLBL300SBK
3-Unit Hubbell iSTATION	HBLIMFSBK
(See Network Wiring section Y	
for module options)	



#### Open Systems – Screw Type Face Plates Description Catalog Number AMP-ACO AMP 6-Port

HBLAM303SBK HBLAMP313SBK Krone®/Leviton® HBLKR314SBK HBLLT309SBK SYSTIMAX® Panduit Mini-Com® HBLPA308SBK NORDX® 6-Port (Cat. 5e jacks only) HBLNO309SBK Siemon CT® Series HBLSI305SBK Siemon MAX® Series HBLSI315SBK Ortronics Series II® HBLOR306SBK Ortronics TracJack® HBLORT322SBK







Typical

Note: \*Catalog number indicated is Black, replace "BK" with the following to designate color: "GY" for Gray, "I" for Ivory and "WA" for White.

HBL317SBK

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## Table Top Boxes

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Hubbell 6-Port

Low voltage only			
Description	Finish	Dimensions	Catalog Number
Table Top box; 2 inch diameter hole; (1) keystone opening; Keystone modules sold separately.	Black Anod. Alum. Clear Anod. Alum. Solid Brass	2.19" Diameter	TTBKSBK TTBKSAL TTBKSBR
Table Top box; 2 inch diameter hole; (1) XLR microphone jack installed.	Black Anod. Alum. Clear Anod. Alum. Solid Brass	2.19" Diameter	TTBXLRBK TTBXLRAL TTBXLRBR



**TTBKSBK** 



TTBXLRBK





TTBDS2BK

Note: See section A for power devices and section Y for datacom accessories.

Keystone modules sold separately.



#### **Features and Benefits**

## Pre-Wired 2X2 USB Work Surface Pop-Up Box

Hubbell's UL listed 2X2 USB Work Surface Pop-Up Box is ideal for work surfaces, such as desks, which require power for a computer and USB charging for smart devices. Developed with coordination from the hotel industry, the Hubbell Pop-Up Box utilizes a pneumatic spring for providing a smooth action for opening and closing. Available in brushed aluminum or black powder coat, the Pop-Up Box is suited for installation with any modern décor.

Installation is simple and only requires a jig-saw or similar saw plus a screwdriver. The unit is supplied with a 5 foot cord with a molded plug end allowing it to be installed with ease. Designed to be installed into existing desks or by furniture manufactures. The Hubbell 2X2 USB Work Surface Pop-Up Box is ideally suited for any work surface application.

 cULus listed to UL962A for Furniture Power Distribution Units



#### WSBUSB2X2ALU



#### Box Design

- Gas-spring actuation for smooth opening and closing
- Die cast aluminum construction
- Rated for +10,000 open/close cycles
- Simple three-screw installation
- Unobtrusive low profile flange at 0.05 in.
- Charging convenience at the push of a button



#### **USB** Device

- 15A duplex with two USB charging ports, 3.8A USB charging capacity
- Tamper-resistant receptacle
- LED power indicating light
- Easily replaceable receptacle
- 5 ft, pre-wired, 12 gauge, 3 wire electrical cord - making it excellent for conference rooms or classrooms that are frequently rearranged



WSBUSB2X2ALU

## 2X2 USB Work Surface Pop-Up Box

Surface Dimensions	Cut out dimensions	Product Depth	Maximum Surface Thickness	Finish	Catalog Number
5" x 5"	4.62" x 4.62"	3.55"	1.125"	Brushed Aluminum	WSBUSB2X2ALU
5" x 5"	4.62" x 4.62"	3.55"	1.125"	Black Powder Coat	WSBUSB2X2BLK

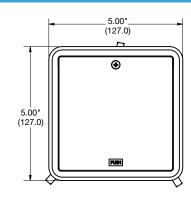
## **Electrical Specifications**

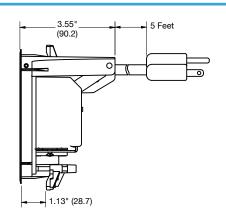
		USB Charging		
Voltage	Current	Current	Plug Type	Cord Length
125V	15A	3.8A	NEMA 5-15P	5 Feet

## **Dimensions**



WSBUSB2X2BLK





Dimensions in Inches (mm)



## Pre-Wired Furniture and Work Surface Connectivity Boxes, Surface Series

Square Lift-Up Style

Description	Finish	Dimensions	Catalog Number
Two (2) pre-wired 15A outlets with 6 ft. power supply cord; 1-Unit opening for Hubbell iSTATION modules. Unit rotates up when in use and down to conceal services when not in use.	Black	5.75"L x 5.39"W x 4.25"H	WSBC21UBK



WSBC21UBK

## **Square Mini Lift-Up Style**

Description	Finish	Dimensions	Catalog Number
One (1) pre-wired 15A outlet with 9 ft. power supply cord; One (1) RJ-45 jack installed with 6 ft. patch cord.	Black Brushed Stainless Steel	3.7"L x 3.7"W x 2.93"H	WSBA11BK WSBA11BSS
Two (2) pre-wired 15A outlets with 9 ft. power supply cord (power only).	Black Brushed Stainless Steel	3.7"L x 3.7"W x 2.93"H	WSBA2BK WSBA2BSS



## **Under Table Mount**

Description	Finish	Dimensions	Catalog Number
Two (2) pre-wired 15A outlets with 9 ft. power supply cord; One (1) Low Voltage Plate included with 1-Unit opening for Hubbell iSTATION modules.	Black	6.50"L x 1.75"W x 2.25"H	WSBD21UBK



## **Work Surface Mount**

Description	Finish	Dimensions	Catalog Number
One (1) pre-wired 15A outlet with 9 ft. power supply cord; One (1) Hubbell Keystone opening.	Black Silver	3.57"L x 2.19"W x 2.50"H	WSBE11BK WSBE11SV
Two (2) pre-wired 15A outlets with 9 ft. power supply cord; Two (2) Hubbell Keystone openings.	Black Silver	6.32"L x 2.19"W x 2.50"H	WSBE22BK WSBE22SV
Three (3) pre-wired 15A outlets with 9 ft. power supply cord; One (1) Low Voltage Plate included with 1-Unit opening for Hubbell iSTATION modules.	Black Silver	8.25"L x 2.19"W x 2.50"H	WSBE31UBK WSBE31USV
Mounting bracket with thumb screw (optional).	n/a	n/a	WSBECLAMP



## **Recessed Concealed Services**

Recessed Concealed Services			
Description	Finish	Dimensions	Catalog Number
Two (2) pre-wired 15A outlets with 6 ft. power supply cord; One (1) Low Voltage Plate included with 1-Unit opening for Hubbell iSTATION modules; Two (2) additional 1-Unit openings provided in base of unit.	Black Brushed Anod. Alum. Brushed Stainless Steel	8.98"L x 5.47"W x 2.97"H	WSBB23UBK WSBB23UBAL WSBB23UBSS
Four (4) pre-wired 15A outlets with 6 ft. power supply cord; Two (2) 1-Unit opening for Hubbell iSTATION modules provided in base of unit.	Black Brushed Anod. Alum. Brushed Stainless Steel	8.98"L x 5.47"W x 2.97"H	WSBB43UBK WSBB43UBAL WSBB43UBSS
Empty Enclosure with one (1) duplex opening, One (1) Low Voltage Plate included with 1-Unit opening for Hubbell iSTATION modules; Two (2) additional 1-Unit openings provided in base of unit; intended for field wiring.	Black	8.98"L x 5.47"W x 2.97"H	WSBBHWBK



WSBB23UBK



## Pre-Wired Furniture and Work Surface Connectivity Boxes, Surface Elite Series

# THE PARTY OF THE P

WSBF22BK







**Grommet Style** 

WSBFGROMSV





**WSBFGROMBK** 

WSBFGROMBAL WSBFGROMBSS

## **Pre-Wired Work Surface Elite Series**

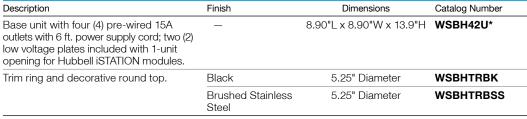


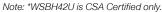
## **Recessed Concealed Services**

Description	Finish	Dimensions	Catalog Number
Four (4) pre-wired 15A outlets with 6 ft. power supply cord; three (3) new voltage openings which allow for three (3) 1-unit Hubbell iSTATION modules.	Black Silver Clear Anodized Black Anodized	15.0"L x 9.0"W x 6.25"H	WSBG43UBK WSBG43USV WSBG43UBAL WSBG43UBBA

WSBG43USV (cover doors shown open)

### Pop-Up Style\*







**Replacement Low Voltage Data Plates** 

Description	Finish	Dimensions	Catalog Number
Non-metallic low voltage plate, blank.	Black	3.18"L x 1.88"W	WSBPLATE1
Non-metallic low voltage plate, 1-unit Hubbell iSTATION cut-out.	Black	3.18"L x 1.88"W	WSBPLATE2





WSBPLATE2

## Floor Boxes

#### **Features and Benefits**

#### **AV In-Wall Enclosure**

Hubbell's netSELECT® Flat Panel Television (FPTV) connection enclosure delivers high-density connectivity and power in the wall. This allows flat panel displays and interactive "smart" boards to sit flush against walls with no dangling cords. It quickly installs to study or sheetrock without additional components or hardware.

- Optional screw on cover reduces tampering
- cÜLus 1863 Listed



NSAV62M

#### Box Design

- Flush against walls installation
- Sheet metal base white powder coat finish
- Accepts standard electrical boxes
- Integrated cable management



### Mounting

- Multiple device mounting options
- 1½ and 1¼ inch conduit knockouts
- Easily mounts to studs or sheetrock
- Easily replaceable receptacle
- Trim ring covers rough in

#### **FPTV Connection Enclosure**

Description	Color	Catalog Number
2-Gang In-Wall enclosure.	White	NSAV62M
Steel cover for NSAV6 series.	White	NSAV6C
4-Gang In-Wall enclosure.	White	NSAV124M
Steel cover for NSAV12 series.	White	NSAV12C

**Power Kits** (For use with NSAV62M only)

Description	Color	Catalog Number
Standard power kit.	White	NSOKPTR
Surge protected power kit.	Blue	NSOKPS



Description	Color	Catalog Number
1-Gang blank plate.	White	NP14W
1-Gang decorator plate.	White	NP26W
1-Gang Hubbell iSTATION plate.	White	IMF1W
1-Gang 4-port Keystone plate.	White	NSP14W
1-Port HDMI frame.	White	NS801W
2-Port HDMI frame.	White	NS802W
HDMI snap fit.	White	SFHC14W
F-connector snap fit.	White	NSF70W
Usb A-to-B snap fit.	White	SFUSBABW
Cat 6 snap fit jack.	White	NSJ6W



NSAV6C



**NSOKPS** 

SFHC14W

**NSJ6W** 

## **AV Ceiling Enclosure**

The AV Ceiling Enclosure is designed to work with active AV devices to integrate AV distribution, data connections and power in one location, providing a direct connection to a projector or a display device. An additional AV/data kit can be added or customized to address all connector, mounting and patching needs, reducing multiple pieces on site.

- Manage multiple applications inside one enclosure
- Flush mounted, white enclosure for consistent look when mounted in the ceiling
- Loaded with two Hubbell 20A duplex receptacles and a 2-gang back box
- All steel rugged construction provides the ultimate strength for installation



AVCE1H

## **AV Ceiling Enclosure**

Description	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)	Color	Catalog Number
AV ceiling enclosure.	12" (305)	24" (610)	8" (203)	White	AVCE1H

Note: Enclosure includes two 20 amp duplex receptacles and 2-gang back box.



## **Gangable AV and Large Capacity Wall Boxes**

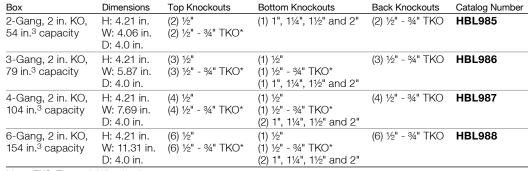


**HBL985** 



HBL985 and HBL986 with HBL989 Low Voltage Partition





Note: \*TKO (Tangential Knockout).

## **Low Voltage AV Wallbox Partitions**

Compatible With	Compatible Mud Ring Depth	Description	Quantity	Catalog Number
HBL985 and HBL986	½", ¾" and 1¼"	Solid divider	1	HBL989
		With pass-thru capability	1	HBL989AVD



**HBL989** 

**HBL986** 

**HBL260** 







Back (Cutaway) Note: Cutaway images are for demonstration purposes only.

2-Gang Large Capacity Wall Box - 66.7 Cubic Inch Capacity

	supusity man box s		· · · · · · · · · · · · · · · · · ·	
Description	Dimensions	Knockouts Sides*	Knockouts Back*	Catalog Number
Square 2-gang wall box	4 <sup>11</sup> /16"Н x 4 <sup>11</sup> /16"W x 3½"D	(2) ¾" – 1" TKO; (2) 1" – 1¼" TKO; (2) 1" – 2" conc. KO	(2) ¾" – 1" TKO (2) ½" TKO	HBL260

Note: Use with industry standard 411/16" square mud rings for 1- or 2-gang applications. \*TKO (Tangential Knockout)

#### 3-Gang Large Capacity Wall Box - 113.3 Cubic Inch Capacity

Description	Dimensions	Knockouts Sides	Knockouts Back	Catalog Number
Square 2 or 3-gang wall box	411/16"H x 73/4"W x 31/4"D	(4) ½" - ¾" TKO, (4) ¾" - 1" TKO, (2) 1" - 1¼" TKO, (2) 1" - 2" conc. KO	(2) ½" – ¾" TKO, (2) ¾" – 1" TKO, (2) 1" – 1¼" TKO	HBL263

Note: Use with industry standard 4" square mudrings for 1- or 2-gang applications.

Catalog Number

**HBL818** 

**HBL840** 

**HBL819** 

**HBL820** 



**HBL263** 



**HBL794** 



**HBL981** 

## 3-Gang Mud Rings -Compatible with HBL263

Description	Capacity (cu. in.)	Catalog Number
½" height	10.1	HBL792
%" height	12.3	HBL793
11/4" height	24.3	HBL794

### Low Voltage Partitions

2-Gang Mud Rings -

Description

%" height

34" height

1" height

11/4" height

Compatible with HBL260

Capacity (cu. in.)

7.3

8.8

12.0

15.0

Compatible With	Compatible Mud Ring Depth	Description	Quantity	Catalog No.
HBL260 and HBL263	½", ¾" and 1¼"	Solid divider	1	HBL981
		With pass-thru capability	1	HBL981AVD

## SECTION Q

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## **Hubbell SystemOne Recessed FRPTs**

Hubbell's SystemOne Recessed Fire-Rated Poke-Throughs (FRPT) enhances functionality providing increased power, data and audio visual capacity. Safety is improved with recessed connectivity, a low profile flange, and egress doors that hinge inwards. Building value is enhanced with plated finishes to match and blend with modern building décor.

## 8 Inch Concrete Core Hole Applications...



**High Capacity Multimedia Applications**Sub-plate layout for the center three gangs of the eight inch FRPT allows for maximum audio visual capacity. The NEMA spacing allows the product flexibility to easily accept 3rd party products.



Sub-Plates Offer Application Flexibility
Perimeter sub-plates for the eight inch FRPT
help compliment the audio visual or data in
the center three gangs. Additionally these
plates can be exchange for other low voltage
compatible plates.

#### 8 Inch Recessed Access



Center Sub-Plates with Perimeter Sub-plates

## 6 Inch Concrete Core Hole Applications...



**60/40 6 Inch Sub-Plate Split**An Industry first, the 60/40 sub-plate layout allows for unmatched capacity with up to 12 keystone jacks and one 20A duplex.



**50/50 6 Inch Sub-Plate Split**Two duplexes with ample audio/video and data are achieved by using the 50/50 sub-plate layout. Additionally this layout will accommodate two Style Line® devices for GFCI, surge, etc. applications.

#### 6 Inch Recessed Access



60/40 split 50/50 split Sub-Plates Sub-Plates

## 4 Inch Concrete Core Hole Applications...



4 Inch Quad Sub-Plate
The quad sub-plate can be wired on one circuit or two and includes 12 inch of stranded 14 AWG wire.



4 Inch 2X2 Sub-Plate
The 2x2 sub-plates are available with
Style Line® or traditional duplex openings
and can accommodate up to two
keystone jacks.

#### 4 Inch Recessed Access



Quad Sub-Plate Multi & Single Service Sub-Plates

## Products at a Glance

Featuring the innovative SystemOne product line, Hubbell's offering of Fire-Rated Poke-Throughs (FRPT) products provide installers with a broad range of options to support a wide array of connections. Hubbell SystemOne flush FRPTs install in a 4 inch core hole and provide users the flexibility to create personal solutions for their most demanding applications.

## Hubbell SystemOne Flush FRPTs for 4 Inch Concrete Core Hole Applications...



#### **Multi-Service Applications**

This Hubbell SystemOne sub-plate incorporates two Style Line® rectangular openings. These can be used for a variety of power and/or data applications. It will accommodate 15 or 20 amp, standard, isolated ground, GFCI or surge protected receptacles. Using communication frames it can provide up to a 6-port multi-service or a 12-port all communication solution.



### **Multimedia Applications**

Other Hubbell SystemOne sub-plates are designed to meet the growing needs of the audio and video markets. Some sub-plates provide power outlets with Hubbell's audio/video products including 15-pin SVGA, RCA, S-Video, 3.5mm stereo, and XLR microphone jacks. Other sub-plates can accommodate Extron® Electronics MAAP and AAP series audio/video modules.



### **4X4 Applications**

Provides maximum power capacity for flush, multi-service applications. This sub-plate features a pre-wired four outlet 20A, 125V receptacle and four openings for Hubbell's Snap Fit, flush mount modular jacks and audio/video connectors.

## Traditional Hubbell FRPTs for 3 Inch and 2 Inch Concrete Core Hole Applications...



#### Flush Applications

Hubbell offers a variety of single and multi-service flush fire-rated poke-through products. It incorporates a Hubbell Style Line®, 20 amp, duplex receptacle and two Hubbell Category 5e data jacks. The jacks mount flush to the cover for an unobtrusive appearance. Various colors and all brass versions are available.



#### **Pedestal Applications**

Hubbell offers single and multi-service pedestal style FRPTs for those applications requiring above-the-floor connections. Available in 2, 4 or 6-gang sizes, pedestal FRPTs provide more power and low voltage connections to the desktop than most flush configurations in a 3 Inch core hole.



#### **Furniture Feed Applications**

Hubbell offers single and multiple service flush and pedestal style FRPTs that deliver power and voice/data cabling to feed furniture systems. Various models can feed up to 2 inch conduit and can accommodate up to 36 Category 5e data cables.

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#### **Features and Benefits**

## Hubbell SystemOne Recessed 4, 6 and 8 Inch System

#### **Functionality**

- Cables and connections are protected by recessed installation
- Open architecture sub-plate design
- Dirt ingress reduced by egress door brushes
- Exceeds UL 514A Scrub Requirements with ScrubShield® technology
- Easy selection with common flange for all floor types
- For use in concrete floors

#### Value

- Enhance building décor with numerous finishes
- Increase durability and longevity with cast aluminum covers

#### **Online Resources**

 BIM models, customer drawings and technical specifications are available on www.hubbell-wiring.com





#### Safety

- Low profile flange, 0.15 inch exceeds ADA requirements
- Hide-away egress doors fold under cover while in use
- 180° opening of main door



## 6 Inch Sub-Plate Features 60/40 Device Plate Combinations

- Allows for a wide array of data and audio visual connectivity with a 20A duplex receptacle
- The two plates can be independently wired



## 8 Inch Sub-Plate Features Center Plate Configurations

- Allows for three duplex receptacles or up to 18 data and or audio visual jacks
- Open architecture sub-plate design accommodates Extron<sup>®</sup>, Crestron<sup>®</sup>, FSR<sup>®</sup>, etc.
- NEMA spacing between devices
- All plates can be independently wired



## 6 Inch Sub-Plate Features 50/50 Device Plate Combinations

- Accommodates up to two 20A duplex receptacles with eight data or audio visual connections
- The two plates can be independently wired



## 8 Inch Sub-Plate Features Perimiter Plate Configurations

- Available in pre-wired 20A duplex receptacles or data/AV plates
- Multiple 20A duplex receptacles can be wired to a common circuit or independently



## 4 Inch Sub-Plate Features Plate Configurations

- Quad receptacle sub-plate, single or dual circuit wiring
- 2x2 sub-plate for decorator or traditional receptacles plus two keystone jacks
- Since service decorator or traditional sub-plates

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## How to Order 4, 6 and 8 Inch SystenOne Products

## STEP 1: Select Poke-Through

8 Inch Recessed Access



6 Inch Recessed Access



6 Inch Furniture Feed



4 Inch Recessed Access



#### STEP 2: Select Sub-Plates

8 Inch Recessed Access



Center Sub-Plates with Perimiter Sub-plates

#### 6 Inch Recessed Access



60/40 split Sub-Plates



50/50 split Sub-Plates

4 Inch Recessed Access



Quad Sub-Plates



2X2 Sub-Plates

Note: Furniture feed model does not use sub-plates.

## STEP 3: Select Cover Finishes



Powder Coat



Bronze Plated Finish



Brushed Brass Plated



Nickel Plated



Brushed Aluminum

## Recommended Fire-Rated Poke-Through Size Chart

To avoid over or under utilizing the capacity of the fire-rated poke-through, first determine how many gangs of power, data and AV are required for the application. The matrix below will guide you to the correct poke-through size.

		Recommended Fire-Rated Poke-Through Size						
(0	5	8"		Exceeds capacity				
NGS	4	8"	8"	of Hul	obell rece	essed		
GA	3	6"	8"	8" poke-throughs				
POWER GANGS	2	6"	6"	8"	8"			
Š	1	4"	6"	6" 8" 8"				
	0	_	4"	6"	8"	8"	8"	
		0	1	2	3	4	5	
		DATA AND AV GANGS						

Example: 2-gangs of power, 1-gang of AV and 1-gang of data is required. Find the intersection for 2 power gangs with 2 data/AV gangs. The highlighted intersection defines the recommended FRPT.







#### **Features and Benefits**

## SystemOne Recessed 8 Inch Fire-Rated Poke-Through Fittings

- Perfect for high capacity multimedia applications where power and low voltage are required
- Maintains concrete floor fire rating up to two hours
- Fitting box standard
- For use in the City of Chicago applications, fitting box is NOT included
- Features ScrubShield® technology that exceeds UL514A scrub water exclusion requirements





## FRPT Design

- Step down installation
- Flexible single or dual service
- Recessed connections



#### Covers

- Durable die-cast aluminum cover
- 1,000 lbs, static load rated cover
- Available in six architectural finishes



#### Chamber

- Recessed 3.5 inch connectivity chamber
- Large wiring compartments
- Fixed wiring chambers
- On-site exchangeable center compartment fitting
- Standard ¾-inch EMT



#### **Easy Mount Device Plates**

- Multiple, open architecture mounting plates for power, data and AV
- 3 center gangs
- 2 independent perimeter gangs



#### Safety

- Low profile flange, 0.15 inch exceeds ADA requirements
- Hide-away egress doors fold under cover while in use
- 180° opening of main door



#### 8 Inch Sub-Plate Features

- Center and perimeter plate configurations
- Available in pre-wired 20A duplex receptacles or data/AV plates
- Multiple 20A duplex receptacles can be wired to a common circuit or independently
- NEMA spacing between devices







## SystemOne Recessed 8 Inch Core Hole Kits, for Use In Concrete Floors

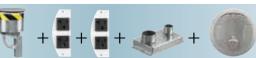
#### Pre-Wired 8 Inch Fire-Rated Poke-Through Kits

Assembled unit includes:

- (1) Hubbell SystemOne 8 inch floor fitting (S1R8PTFIT1)
- (4) 20A, pre-wired receptacles, 18 inch wire lead, two pieces (S1R8PSPZ)
- (1) Fitting connection box with 1 inch and 1½ inch EMT stubs (S1R8JNC1)
- (1) 8 inch flange and universal cover assembly (S1R8CVRxx)

Receptacles feature single circuit wiring

Finish	Catalog Number
Brushed Aluminum	S1R8PTZZ1ALU
Black Powder Coat	S1R8PTZZ1BLK
Brass Plated	S1R8PTZZ1BRS
Antique Bronze Plated	S1R8PTZZ1BRZ
Nickel Plated	S1R8PTZZ1NKL

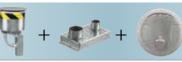


## 8 Inch Fire-Rated Poke-Through Kits

Assembled unit includes:

- (1) Hubbell SystemOne 8 inch floor fitting (S1R8PTFIT1)
- (1) Fitting connection box with 1 inch and 1½ inch EMT stubs (S1R8JNC1)
- (1) 8 inch flange and universal cover assembly (S1R8CVRxx)

Finish	Catalog Number
Brushed Aluminum	S1R8PT1ALU
Black Powder Coat	S1R8PT1BLK
Brass Plated	S1R8PT1BRS
Antique Bronze Plated	S1R8PT1BRZ
Nickel Plated	S1R8PT1NKL



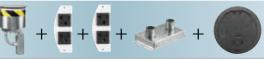
#### Pre-Wired 8 Inch Fire-Rated Poke-Through Kits

Assembled unit includes:

- (1) Hubbell SystemOne 8 inch floor fitting (S1R8PTFIT2)
- (4) 20A, pre-wired receptacles, 18 inch wire lead, two pieces (S1R8PSPZ)
- (1) Fitting connection box with (2) 1 inch EMT stubs (S1R8JNC2)
- (1) 8 inch flange and universal cover assembly (S1R8CVRxx)

Receptacles feature single circuit wiring

Finish	Catalog Number
Brushed Aluminum	S1R8PTZZ2ALU
Black Powder Coat	S1R8PTZZ2BLK
Brass Plated	S1R8PTZZ2BRS
Antique Bronze Plated	S1R8PTZZ2BRZ
Nickel Plated	S1R8PTZZ2NKL



#### 8 Inch Fire-Rated Poke-Through Kits

Assembled unit includes:

- (1) Hubbell SystemOne 8 inch floor fitting (S1R8PTFIT2)
- (1) Fitting connection box with (2) 1 inch EMT stubs (S1R8JNC2)
- (1) 8 inch flange and universal cover assembly (S1R8CVRxx)

Finish	Catalog Number
Brushed Aluminum	S1R8PT2ALU
Black Powder Coat	S1R8PT2BLK
Brass Plated	S1R8PT2BRS
Antique Bronze Plated	S1R8PT2BRZ
Nickel Plated	S1R8PT2NKL



### Pre-Wired 8 Inch Fire-Rated Poke-Through for Data AV Kits

Assembled unit includes:

- (1) Hubbell SystemOne 8 inch floor fitting (S1R8PTFIT3)
- (4) 20A, pre-wired receptacles, 18 inch wire lead, two pieces (S1R8PSPZ)
- (1) Fitting connection box with one 2 inch EMT stubs (S1R8JNC3)
- (1) 8 inch flange and universal cover assembly (S1R8CVRxx)

Receptacles feature single circuit wiring

Finish	Catalog Number
Brushed Aluminum Black Powder Coat Brass Plated Antique Bronze Plated Nickel Plated	S1R8PTZZ3ALU S1R8PTZZ3BLK S1R8PTZZ3BRS S1R8PTZZ3BRZ S1R8PTZZ3NKL
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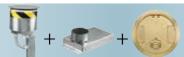


#### 8 Inch Fire-Rated Poke-Through Kits

Assembled unit includes:

- (1) Hubbell SystemOne 8 inch floor fitting (S1R8PTFIT3)
- (1) Fitting connection box with (1) 2 inch EMT stubs (S1R8JNC3)
- (1) 8 inch flange and universal cover assembly (S1R8CVRxx)

Finish	Catalog Number
Brushed Aluminum Black Powder Coat Brass Plated Antique Bronze Plated Nickel Plated	S1R8PT3ALU S1R8PT3BLK S1R8PT3BRS S1R8PT3BRZ S1R8PT3NKL













## SystemOne Recessed 8 Inch FRPT and Covers, for Use In Concrete Floors



S1R8PTFIT1



S1R8PTFIT2CHI



Description	Catalog Number
8 Inch Fire-Rated Poke-Through. No fitting box.	S1R8PTFIT
8 Inch Fire-Rated Poke-Through includes: (1) $^{3}4$ inch power EMT plus (1) S1R8JNC1 with (1) 1 inch EMT and (1) $^{1}2$ inch EMT.	S1R8PTFIT1
8 Inch Fire-Rated Poke-Through includes: (1) ¾ inch power EMT plus (1) S1R8JNC2 with (2) 1 inch EMT.	S1R8PTFIT2
8 Inch Fire-Rated Poke-Through includes: (1) ¾ inch power EMT plus (1) S1R8JNC3 with (1) 2 inch EMT.	S1R8PTFIT3
8 Inch Fire-Rated Poke-Through includes: (1) ¾ inch power EMT plus (1) S1R8JNC1 with (2) 1inch EMTand (1) 1½ inch EMT. No fitting box or flexible metal conduit.	S1R8PTFIT1CHI
8 Inch Fire-Rated Poke-Through includes: (1) ¾ inch power EMT plus (1) S1R8JNC2 with (2) 1 inch EMT. No fitting box or flexible metal conduit.	S1R8PTFIT2CHI
8 Inch Fire-Rated Poke-Through includes: (1) $^{3}4$ inch power EMT plus (1) S1R8JNC3 with (1) 2 inch EMT. No fitting box or flexible metal conduit.	S1R8PTFIT3CHI

Note: See page Q-27 for technical information.

#### **Recessed 8 Inch Cover**

8 Inch FRPT Cover Assembly unit includes solid cast aluminum construction, carpet gasket and mounting hardware.



S1R8DIV









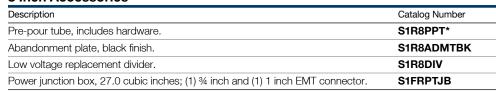




Finish	Catalog Number
Brushed Aluminum	S1R8CVRALU
Black Powder Coat	S1R8CVRBLK
Brushed Brass Plated	S1R8CVRBRS
Antique Bronze Plated	S1R8CVRBRZ
Gray Powder Coat	S1R8CVRGRY
Satin Nickel Plated	S1R8CVRNKL

Note: COVER LOAD RATING: 1,000 lbs with 2x safety factor. Load applied through a 3" (76mm) mandrel in center of the cover. Static loads only.

### 8 Inch Accessories



Note: \*Not UL Listed.

**Replacement Fitting Box** 



S1R8JNC1



S1R8JNC2





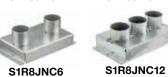
S1R8JNC3



S1R8JNC10



S1R8JNC4





Description	Catalog Number
(1) 1½ inch & (1) 1 inch EMT.	S1R8JNC1
(2) 1 inch EMTs.	S1R8JNC2
(1) 2 inch EMT.	S1R8JNC3
(3) 1 inch EMTs.	S1R8JNC4
(1) 1½ inch & (1) 1¼ inch EMT.	S1R8JNC5
(2) 11/4 inch EMTs.	S1R8JNC6
(1) ¾ inch & (2) 1 inch EMTs.	S1R8JNC7
(1) ¾ inch & (1) 1¼ inch EMT.	S1R8JNC8
(1) ¾ inch & (2) 1¼ inch EMTs.	S1R8JNC9
(1) 11/4 inch & (1) 2 inch EMT.	S1R8JNC10
(1) 1½ inch & (1) 2 inch EMT.	S1R8JNC11

(3) 11/4 inch EMTs.

S1R8JNC12







## SystemOne Recessed 8 Inch Sub-Plates

## **Center Plate Configurations**

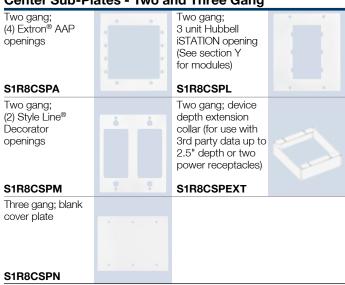
- Allows for 3 duplexes or up to 18 data/ AV jacks. Other combinations possible
- Accepts third party AV devices (i.e. Extron<sup>®</sup>, Crestron<sup>®</sup>, FSR<sup>®</sup>)
- Standard NEMA spacing between devices



## Center Sub-Plates - Single Gang

Center Sub-Pi	ates - Singi	e Gang	
Description/Cat. No.	Sub-plate	Description/Cat. No.	Sub-plate
Blank cover plate	•	(2) Extron <sup>®</sup> MAAP openings	
S1R8CSPB		S1R8CSPC	•
(1) 1 unit Hubbell iSTATION opening		(1) 1.5 unit Hubbell iSTATION opening (See section Y for modules)	
S1R8CSPD		S1R8CSPE	
(1) 1.60" opening for 20A & 30A Twist-Lock®		(1) Duplex opening	O.O.
S1R8CSPG		S1R8CSPI	
(1) 1.40" opening for simplex or 15A Twist-Lock®		(1) Style Line® Decorator opening	ò
S1R8CSPJ		S1R8CSPK	

#### Center Sub-Plates - Two and Three Gang



Note: Rectangle sub-plates are for center compartment, crescent sub-plates are for perimeter compartments and are not inter-changeable See page Q-8 for Covers and Accessories.

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### **Perimeter Plate Configurations**

- Available in pre-wired duplexes or openings to accommodate third party AV Devices
- Multiple duplexes can be wired in the supplied junction box or independently



#### **Perimeter Sub-Plates**

Description/Cat. No.	Sub-plate	Description/Cat. No.	Sub-plate
Blank cover plate		Single Extron® AAP opening	Ċ
S1R8PSPU		S1R8PSPV	
Pull through with 1" bushing opening	0	Single Extron® AAP opening	
S1R8PSPW		S1R8PSPX	
(1) 1 unit Hubbell iSTATION opening (See section Y for modules)		Dual 20A pre-wired power cubes; one circuit (Supplied with isolated ground sticker)	
S1R8PSPY		S1R8PSPZ	
Dual 20A pre-wired power cubes; one circuit (Supplied with isolated ground sticker); Marked with "Ill Controlled"		\$1R8P\$PZ25 (25 Inch leads)	
S1R8PSPZC			





#### **Features and Benefits**

## SystemOne Recessed 6 Inch Fire-Rated Poke-Through Fittings

- Maintains concrete floor fire rating up to two hours
- Junction box standard
- Includes (1) 2 inch data/AV EMT and (1) ¾ inch power EMT
- For use in the City of Chicago applications, junction box is NOT included
- Features ScrubShield® technology that exceeds UL514A scrub water exclusion requirements





## FRPT Design

- Step down installation
- Flexible single or dual service
- Recessed connections



#### Cover

- Durable die-cast aluminum cover
- 1,000 lbs, static load rated cover
- Available in six architectural finishes



#### Chamber

- Recessed 3.5 inch connectivity chamber
- Large wiring compartments divides up to 2.9 inch (73mm) deep
- Adaptable low voltage divider
- 2-inch EMT bottom feed
- ¾-inch EMT bottom feed



## **Easy Mount Device Plates**

 Multiple, open architecture mounting plates for power, data and AV



#### Safety

- Low profile flange, 0.15 inch exceeds ADA requirements
- Hide-away egress doors fold under cover while in use
- 180° opening of main door



## 6 Inch Sub-Plate Features 60/40 or 50/50 Device Plate Combinations

- Allows for a wide array of data and audio visual connectivity with a 20A duplex receptacle
- The two plates can be independently wired



Catalog Number

S1R6PTDEHALU

S1R6PTDEHBLK

S1R6PTDEHBRS

S1R6PTDEHBRZ

S1R6PTDEHNKL

Catalog Number

S1R6PTACEHALU

S1R6PTACEHBLK

S1R6PTACEHBRS

S1R6PTACEHBRZ

S1R6PTACEHNKL





## SystemOne Recessed 6 Inch Core Hole Kits, for Use In Concrete Floors

### Pre-Wired 60/40 Split 6 Inch Fire-Rated Poke-Through for Data AV Kits

Assembled unit includes:

- (1) Hubbell SystemOne 6 inch floor fitting (S1R6PTFIT)
- (2) Decorator opening sub-plate (S1R6SPW)
- (2) 20A, pre-wired receptacle with 18 inch wire leads (S1R6SPZ)
- (1) 6 inch flange and universal cover assembly (S1R6CVRxx)

Receptacles feature single circuit wiring.

Finish	Catalog Number
Brushed Aluminum	S1R6PTWZALU
Black Powder Coat	S1R6PTWZBLK
Brass Plated	S1R6PTWZBRS
Antique Bronze Plated	S1R6PTWZBRZ
Nickel Plated	S1R6PTWZNKL

Brushed Aluminum

Black Powder Coat

Brushed Aluminum

Black Powder Coat

Antique Bronze Plated

Brass Plated

Nickel Plated

Antique Bronze Plated

Brass Plated

Nickel Plated



# **\*\*** + **\*\*** + **\*\*** + **\*\***

#### Pre-Wired 50/50 Split 6 Inch Fire-Rated Poke-Through for Hubbell Data AV Kits

Assembled unit includes:

- (1) Hubbell SystemOne 6 inch floor fitting (S1R6PTFIT)
- (4) 1 Unit Hubbell iSTATION openings (S1R6SPD)
- (1) Decorator opening and (2) keystone openings (S1R6SPE)
- (4) 20A, pre-wired receptacles (S1R6SPH)
- (1) 6 inch flange and universal cover assembly (S1R6CVRxx)

Opening architecture Keystone openings accept Hubbell modular jacks and many others.

Receptacles feature single or two circuit wiring and isolated ground capability.





#### Pre-Wired 50/50 Split 6 Inch Fire-Rated Poke-Through for Hubbell or Third Party Devices Kits

Assembled unit includes:

- (1) Hubbell SystemOne 6 inch floor fitting (S1R6PTFIT)
- (3) Extron® AAP openings (S1R6SPA)
- (5) Extron® MAPP openings (S1R6SPC)
- (1) Decorator opening and (2) Hubbell keystone openings (S1R6SPE)
- (4) 20A, pre-wired receptacles (S1R6SPH)
- (1) 6 inch flange and universal cover assembly (S1R6CVRxx)

Opening architecture Keystone openings accept Hubbell modular jacks and many others.

Receptacles feature single or two circuit wiring and isolated ground capability.



## 6 Inch Fire-Rated Poke-Through with Finished Cover Kits

Assembled unit includes:

- (1) Hubbell SystemOne 6 inch floor fitting (S1R6PTFIT)
- (1) 6 inch flange and universal cover assembly (S1R6CVRxx)

Finish	Catalog Number
Brushed Aluminum	S1R6PTALU
Black Powder Coat	S1R6PTBLK
Brass Plated	S1R6PTBRS
Antique Bronze Plated	S1R6PTBRZ
Nickel Plated	S1R6PTNKL





## 6 Inch Fire-Rated Poke-Through for Furniture Feed Applications Kits

Assembled unit includes:

- (1) Hubbell SystemOne 6 inch floor fitting (S1R6PTFIT)
- (1) 6 inch furniture feed flange and cover assembly (S1R6FFCVRxx)
- (1) 2 inch conduit fitting
- (1) ¾ inch conduit fitting

Catalog Number
S1R6PTFFALU
S1R6PTFFBLK
S1R6PTFFBRS
S1R6PTFFBRZ
S1R6PTFFNKL





Note: xx indicates finish options.

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## SystemOne Recessed 6 Inch FRPT and Covers, for Use In Concrete Floors





Description	Catalog Number
6 Inch Fire-Rated Poke-Through.	S1R6PTFIT
6 Inch Fire-Rated Poke-Through; for use in the City of Chicago.	S1R6PTFITCHI

Note: See page Q-28 for technical information.

#### **Recessed 6 Inch Cover**

6 Inch Fire-Rated Poke-Through cover assembled unit includes solid cast aluminum construction, carpet gasket and mounting hardware.



S1R6PTFITCHI













Finish	Catalog Number	Furniture Feed Option
Brushed Aluminum	S1R6CVRALU	S1R6FFCVRALU
Black Powder Coat	S1R6CVRBLK	S1R6FFCVRBLK
Brushed Brass Plated	S1R6CVRBRS	S1R6FFCVRBRS
Antique Bronze Plated	S1R6CVRBRZ	S1R6FFCVRBRZ
Gray Powder Coat	S1R6CVRGRY	S1R6FFCVRGRY
Satin Nickel Plated	S1R6CVRNKL	S1R6FFCVRNKL

Note: COVER LOAD RATING: 1,000 lbs with 2x safety factor. Load applied through a 3" (76mm) mandrel in center of the cover. Static loads only.



S1R6DIV



S1FRPTJB

### **6 Inch Accessories**

Description	Catalog Number
Pre-pour tube, includes hardware.	S1R6PPT*
Abandonment plate, black finish.	S1R6ADMTBK
Low voltage replacement divider.	S1R6DIV
Power junction box, 27.0 cubic inches; (1) ¾ inch and (1) 1 inch EMT connector.	S1FRPTJB
1½ inch extension kit.	S1R6SPEXT

Note: \*Not UL Listed.



S1RFFFIT2



**Replacement Furniture Feed Fitting** 

Description	Catalog Number
2 inch furniture feed fitting.	S1RFFFIT2

Replacement Plugs

Finish	2 Inch	¾ Inch
Aluminum	S1RPLUG2ALU	S1RPLUG075ALU
Black	S1RPLUG2BLK	S1RPLUG075BLK
Brass	S1RPLUG2BRS	S1RPLUG075BRS
Bronze	S1RPLUG2BRZ	S1RPLUG075BRZ
Nickel	S1RPLUG2NKL	S1RPLUG075NKL







## SystemOne Recessed 6 Inch Sub-Plates, for Use In Concrete Floors

## 60/40 Device Plate Combination

- Allows for up to twelve data/AV jacks plus a 20A duplex receptacle
- Two plates which can be wired independently



## Left 60% Sub-Plates

Description/Cat. No.	Sub-plate	Description/Cat. No.	Sub-plate
(1) Extron® MAAP opening, (4) Extron® MAAP openings, (1) Extron® MAAP opening, left side only		(1) Style Line® Decorator and (2) 1.5 unit Hubbell iSTATION openings, left side only	
S1R6SPT		S1R6SPU	
(1) Style Line® Decorator and (2) Extron® MAAP openings, left side only		(2) Style Line® Decorator openings, left side only	
S1R6SPV		S1R6SPW	
(1) Style Line® Decorator and (2) Extron® AAP openings, left side only		(1) Style Line® Decorator and (2) 1.5 unit Hubbell iSTATION openings, left side only (See section Y for modules)	
S1R6SPX		S1R6SPY	

#### Right 40% Sub-Plates

Hight to /0 Out	J-r lates		
(2) 20A pre-wired receptacles; 16 inch lead; one circuit, right side only (Supplied with isolated ground sticker)		(2) 20A pre-wired receptacles; 25 foot lead; one circuit, right side only (Supplied with isolated ground sticker)	
S1R6SPZ		S1R6SPZ25	
(2) 20A pre-wired receptacles; 16 inch lead; one circuit, right side only (Supplied with isolated ground sticker); Marked with "Controlled"			
S1R6SPZC			

Note: Sub-plates can not be rotated to create additional layouts. When assembled, sub-plates can not overlap. Custom Plates available upon request and may be subject to minimum order quantity.

See page Q-12 for Covers and Accessories.

## 50/50 Device Plate Combination

- Allows for up to eight Hubbell data jacks plus two 20A duplex receptacles
- Two plates which can be wired independently



### Left 50% Sub-Plates

Description/Cat. No.	Sub-plate	Description/Cat. No.	Sub-plate
(3) Extron® AAP plate openings, left side only		Blank cover plate, left side only	
S1R6SPA		S1R6SPB	
(5) Extron® MAAP plate openings, left side only		(4) 1 unit Hubbell iSTATION openings, left side only (See section Y for modules)	
S1R6SPC		S1R6SPD	
(1) Style Line® Decorator and (2) Hubbell keystone openings, left side only		(2) 1.5 unit Hubbell iSTATION openings, left side only (See section Y for modules)	
S1R6SPE	•	S1R6SPF	
(3) Extron® MAAP openings and (2) Hubbell keystone jack openings, left side only		(1) Style Line® Decorator opening, left side only	
S1R6SPL		S1R6SPM	
(1) Decorator opening and (2) Ortronics® TracJack® openings, left side only			
S1R6SPN			

### Right 50% Sub-Plates

rigiti 30 /6 Sub	-riales		
(1) Duplex device opening, right side only	8	(1) Style Line® Decorator device opening, right side only	D
S1R6SPI		S1R6SPK	
(1)1.60 inch opening for 20A and 30A Twist-Lock®, right side only		(1) 1.40 inch opening for simplex or 15A Twist-Lock®, right side only	
S1R6SPG		S1R6SPJ	
(4) 20A pre-wired receptacles; one or two circuits, right side only (Supplied with isolated ground sticker)  S1R6SPH (16 Inch leads)  S1R6SPH25	*	(4) 20A pre-wired receptacles; 16 Inch leads; one or two circuits, right side only; Marked with "I Controlled" S1R6SPHC4 (4 Controlled) S1R6SPHC2	*
(25 Inch leads)		(2 Controlled)	

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#### **Features and Benefits**

## SystemOne Recessed 4 Inch Fire-Rated Poke-Through Fittings

- Maintains concrete floor fire rating up to two hours
- Junction box standard, 27 cubic inches
- (1) ¾ inch conduit for power and (2) ½ inch conduits for low voltage
- For use in the City of Chicago applications, junction box is NOT included





## FRPT Design

- Step down installation
- Flexible single or dual service
- Recessed connections



#### Covers

- Durable die-cast aluminum cover
- 1,000 lbs, static load rated cover
- Available in six architectural finishes



#### Chamber

- 3-inch deep user access chamber
- Deep wiring chamber for GFCI and USB devices
- Low voltage dividers
- Perimeter chamber:
  (2) ½ inch EMTs bottom feed
- Center chamber:
  (1) ¾ inch EMT bottom feed



#### **Easy Mount Device Plates**

- Field configurable device plates
- Multiple, open architecture mounting plates for power, data and AV



#### Safety

- Low profile flange, 0.15 inch exceeds ADA requirements
- Hide-away egress door folds under cover while in use
- 180° opening of main door



#### 4 Inch Sub-Plate Features

- Sub-plates accept Hubbell keystone jacks
- Third party sub-plates accept Ortronics® TracJack®

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Catalog Number

S1R4PTQUADALU S1R4PTQUADBRS

S1R4PTQUADBRZ

S1R4PTQUADNKL

S1R4PTQUADBLK

S1R4PTQUADGRY





## SystemOne Recessed 4 Inch Core Hole Kits, for Use In Concrete Floors

One-Piece Pre-Wired, Quad Receptacle, Recessed Connectivity, Fire-Rated Poke-Through for Power Only

Assembled unit includes:

- (1) Hubbell SystemOne 4 inch recessed floor fitting (S1R4PTFIT)
- (1) Hubbell SystemOne 4 inch recessed activation cover (S1R4CVRxx)
- (1) Hubbell pre-wired quad receptacle with mounting plate (S1R4SPQUAD)
- (1) Hubbell Junction box (S1FRPTJB)





## One-Piece, Fire-Rated Poke-Through, Recessed Connectivity

Assembled unit includes:

- (1) Hubbell SystemOne 4 inch recessed floor fitting (S1R4PTFIT)
- (1) Hubbell SystemOne 4 inch recessed activation cover (S1R4CVRxx)
- (1) Hubbell Junction box (S1FRPTJB)

Finish	Catalog Number
Brushed Aluminum Brushed Brass Plated Antique Bronze Plated Satin Nickel Plated Black Powder Coat Gray Powder Coat	S1R4PTALU S1R4PTBRS S1R4PTBRZ S1R4PTNKL S1R4PTBLK S1R4PTGRY
•	

Brushed Aluminum

Satin Nickel Plated

Black Powder Coat

Gray Powder Coat

Brushed Brass Plated

Antique Bronze Plated





Note: xx indicates finish options.

## SystemOne Recessed 4 Inch FRPT and Covers, for Use In Concrete Floors

4 Inch Fire-Rated Poke-Through

Description	Catalog Number
4 Inch FRPT includes: Junction box and low voltage dividers.	S1R4PTFIT
4 Inch FRPT includes: Low voltage dividers, junction box NOT included.	S1R4PTFITCHI
4 Inch FRPT includes: Quad sub-plate and junction box.	S1R4PTQUAD

Note: See page Q-16 for sub-plates and accessories. See page Q-29 for technical information.



## **Recessed 4 Inch Cover**

Single fold under cable egress door. Unit includes solid cast aluminum construction, carpet gasket and mounting hardware.













Catalog Number	



Finish	Catalog Number
Brushed Aluminum	S1R4CVRALU
Black Powder Coat	S1R4CVRBLK
Brushed Brass Plated	S1R4CVRBRS
Antique Bronze Plated	S1R4CVRBRZ
Gray Powder Coat	S1R4CVRGRY
Satin Nickel Plated	S1R4CVRNKL

Note: COVER LOAD RATING: 1,000 lbs with 2x safety factor. Load applied through a 3" (76mm) mandrel in center of the cover. Static loads only.







## SystemOne Recessed 4 Inch Sub-Plates and Accessories

The 4 Inch recessed cover is available in a number of durable, yet beautiful finishes to match any décor. The flange height of 0.15 inch exceeds ADA compliant and suitable for use on any floor finish. All covers are UL514A, scrubwater compliant.



## **Device Mounting Plates**

Description / Catalog Number	Sub-plate	Description / Catalog Number	Sub-plate	Description / Catalog Number	Sub-plate
2X2 Sub-plate with (1) Style Line® decorator device opening and (2) keystone jack openings	1	(1) Style Line® decorator device opening for power or datacom applications		2X2 Sub-plate with (1) decorator device opening and (2) Ortronics® TracJack® openings	
S1R4SP2X2STYLE		S1R4SPSTYLE		S1R4SP2X2STYLETJ	
2X2 Sub-plate with (1) duplex device opening and (2) keystone jack openings		(1) Duplex device opening for power or datacom applications		2X2 Sub-plate with (1) duplex device opening and (2) Ortronics® TracJack® openings	0
S1R4SP2X2DUPLEX		S1R4SPDUPLEX		S1R4SP2X2DUPLEXTJ	
(4) Single 20A receptacles. Can be wired as single or two circuit with isolated ground capability, 12 inch wire leads	00	(1) 1.60 inch opening for 20 or 30A Twist-Lock <sup>®</sup> receptacle		(1) 1.40 inch opening for simplex receptacle	
S1R4SPQUAD		S1R4SPTWIST		S1R4SPSIMPLEX	

Note: See section Y for data jacks and frames.



For low light applications (i.e. under tables or podiums) consider using Hubbell's LED illuminated receptacles: HBL8200ILW 15A, LED or HBL8300ILW 20A, LED.

HBL8300ILW





## 4 Inch Accessories

Description	Catalog Number
Pre-pour tube, includes hardware.	S1R4PPT*
Abandonment plate, black finish.	S1R4FRPTADMTBK
Low voltage replacement divider.	S1R4DIV

Note: \*Not UL Listed.

## **Design Solutions for:**

Retail, Cafeterias, Commercial Office Space, Mass Transit Hubs, Education.



Carpet Terrazzo

For Technical files, including BIM models, CAD files and Customer drawings, please visit www.hubbell-wiring.com under the Technical tab.

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#### **Features and Benefits**

## SystemOne Flush 4 Inch Core Through Floor Fittings



- Step down installation clips allow the fitting to be installed or removed from the floor above
- Fire barrier expands during fire conditions to maintain the floor's fire rating
- Adjustable lower fire barrier accommodates concrete floor thicknesses from 2¼ to 7 inch
- Oversized EMT conduit tubes for increased cable capacity

## **Features**



- Accepts all Hubbell SystemOne universal covers and flush sub-plates
- Excellent solution for retrofit and new construction
- Delivers power, voice, data and multimedia
- UL listed for use in 1 4 hour fire rated floors at 100% rated fill
- Available with integral power junction box
- SystemOne Fire-Rated Poke-Throughs are approved for use in the City of Chicago
- UL installation spacing minimum 2 feet on center, not more than one per 65 square feet of floor area in each span

## **Universal Flange and Cover Assembly**





- Hinged doors open 180 degrees flush to the carpet flange or tile
- Locking studs allow each door to be secured independently
- The universal carpet or tile flange can be used for Hubbell SystemOne Fire-Rated Poke-Throughs and Floor Boxes
- Finishes and colors available:







Black





Gray Ivory

#### **Features**

- Durable cast aluminum construction available in black, gray, brass, aluminum and ivory powder coat finishes
- Features ScrubShield® technology that exceeds UL514A scrub water exclusion requirements
- Provides consistent look and maximum functionality throughout the installed life
- Meets ADA standards for accessible design

## **Hubbell SystemOne Flush Sub-Plates**

Hubbell's modular sub-plate design allows users to economically upgrade Hubbell SystemOne FRPT and Floor Boxes to accommodate future moves, additions and changes. See page Q-20 for additional information.

Brass

Finish



4x4 Sub-Plate



Datacom and Power Sub-Plate



Extron® APP/MAPP and Power Sub-Plate



Dual Style Line® Decorator Sub-Plate



Twist-Lock® Sub-Plate



Furniture Feed Cover, Carpet

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#### **Features**

- Durable cast aluminum construction, powder coat finish
- Hubbell 4X4: four 20A, 125V receptacles, four keystone openings for voice/data jacks and flush multimedia connectors
- Hubbell X-END and Hubbell iSTATION modular connectivity
- Accommodates Extron® Electronics Architectural Series audio/video system integration products
- Accommodates GFCI, surge and standard Style Line<sup>®</sup> Decorator receptacles
- Twist-Lock® receptacle with two flush keystone openings
- Large capacity and multi-service furniture feed applications
- Open system sub-plates permit maximum data flexibility





## SystemOne Flush Systems 4 Inch Core Hole, One-Piece Units For Use In Concrete Floors

## Hubbell SystemOne 4 Inch Core Hole, One-Piece Units

All Hubbell SystemOne 4 Inch core, one-piece units include the sub-plate and cover to simplify your order and reduce installation time. Units are also available with a power junction box installed. The junction box is also available for purchase separately.



Description

#### One-Piece 4X4 Poke-Through

Assembled-unit includes:

- Hubbell SystemOne 4X4 floor fitting (S1PT4X4FIT)
- 4x4 sub-plate (S1SP4X4)
- Finish flange and universal carpet cover assembly (S1CFCxx)
- 4-hour fire classification

Keystone openings accept Hubbell modular jacks, X-END connectors and flush multimedia snap fit connectors. Receptacles feature single or two circuit wiring and isolated ground capability.



Brass Finish Black/Brass Finish Black Gray Catalog Number without Junction Box S1PT4X4AL S1PT4X4BRS

S1PT4X4BRS3 S1PT4X4BL S1PT4X4GY Catalog Number with Junction Box\*

S1PT4X4ALJ S1PT4X4BRSJ S1PT4X4BRS3J S1PT4X4BLJ S1PT4X4GYJ



## One-Piece Dual Style Line® Decorator Poke-Through Assembled-unit includes:

- Hubbell SystemOne dual channel floor fitting (S1PTFIT)
- Dual Style Line® decorator opening sub-plate (S1SP)
- Finish flange and universal carpet cover assembly (S1CFCxx)
- 4-hour fire classification

Style Line® decorator openings accept two Style Line® decorators or one surge or GFCI receptacle and one Style Line® decorator receptacle. Outlet frames can be used to convert the application to a 6-port multi-service or a 12-port all communication solution. Fitting is 4-hr rated at 100% fill to accommodate (12) Cat. 6A cables (0.330" diameter).





S1PTALJ S1PTBRSJ S1PTBLJ S1PTGYJ





S1PT3IMAL

**S1PTFFGY** 

## One-Piece Modular AV Poke-Through

Assembled-unit includes:

- Hubbell SystemOne AV floor fitting (S1PTAVFIT)
- 20A, 125V power and 3-unit Hubbell iSTATION sub-plate (S1SP3IM)
- Finish flange and universal carpet cover assembly (S1CFCxx)
- 4-hour fire classification

The Hubbell iSTATION's recessed opening can accommodate data/voice/audio and video solutions including15-pin VGA, RCA, S-Video, 3.5mm stereo, X-END, HDMI and XLR microphone jacks.





S1PT3IMAL S1PT3IMBRS S1PT3IMBL S1PT3IMGY S1PT3IMALJ S1PT3IMBRSJ S1PT3IMBLJ S1PT3IMGYJ

#### **One-Piece Furniture Feed Poke-Through**

Assembled-unit includes:

- Hubbell SystemOne AV floor fitting (S1PTAVFIT)
- Hubbell SystemOne furniture feed cover plate (S1SPFFxx)
- 4-hour fire classification

This solution provides one ¾ in. conduit for power and one 1½ in. conduit for low-voltage. Furnished with two screw-in flexible metal conduit connectors.





S1PTFFAL S1PTFFBRS S1PTFFBL S1PTFFGY S1PTFFALJ S1PTFFBRSJ S1PTFFBLJ S1PTFFGYJ

Note: \*Junction box factory installed on through floor fitting. See pages Q-30 and Q-31 for technical information.





## SystemOne Flush Systems 4 Inch Core Hole, Three-Piece Units For Use In Concrete Floors

## **Hubbell SystemOne 4 Inch Core, Three-Piece Units**



Catalog Number with Junction Box\*

Catalog Number without Junction Box

S1PT4X4FIT

S1PT4X4FITJ



S1PT4X4FITJ

## 4X4 Through Floor Fitting

Description

Through floor fitting with two % in. EMT for communications and one % in. EMT for power. For use with Hubbell SystemOne universal covers and S1SP4X4 and S1SPTL series sub-plates only. Universal cover and sub-plate ordered separately. 4-hour fire classification.

#### **Dual Channel Through Floor Fitting**

Through floor fitting with two 1 in. EMT conduit stems to feed power and/or communication services. For use with Hubbell SystemOne universal covers and all Hubbell sub-plates except S1SP4X4 and S1SPTL series. Universal cover and sub-plate ordered separately. 4-hour fire classification.

S1PTFIT

S1PTAVFIT

S1PTFITJ

S1PTAVFITJ



S1PTFIT

## AV Through Floor Fitting

Through floor fitting with one ¾ in. EMT conduit stem for power and one 1½ in. EMT conduit stem for communication services. Ideal for demanding, high capacity audio/video and data requirements. For use with Hubbell SystemOne universal covers and all Hubbell sub-plates except S1SP4X4 and S1SPTL series. Universal cover and sub-plate ordered separately. 4-hour fire classification.



S1PTAVFIT

Catalog Number

Note: \*Junction box factory installed on through floor fitting. See pages Q-30 and Q-31 for technical information.

#### **Hubbell SystemOne Universal Cover**

- Cast aluminum construction
- Durable powder coat finish





Color	Carpet	Tile
Aluminum Finish	S1CFCAL	S1TFCAL
Brass Finish	S1CFCBRS	S1TFCBRS
Black	S1CFCBL	S1TFCBL
Gray	S1CFCGY	S1TFCGY
lvory	S1CFCI	S1TFCI



Finish

Brass Finish







Poke Through Accessories

Description	
Abandonment Plates	

Used to cover abandoned SystemOne Fire-Rated Poke-Throughs or Floor Boxes.



Black Gray

Color

S1AP4BL S1AP4GY

Fire-Rated Closure Plug

Used to seal a 4 Inch core hole when the FRPT is no longer required and the through-floor fitting is removed. Maintains the floor's 1–4 hour fire rating.



Black Gray

S1FRP4BL S1FRP4GY

#### **Power Junction Box**

For use with SystemOne Fire-Rated Poke-Throughs. Provides 27.0 cubic inches. (1) ¾ and (1) 1" EMT connector supplied.

Trade size knockouts: Top (1) 1 inch Bottom (1) ¾ inc

Bottom (1) ¾ inch Sides (2) ½ inch (1) ¾ inch



S1FRPTJB

4 Inch Dia., Pre-Pour Tube

Includes hardware.



S1R4PPT





SystemOne Flush Sub-Plates Catalog Number Description Catalog Number Description Catalog Number Description Duplex/Style Line® Decorator Style Line® Decorator/GFCI Duplex/Duplex (2) Style Line® decorator openings (2) Duplex openings for power (1) Duplex and (1) Style Line® for power and/or datacom and/or datacom applications. decorator opening for power and/or applications. datacom applications. S1SP S1SPDU S1SPDUSL Hubbell 4 X 4 Carpet Furniture Feed Tile Furniture Feed (4) 20A, 125V receptacles. Cover/Flange\* Cover/Flange\* (1) 3/4" and (1) 11/2" NPT access (4) Keystone openings for Hubbell (1) 3/4" and (1) 11/2" NPT access jacks or flush AV connectors. Power holes for power and/or datacom holes for power and/or datacom can be wired as single or two circuit applications. Universal Cover not applications. Universal Cover not with isolated ground capability. required. Includes carpet flange. required. Includes tile flange. S1SP4X4 Includes III stickers. S1SP4X4C Aluminum Fin. S1SPFFAL S1SPFFTAL Aluminum Fin. Provided with 15 ft, wire leads S1SP4X415 S1SPFFBRS S1SPFFTBRS Brass Finish Brass Finish S1SP4X430 S1SPFFBL Provided with 30 ft. wire leads Black Black S1SPFFTBL S1SPFFGY S1SPFFTGY Grav Grav Hubbell DataCom + Power **Hubbell DataCom + Duplex** Single Receptacle + Data Opening for 20 or 30A Twist-Lock® (1) 20A, 125V receptacle and 3-unit (1) Duplex opening, (2) flush Keystone receptacle (1.56" OD) and (2) recessed Hubbell iSTATION opening openings and 1.5 unit recessed Hubbell iSTATION opening for data, Keystone openings for Hubbell for data, voice, and AV applications. jacks or flush AV connectors. voice and AV applications. S1SPTL S1SP3IM S1SPDU2IM Marked with "II Controlled" S1SP3IMC Hubbell DataCom + Hubbell DataCom Active Multimedia + Power Style Line® Decorator 1 unit flush Hubbell iSTATION Single 20A, 125V receptacle; (2) flush (1) Style Line® decorator opening, opening and 3-unit recessed Keystone openings; (1) rectangular (2) flush Keystone openings and Style Line® decorator opening to Hubbell iSTATION opening for 1.5 unit recessed Hubbell data, voice, and AV applications. accommodate active multimedia S1SPSL2IM S1SP4IM iSTATION opening for data, modules or low voltage outlet frames. S1SPAMM20 voice and AV applications. Marked with "II Controlled" S1SPAMM20C Extron® or FSR + Power Extron® or FSR + Power Extron® or FSR (1) 20A, 125V receptacle. (1) 20A, 125V receptacle. Recessed Single-Service Recessed opening for (3) single opening for (1) single Extron® Recessed opening for (2) single Extron® MAAP series adapter MAAP and (2) single AAP series Extron® MAAP and (2) single plates or FSR IPS plates. adapter plates or FSR IPS plates. AAP series adapter plates or S1SPEXT1 S1SPEXT2 S1SPEXT3 FSR IPS plates. Marked with "!! Controlled" Marked with " Controlled" S1SPEXT1C S1SPEXT2C Ortronics Series II® + Power Ortronics TracJack® + Power Extron® AAP + Power (1) 20A, 125V receptacle. (2) flush (1) 20A, 125V receptacle. (1) 20A, 125V receptacle. Recessed opening for (3) 1 unit Recessed bezel for (6) Ortronics Keystone & recessed opening for (2) single Extron® AAP Series Ortronics Series II® modules. TracJack® modules.

adapter plates.

Marked with " Controlled" Panduit Mini Com® 4 X 4

(4) 20A, 125V receptacles. (4) Openings for Panduit Mini-Com Connectivity.

Includes !!! stickers.

S1SP4X4PA

S1SPEXT4

S1SPEXT4C

SYSTIMAX® 4 X 4 (4) 20A, 125V receptacles. (4) Openings for SYSTIMAX®

Marked with "Controlled"

Connectivity.

S1SP4X4PAC Includes !!! stickers.

S1SPORT

S1SPORTC

S1SP4X4SYS S1SP4X4SYSC Marked with "!! Controlled"

Marked with " Controlled"

Siemon MAX® + Power (1) 20A, 125V receptacle. Recessed bezel for (6) Siemon

MAX® modules.

S1SPMAX

S1SPTRAC

S1SPTRACC

S1SPMAXC

Note: \*Furnished with two screw-in flexible metal conduit connectors. See Network Wiring section for complete offering of Hubbell jacks, frames and datacom accessories. See page Q-21 for FRPT Configuration Chart.

### **Sub-Plate Accessories**

Description			Description	Catalog Number
Replacement Threaded Used with S1SPFFx and Sub-plate is supplied with	S1SPFFTx only.		Replacement for <b>S1SPMAX.</b> Sub-plate is supplied with data frame. Works with Siemon MAX®.	S1DFMAX
Color	1½" Plug	34" Plug	Replacement for <b>S1SPTRAC</b> sub-plate. Sub-plate is supplied with data frame. Works with Ortronics TracJack <sup>®</sup> .	S1DFTRAC
Aluminum Finish Brass Finish Black Gray	S1FP15AL S1FP15BRS S1FP15BL S1FP15GY	S1FP34AL S1FP34BRS S1FP34BL S1FP34GY	Blank Style Line <sup>®</sup> decorator frame, Black. 2-Port Style Line <sup>®</sup> decorator frame, Black. 4-Port Style Line <sup>®</sup> decorator frame, Black. 6-Port Style Line <sup>®</sup> decorator frame, Black.	NS620BK ISF2BK ISF4BK ISF6BK

Extron® is a registered trademark of Extron Electronics. MAX® is a registered trademark of The Siemon Company. Mini-Com® and Panduit® are registered trademarks of Panduit Corp. SYSTIMAX® is a registered trademark of CommScope, Inc. TracJack®, Series II® and Ortronics® are registered trademarks of Ortronics/Legrand.



0 1 0	. Et				Floor	Boxes*		ООПРІК	es with UL		
SystemOne Configurat			Non- Metallic		1 1001	Metal		l	Fire-Ra	4" Core Hole ted Poke-Tl	e nroughs
(except S1PF	use in the City of Chicag B)	о.		-		8	-		Î	517	
Sub-Plates S1SP	Style Line® Decorator/GFCI	0	S1PFB	3.5	3.5	S1SFBCR	3.5	3.5	S1PTFIT	S1PT4X4FIT	SIPIAVFII
S1SPDU	Duplex/Duplex	0	3	3.5	3.5	3.5	3.5	3.5	<b>/</b> +	X	1
S1SPDUSL	Duplex/Style Line® Decorator	Ø	3	3.5	3.5	3.5	3.5	3.5	<b>/</b> +	X	1
S1SP4X4 S1SP4X4PA S1SP4X4SYS	Hubbell 4 X 4 Panduit Mini-Com® 4 X 4 SYSTIMAX® 4 X 4		<b>4</b>	4	4	4	4	4	X	<b>/</b> +	X
S1SP4X4C S1SP4X4PAC S1SP4X4SYSC		•									
S1SPTL	Twist-Lock® Receptacle + Data	0	4	4	4	4	4	4	X	<b>/</b> +	X
S1SP3IM	Hubbell DataCom + Power	0	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	1	X	<b>/</b> +
S1SP4IM	Hubbell DataCom	0	3.5	3.5	3.5	3.5	3.5	3.5	1	X	<b>√</b> +
S1SPDU2IM	Hubbell DataCom + Duplex	<b>(1)</b>	5	5	5	5	5	<b>5</b>	1	X	<b>/</b> +
S1SPSL2IM	Hubbell DataCom + Style Line® Decorator	0	5	5	5	5	5	<b>5</b>	1	X	<b>/</b> +
S1SPFFxx (Carpet) S1SPFFTxx (Tile)	Furniture Feed Cover/Flange (Replace "xx" with BRS (Brass finish), AL (Aluminum finish), BL (Black) or GY (Gray).	0	3	3.5	3.5	3.5	3.5	3.5	1	X	<b>/</b> +
S1SPEXT1 S1SPEXT1C	Extron® or FSR + Power  Marked with "I Controlled"	0	4	4	4	4	4	4	1	X	<b>/</b> +
S1SPEXT2 S1SPEXT2C	Extron® or FSR + Power  Marked with " Controlled"	Ŏ	4	4	4	4	4	4	1	X	<b>/</b> +
S1SPEXT3	Extron® or FSR Single-Service	Ŏ	4.5	4.5	4.5	4.5	4.5	4.5	1	X	<b>/</b> +
S1SPEXT4 S1SPEXT4C	Extron® or FSR + Power  Marked with " Controlled"	Ŏ	4	4	4	4	4	4	1	X	<b>/</b> +
S1SPORT	Ortronics Series II® + Power	ň	<b>5</b>	5	<b>5</b>	<b>5</b>	5	<b>5</b>		X	<b>/</b> +
S1SPORTC S1SPTRAC	Marked with " Controlled"  Ortronics TracJack® + Power	X		_		_	_	_			
S1SPTRACC S1SPMAX	Marked with "Controlled"  Siemon MAX® + Power		<b>5</b>	5	<b>5</b>	5	5	5	<b>V</b>	X	<b>/</b> +
S1SPMAXC S1SPAMM20	Marked with "Controlled"  Active Multimedia + Flush		5	5	5	5	5	5	<b>/</b>	X	<b>/</b> +
	Keystone + Power  Marked with " Controlled"	O	<b>(5)</b>	5	5	5	5	5	1	X	<b>/</b> +
S1CFCxx (Carpet)	SystemOne Floor Boxes and FRPTs use SystemOne Universal Covers (Replace		Signifies minimum depth of concrete pour in inches for Hubbell SystemOne Floor Boxes.  Alternative Floor Fitting Floor Fitting Floor Fitting				Not Compatible				
S1TFCxx (Tile)	"xx" with BRS (Brass finish), AL (Aluminum finish), BL (Black) or GY (Gray).		Mini-Com® a	and Panduit®	are registere	d trademarks	of Panduit C		rademark of AX® is a regis	The Siemon C	Company.





## Traditional Flush 2X2 FRPT 3 Inch Core Hole Units, for Use In Concrete Floors

### 2X2 Flush FRPT, One-Piece Units (PT2X2FIT)

Description	Color	Catalog Number	Description	Color/Material	Catalog Number
2X2 Poke-Through Non-metallic Cover	Black Gray Black Gray	PT2X2BL PT2X2GY PT2X2IGBL* PT2X2IGGY*	2X2 Poke-Through	Black/Brass Brass Finish/Brass Black/Brass Brass Finish/Brass	PT2X2BRS3 PT2X2BRS PT2X2IGBRS3* PT2X2IGBRS*
<ul> <li>Pre-wired 20A Style Li receptacle and (2) Cat</li> <li>Painted aluminum flan</li> </ul>	egory 5e data jacks		Pre-wired 20A Style Linguistic receptacle and (2) Cate Solid brass flange		

• Approved for use in the City of Chicago



Approved for use in the City of Chicago

• Approved for use in the City of Chicago



Note: \*Includes pre-wired 20A isolated ground duplex Style Line® receptacle.

### 2X2 Flush FRPT. Two-Piece Units

Description	Catalog Number	
Multi-Channel Through-Floor Fitting with (1) % in. EMT stem with junction box for power and (2) ½ in. EMT stems for low voltage.	PT2X2FIT	<ul> <li>Specifications:</li> <li>1 – 4 hour fire rating (1 – 3 hour for steel floor units and concrete topping, D900 Series Design)</li> <li>For 2¼ in. to 7 in. floor thickness</li> <li>UL installation spacing – minimum 2 ft. on center and not more than one per 65 sq. ft. of floor area</li> </ul>

## **Service Fittings**

Description	Color	Catalog Number	Description	Color/Material	Catalog Number
2X2 Service Fitting Non-metallic Cover/ Aluminum Flange	Black Gray	PT2X2SFBL PT2X2SFGY	2X2 Service Fitting Non-metallic Cover/ Brass Flange	Black/Brass Brass Finish/Brass	PT2X2SFBRS3 PT2X2SFBRS
<ul> <li>Pre-wired 20A Style Lin- receptacle and (2) Cate</li> <li>Painted aluminum flange</li> </ul>	gory 5e data jacks		Pre-wired 20A Style Line® receptacle and (2) Catego Solid brass flange		

#### **Accessories**

Description	Color/Material	Catalog Number	Description	Color/Material	Catalog Number
Non-metallic Replacement Covers	Brass Finish Black Gray	PT2X2CBRS PT2X2CBL PT2X2CGY	Closure Plug Textured aluminum plug seals 3 in. core hole when FRPT is no longer required and is removed. Maintains the floor's 1 – 4 hour fire rating. UL Listed and CSA Certified.	Gray	FRP250

Note: See page Q-33 for technical information.





## Traditional Flush Duplex FRPT 3 Inch Core Hole Units, for Use In Concrete Floors

## Flush Duplex FRPT, One-Piece Units

Description	Color	Catalog Number	Description	Color/Material	Catalog Number
Flush Poke-Through	Black Brown Gray Ivory Gray Ivory	PT7FSDBLA PT7FSDBRA PT7FSDGYA PT7FSDIA PT7IGFSDGYA* PT7IGFSDIA*	Flush Brass Poke-Through	All Brass Black/Brass All Brass	PT7FSDBRS2A PT7FSDBRS3A PT7IGFSDBRSA*
,			Complete assembled unit inc Pre-wired 20A duplex rece All brass or black non-mei Flip lid cover with (2) ½ in. low voltage feed-through I Solid brass flange	eptacle tallic cover option diameter	

Note: \*Includes pre-wired 20A isolated ground duplex receptacle.

Flush FRPT, Two-Piece Units	
Description	Catalog Number
Multi-Channel Through-Floor Fitting with (1) ¾ in. EMT stem for power and (2) ½ in. low voltage feed-through holes.	PT7FSD (with Junction Box) PT73SD (without Junction Box)  Specifications:  1 - 4 hour fire rating (1 - 3 hour for steel floor units and concrete topping, D900 Series Design)



- For 21/4 in. to 7 in. floor thickness
- UL installation spacing minimum 2 ft. on center and not more than one per 65 sq. ft. of floor area

## **Service Fittings**

Description	Color	Catalog Number	Description	Color/Material	Catalog Number
Flush Aluminum Service Fitting	Black Brown Gray Ivory	FRFBLA FRFBRA FRFGYA FRFIA	Flush Brass Service Fitting	Solid Brass	FRFBRS2A
Complete assembled unit incl Pre-wired 20A duplex rece Non-metallic flip lid cover w (2) ½ in. diameter low voltaged-through holes Painted aluminum flange	ptacle vith	(F)	Complete assembled unit  Pre-wired 20A duplex r  Solid brass flip lid cover (2) ½ in. diameter low v feed-through holes  Solid brass flange	eceptacle with	

## **Accessories**

Description	Color	Catalog Number	Description	Color/Material	Catalog Number
Non-metallic Replacement Covers	Black Brown Gray Ivory	PFBRCBLA PFBRCBRA PFBRCGYA PFBRCIA	All Brass Replacement Covers	Solid Brass	BRS2RCA
		H			

Note: See page Q-26 for 3 Inch FRPT accessories. See page Q-33 for technical information.





## Traditional Flush Furniture Feed FRPT 3 Inch Core Hole Units, for Use In Concrete Floors

### Large Capacity, Single-Service Flush Furniture Feed FRPT, Two-Piece Units

Description	Catalog Number	Description	Color/Material	Catalog Number
Large Capacity, Single-Service Through Floor Fitting with (1) 2 in. EMT stem. Will accommodate up to 36 Category 5e cables.	PT2FIT	Large Capacity Cover/Flange	Brass Finish Black Gray	FF2BRS FF2BK FF2GY
Specifications:		Specifications:		
1- to 2-hour fire rating		Cover/flange with 13		
Single-Service, Power or Data		trade size combinati	on knockout	
• For 21/4 to 7 in. floor thickness	10.00	Painted aluminum co	over and flange	
<ul> <li>UL installation spacing – minimum</li> <li>2 ft. on center and not more than</li> </ul>		Approved for use in	the City of Chicago	

Note: \*Includes pre-wired 20A isolated ground duplex Style Line® receptacle. See page Q-34 for technical information.

## Flush Furniture Feed FRPT, One-Piece Units

Description	Color	Catalog Number	Description	Color	Catalog Number
3-Service Furniture Feed Poke-Through	Black Gray Ivory	PT73FFSDBK PT73FFSDGY PT73FFSDI	Single-Service Furniture Feed Poke-Through	Black Gray Ivory	_ PT7FFSDGY PT7FFSDI
Complete assembled unit inclu  PT73SD floor fitting  Aluminum cover with (2) ½ i threaded hubs for low voltag (1) ¾ in. threaded hub for po  Painted aluminum flange	n. ge and		Complete assembled unit incl PT71SD floor fitting Aluminum cover with (1) K0 to accept a ¾ in. connecto Painted aluminum flange	)	

Note: See page Q-34 for technical information.

1 per 65 sq. ft. of floor areaApproved for use in the City of Chicago

## Flush Furniture Feed FRPT, Two-Piece Units

Description	Catalog Number	Description	Catalog Number
3-Service Furniture Feed Through- Floor Fitting with (1) ¾ in. EMT stem for power and (2) ½ in. low voltage conduit holes.	PT73SD	Single-Service Furniture Feed Through-Floor Fitting with (1) % in. EMT stem for power or low voltage applications.	PT71SD
Specifications:  • 1 – 4 hour fire rating (1 – 3 hour for steel floor units and concrete topping, D900 Series Design)		<ul> <li>Specifications:</li> <li>For 2¼ to 7 in. floor thickness</li> <li>UL installation spacing – minimum 2 ft. on center and not more than 1 per 65 sq. ft. of floor area</li> </ul>	

## **Service Fittings**

Description	Color	Catalog Number	Description	Color	Catalog Number
3-Service Furniture Feed Service Fitting	Black Gray Ivory	FRF3BK FRF3GY FRF3I	Single-Service Furniture Feed Service Fitting	Brass Finish Black Gray	FRF1BRS FRF1BK FRF1GY
Complete assembled unit inc  Aluminum cover with (2) ½ threaded hubs for low volt. (1) ¾ in. threaded hub for low painted aluminum flange	in age and		Complete assembled unit inci  Aluminum cover with (1) KO to accept a ¾ in. connecto Painted aluminum flange		

Note: See page Q-26 for 3 Inch FRPT accessories. See page Q-34 for technical information.





## Painted Pedestal FRPT 2 and 3 Inch Core Hole Units, for Use In Concrete Floors

## 3 Inch Core Hole, Two-Piece Unit

## 2 Inch Core Hole, Two-Piece Unit

Description	Catalog Number	Description	Catalog Number
Large Capacity Multi-Service Pedestal Through-Floor Fitting with (1) 1½ in. EMT stem for low voltage and (1) ½ in. EMT stem for power applications.	PT7XC	Multi-Service Pedestal Through-Floor Fitting with (1) % in. EMT stem for low voltage and (1) ½ in. EMT stem for power applications.	PT27A
<ul> <li>Specifications:</li> <li>1 – 4 hour fire rating (1 – 3 hour for steel floor units and concrete topping, D900 Series Design)</li> <li>For 2½ in. to 7 in. floor thickness</li> <li>Approved for use in the City of Chicago</li> </ul>		<ul> <li>Specifications:</li> <li>1 – 4 hour fire rating (1 – 3 hour for steel floor units and concrete topping, D900 Series Design)</li> <li>For 21/4 in. to 7 in. floor thickness</li> <li>Approved for use in the City of Chicago</li> </ul>	

Note: \*Includes pre-wired 20A isolated ground duplex receptacle. See page Q-35 for technical information.

## Pedestal Service Fittings (Order 1 plate per gang)

Description	Color/Material	Catalog Number	Description	Color	Catalog Number	Description	Color	Catalog Number
2-Gang	Alum. Finish Black Gray	FR280ALA FR280BKA FR280GYA	4-Gang	Black Gray	FR480BKA FR480GYA	6-Gang	Black Gray	FR680BKA FR680GYA
Use with PT27A only.		Use with P	Use with PT27A or PT7XC.			Use with PT27A or PT7XC.		
	,535,		1	1 × ×		[3	B 📵, 👵	S, NYSY
FR280BKA			FR480GYA			FR680BKA		

- Painted aluminum housing with low voltage barrier(s); plates and devices sold separately
- For additional barriers, use FRBR1, see page Q-21.
- UL Listed and CSA Certified

Note: See page Q-35 for technical information.

## Pedestal Face Plates (Order 1 plate per gang)

Description	Color/Material	Catalog Number		Description	Color/Material	Catalog Number	
Duplex	Black Gray	SS2309DBKA SS2309DGYA	.00,	Furniture feed (¾ in. KO)	Alum. Finish Black Gray	SS2309FALA SS2309FBKA SS2309FGYA	, o.
Style Line®/ GFCI	Black Gray	SS2309SLBKA SS2309SLGYA		Furniture feed (1 in. KO)	Black Gray	SS2309F1BKA SS2309F1GYA	.0.
Single receptacle (1.39 in. OD)	Black Gray	SS2309SBKA SS2309SGYA	●.	Bushed data opening (1 in. ID)	Black Gray	SS2309TBKA SS2309TGYA	
Blank	Alum. Finish Black Gray	SS2309BALA SS2309BBKA SS2309BGYA		Painted alum     UL Listed and			

## Brushed Aluminum Pedestal FRPT 3 Inch Core Hole Two-Piece Units, for Use In Concrete Floors

### **Through-Floor Fitting**

## **Pedestal Service Fitting**

i ili ougii-i looi i ittiilig	redestal Sel vice i ittilig			
Description	Catalog Number	Description	Color/Material	Catalog Number
Large Capacity Multi-Service Pedestal Through-Floor Fitting with (1) 1¼ in. EMT stem for low voltage and (1) ½ in. EMT stem for power applications.	PT7XC	2-Gang Pedestal Service Fitting For use with PT7XC only.	Brushed Aluminum	FR80AL
<ul> <li>Specifications:</li> <li>1 – 4 hour fire rating (1 – 3 hour for steel floor units and concrete topping, D900 Series Design).</li> <li>For 21/4 in. to 7 in. floor thickness.</li> <li>Approved for use in the City of Chicago.</li> </ul>		Specifications:  • Brushed aluminum housin with low voltage barrier. P and devices sold separate	lates	

Note: See pages Q-35 and Q-36 for technical information.

## **Plates**

Description	Catalog Number		Description	Catalog Number	
Duplex	SS309D	,00,	Furniture feed (% in. KO)	SS309SF*	, Q,
Style Line <sup>®</sup> /GFCI	SS309DS	•	Furniture feed, blank	SS309BF*	
Single receptacle (1.39 in. OD)	SS309S	5000	Bushed data opening (1 in. ID)	SS309T	
Blank	SS309B	9 9	302/304 stainless steel plates (SS309SF & SS309BF are aluminum).      UL Listed and CSA Certified.		

Note: \*For furniture feed applications using SS309SF, a SS309BF blank must be used for second plate.

### 3 Inch Core Hole FRPT Accessories

Description	Color	Catalog Number	Description	Color/Gang	Catalog Number
Flush FRPT Abandonment Plate Use with PT7FSD, PT73SD or PT71SD only. Covers the opening when FRPT is abandoned. Service fitting is removed and through-floor fitting remains.	Gray Ivory	AP2GY AP2I	PT7XC Extension Kit Extends PT7XC FRPT to accommodate between 7 in. and 13 in. floor thickness.	-	EXT13
Multi-Service Furniture Feed Replacement Inserts Use as a replacement cover for PT73FFSD series, or to convert installed PT7FSD series into furniture feed FRPTs. Includes (2) ½ in. threaded hubs for low voltage and (1) ¾ in. threaded hub for power. (UL Listed only.)	Gray Ivory	FF3GY FF3I	Pedestal FRPT Abandonment Plate Use with PT27A or PT7XC only. Covers the opening when FRPT is abandoned. Service fitting is removed and through- floor fitting remains.	Gray/ 2-gang Gray/ 4-gang	AP22 AP42
Replacement Low Voltage Barrier Use with FR280, FR480, and FR680 pedestal service fittings only when additional power/low voltage separation is required.		FRBR1			

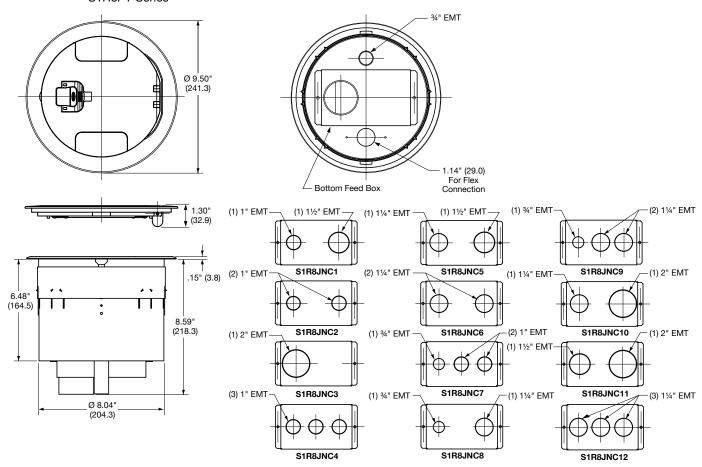






### **Hubbell SystemOne Recessed 8 Inch Series**

S1R8PT Series



### **Product Information**

- Plated cast aluminum covers available in brass, nickel or bronze finishes. Additionally available in brushed aluminum or black powder coat.
- S1R8SPZ sub-plate supplied with pre-wired dual 20A receptacle. Wired with three #12 AWG solid conductors.
- Meets ADA standards for accessible design, "changes in level."
- Meets UL 514A scrub water exclusion requirements.
- COVER LOAD RATING: 1,000 lbs with 2x safety factor. Load applied through a 3" (76mm) mandrel in center of the cover. **Static loads only.**

### **Application Data**

- Mounted in 8 in. (203.2) cored concrete diameter through hole.
- Minimum floor thickness: 21/4 in. (57.2).
- UL Listed for fire resistance in 1 2 hour rated D900 series floors.
- Approved for use in the City of Chicago.
- Not intended to be used in high traffic installations and not intended to support furniture.

Wire Size (AWG)	Copper Cross Sectional Area for Solid or Stranded Conductors
#24	.00032 sq. in. (.206mm²)
#23	.00040 sq. in. (.258mm²)
#22	.00050 sq. in. (.322mm²)
#14	.00323 sq. in. (2.083mm²)
#12	.00512 sq. in. (3.303mm²)
#10	.00815 sq. in. (5.258mm²)
# 8	.01296 sq. in. (8.361mm²)

### **UL Listed Wiring Capacity**

	S1R8PT Series		
Fire Resistance Rating	2-Hrs. (D900)		
Max. Copper Cross Section	Perimeter Chambers (each) .0154 sq. in.	Center Chamber .0633 sq. in.	

### **UL Characteristics**

Listing	UL File Number	ULC File Number
Outlet Box	E31999	CEYYC
Fire Resistance	R8429	R8429

For use in 1, 1½ or 2 hour rated unprotected reinforced floors or in 1 or 2 hour rated floors employing steel floor units and concrete topping (D900 Series designs). UL Spacing Restrictions - Minimum of 2 ft. on center and not more than one unit per each 65 square feet of floor area in each span.

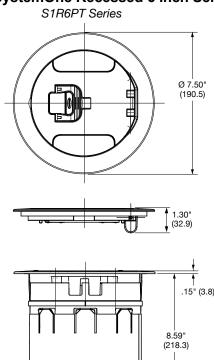
Note: The above product data pertains to both kited units, three-piece units and through-floor fittings.

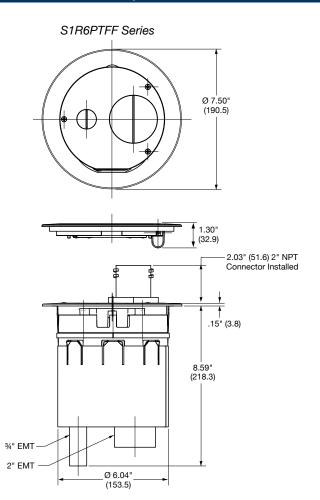
When connection conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.





### **Hubbell SystemOne Recessed 6 Inch Series**





### **Product Information**

34" EMT

2" EMT

- Plated cast aluminum covers available in brass, nickel or bronze finishes. Additionally available in brushed aluminum or black powder coat.
- S1R6SPZ sub-plate supplied with pre-wired dual 20A receptacle. Wired with three #12 AWG solid conductors.
- S1R6SPH sub-plate supplied with pre-wired quad 20A receptacle. Wired with six #12 AWG solid conductors.
   Receptacle can be wired as dual circuit and isolated ground.
- S1R6PTFF series furnished with one (1) ¾ in. and one (1) 2 in. screw-in flexible metal conduit connectors.
- Meets ADA standards for accessible design, "changes in level."

Ø 6.04

(153.5)

- Meets UL 514A scrub water exclusion requirements.
- COVER LOAD RATING: 1,000 lbs with 2x safety factor. Load applied through a 3" (76mm) mandrel in center of the cover. **Static loads only.**

### **Application Data**

- Mounted in 6 in. (152.4) cored concrete diameter through hole.
- Minimum floor thickness: 21/4 in. (57.2).
- UL Listed for fire resistance in 1 2 hour rated D900 series floors.
- Approved for use in the City of Chicago.
- Not intended to be used in high traffic installations and not intended to support furniture.

Wire Size	Copper Cross Sectional Area for Solid or Stranded
(AWG)	Conductors
#24	.00032 sq. in. (.206mm²)
#23	.00040 sq. in. (.258mm²)
#22	.00050 sq. in. (.322mm²)
#14	.00323 sq. in. (2.083mm²)
#12	.00512 sq. in. (3.303mm <sup>2</sup> )
#10	.00815 sq. in. (5.258mm²)
# 8	.01296 sq. in. (8.361mm²)

### **UL Listed Wiring Capacity**

<u> </u>				
	S1R6PT Series		S1R6PTFF Series	
Fire Resistance Rating	2-Hrs. (D900)		2-Hrs. (D900)	
Max. Copper Cross Section	¾ in. Power EMT .0307 sq. in.	2 in. Low Voltage EMT .0348 sq. in.	34 in. Power EMT .0815 sq. in.	2 in. Low Voltage EMT .0962 sq. in.

### **UL Characteristics**

~_ ··········		
Listing	UL File Number	ULC File Number
Outlet Box	E31999	CEYYC
Fire Resistance	R8429	R8429

For use in 1, 1½ or 2 hour rated unprotected reinforced floors or in 1 or 2 hour rated floors employing steel floor units and concrete topping (D900 Series designs). UL Spacing Restrictions - Minimum of 2 ft. on center and not more than one unit per each 65 square feet of floor area in each span.

Note: The above product data pertains to both kited units, three-piece units and through-floor fittings.

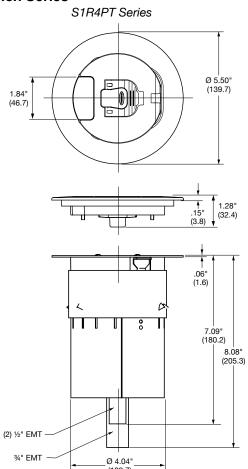
When connection conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.







### **Hubbell SystemOne Recessed 4 Inch Series**



### **Product Information**

- Plated cast aluminum covers available in brass, nickel or bronze finishes. Additionally available in brushed aluminum, black or gray powder coat.
- S1R4SPQUAD sub-plate supplied with pre-wired quad 20A receptacle. Wired with six #12 AWG solid conductors.
   Receptacle can be wired as dual circuit and isolated ground.
- Meets ADA standards for accessible design, "changes in level."
- Meets UL 514A scrub water exclusion requirements.
- COVER LOAD RATING: 1,000 lbs with 2x safety factor. Load applied through a 3" (76mm) mandrel in center of the cover. Static loads only.

### **Application Data**

- Mounted in 4 in. (139.7) cored concrete diameter through hole.
- Minimum floor thickness: 21/4 in. (57.2).
- UL Listed for fire resistance in 1 2 hour rated D900 series floors.
- Approved for use in the City of Chicago.
- Not intended to be used in high traffic installations and not intended to support furniture.

Wire Size	Area for Solid or Stranded
(AWG)	Conductors
#24	.00032 sq. in. (.206mm²)
#23	.00040 sq. in. (.258mm²)
#22	.00050 sq. in. (.322mm²)
#14	.00323 sq. in. (2.083mm²)
#12	.00512 sq. in. (3.303mm²)
#10	.00815 sq. in. (5.258mm²)
# 8	.01296 sq. in. (8.361mm <sup>2</sup> )

### **UL Listed Wiring Capacity**

	S1R4PT Series	
Fire Resistance Rating	2-Hrs. (D900)	
Max. Copper Cross Section	3/4 in. Power EMT .0408 sq. in.	½ in. Low Voltage EMT .008 sq. in.

### **UL Characteristics**

Listing	UL File Number	ULC File Number
Outlet Box	E31999	CEYYC
Fire Resistance	R8429	R8429

For use in 1, 1½ or 2 hour rated unprotected reinforced floors or in 1 or 2 hour rated floors employing steel floor units and concrete topping (D900 Series designs). UL Spacing Restrictions - Minimum of 2 ft. on center and not more than one unit per each 65 square feet of floor area in each span.

Note: The above product data pertains to both one-piece units, three-piece units and through-floor fittings.

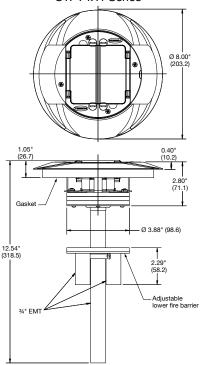
When connection conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.

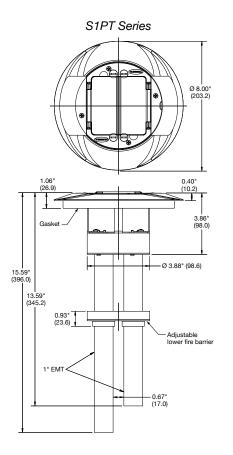




### **Hubbell SystemOne Flush 4 Inch Series**

S1PT4X4 Series





### **Product Information**

- Powder coat cast aluminum cover and flange (color finish options: aluminum, brass, black, gray and ivory).
- Hubbell SystemOne universal cover meets ADA standards for accessible design, "changes in level."
- S1SP4X4 sub-plate supplied with pre-wired, molded, four position 20A, 125V, black receptacle, NEMA 5-20R.
- S1SP4X4 wired with six thermally protected #14 AWG THHN stranded copper conductors, receptacle can be wired as dual-circuit and isolated ground.
- S1SP4X4 accepts four (4) Hubbell HXJ6, HXJ5E, HXJU; category 6A, 6, 5e, and USOC, and flush series
  jacks.
- S1SP sub-plate accepts two (2) 15A or 20A Style Line® decorator receptacles, Style Line® data frames, and/or one (1) GFCI or surge receptacle.

### **Application Data**

- Mounted in 4 in. (101.6) cored concrete diameter through hole.
- Minimum floor thickness: 2¼ in. (57.2).
- UL Listed for fire resistance in 1 4 hour rated D900 series floors.
- Approved for use in the City of Chicago.
- Not intended to be used in high traffic installations and not intended to support furniture.

Wire Size (AWG)	Copper Cross Sectional Area for Solid or Stranded Conductors
#24	.00032 sq. in. (.206mm²)
#23	.00040 sq. in. (.258mm <sup>2</sup> )
#22	.00050 sq. in. (.322mm <sup>2</sup> )
#14	.00323 sq. in. (2.083mm²)
#12	.00512 sq. in. (3.303mm²)
#10	.00815 sq. in. (5.258mm²)
# 8	.01296 sq. in. (8.361mm <sup>2</sup> )

### **UL Listed Wiring Capacity**

	S1PT4X4 Series	S1PT Series
Fire Resistance Rating	4-Hrs. (D900)	4-Hrs. (D900)
Max. Copper Cross Section	¾ in. Power EMT	1 in. Power EMT
	.0307 sq. in.	.0307 sq. in.
	3/4 in. Low Voltage EMT	1 in. Low Voltage EMT
	.016 sq. in.	.024 sq. in.

### **UL Characteristics**

Listing	UL File Number	ULC File Number
Outlet Box	E31999	CEYYC
Fire Resistance	R8429	R8429

For use in 1, 1½, 2, 3, or 4 hour rated unprotected reinforced concrete floors or in 1, 1½, 2, or 3 hour rated floors employing steel form units and concrete topping (D900 Series designs), or concrete floors with suspended ceilings.

Note: The above product data pertains to both one-piece units, three-piece units and through-floor fittings. When connection conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.

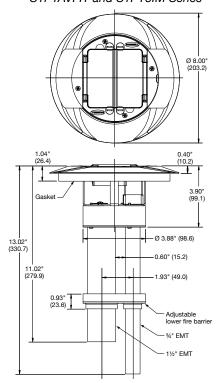




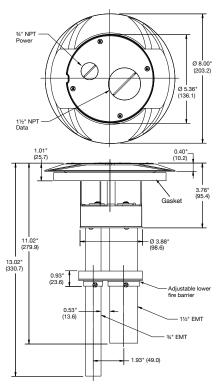


### **Hubbell SystemOne Flush 4 Inch Series**

S1PTAVFIT and S1PT3IM Series



### S1PTFF Series



### **Product Information**

- Powder coat cast aluminum cover and flange (color finish options: aluminum, brass, black, gray and ivory).
- Hubbell SystemOne universal cover meets ADA standards for accessible design, "changes in level."
- S1PTFF series aluminum conduit insert cover with one (1) ¾ in. and one (1) 1½ in. die-cast threaded plugs.
- S1PTFF series furnished with one (1) ¾ in. and one (1) 1½ in. screw-in flexible metal conduit connectors.
- S1PT3IM series sub-plate supplied with pre-wired single 20A 125V black receptacle, NEMA 5-20R.
- S1PT3IM wired with three #12 AWG THHN stranded copper conductors.
- S1PT3IM sub-plate also accepts three unit recessed Hubbell iSTATION; 15-Pin VGA, RCA, S-Video, 3.5 mm stereo and XLR microphone jacks.
- Meets UL 514A scrub water exclusion requirements.

### **Application Data**

- Mounted in 4 in. (101.6) cored concrete diameter through hole.
- Minimum floor thickness: 21/4 in. (57.2).
- UL Listed for fire resistance in 1 4 hour rated D900 series floors.
- Approved for use in the City of Chicago.
- Not intended to be used in high traffic installations and not intended to support furniture.

Wire Size (AWG)	Copper Cross Sectional Area for Solid or Stranded Conductors
#24	.00032 sq. in. (.206mm²)
#23	.00040 sq. in. (.258mm²)
#22	.00050 sq. in. (.322mm <sup>2</sup> )
#14	.00323 sq. in. (2.083mm²)
#12	.00512 sq. in. (3.303mm²)
#10	.00815 sq. in. (5.258mm²)
# 8	.01296 sq. in. (8.361mm <sup>2</sup> )

### **UL Listed Wiring Capacity**

	S1PTAVFIT and S1PT3IM Series	S1PTFF Series	
Fire Resistance Rating	4-Hrs. (D900)	4-Hrs. (D900)	
Max. Copper Cross Section	¾ in. Power EMT	¾ in. Power EMT	1½ in. Low Voltage EMT
	.0307 sq. in.	.072 sq. in.	.100 sq. in.
	1½ in. Low Voltage EMT		
	.048 sq. in.		

### **UL Characteristics**

Listing	UL File Number	ULC File Number
Outlet Box	E31999	CEYYC
Fire Resistance	R8429	R8429

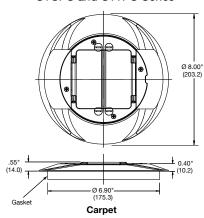
For use in 1, 1½, 2, 3, or 4 hour rated unprotected reinforced concrete floors or in 1, 1½, 2, or 3 hour rated floors employing steel form units and concrete topping (D900 Series designs), or concrete floors with suspended ceilings.

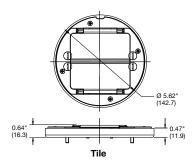
Note: The above product data pertains to both one-piece units, three-piece units and through-floor fittings. When connection conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.



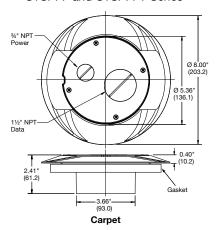
### **Hubbell SystemOne Flush 4 Inch Series**

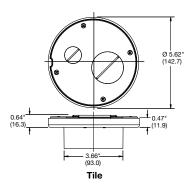
S1CFC and S1TFC Series





### S1SPFF and S1SPFFT Series





### **Product Information**

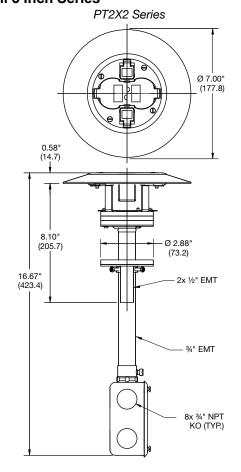
- Powder coat cast aluminum cover and flange (color finish options: aluminum, brass, black, gray and ivory).
- Hubbell SystemOne universal cover meets ADA standards for accessible design, "changes in level."
- S1SPFF and S1SPFFT series aluminum conduit insert cover with one (1) ¾ in. and one (1) 1½ in. die-cast threaded plugs.
- S1SPFF and S1SPFFT series furnished with one (1) 1/2 in. screw-in flexible metal conduit connectors.
- Meets UL 514A scrub water exclusion requirements.

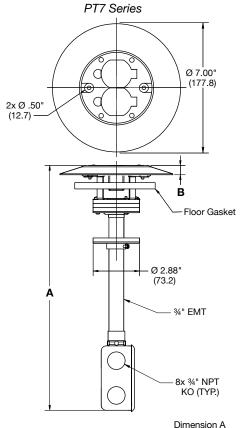






### **Hubbell 3 Inch Series**





Series	Dimension A	Dimension B
Thermoplastic cover with aluminum flange.	13.24 in. [336.2]	.51 in. [13.0]
Brass cover and flange.	13.20 in. [335.2]	.49 in. [12.4]

### **Product Information**

- PT7 series supplied with flush thermoplastic cover with matching painted aluminum flange (black, brown, gray, ivory) or solid brass cover and flange.
- PT2X2 series supplied with Hubbell pre-wired HBL2162BK; black Stye Line® or IG2162 (isolated ground) receptacle, NEMA 5-20R, 20A, 125V.
- PT2X2 series supplied with two (2) Hubbell HXJ5EBK black jacks; category 5e, UL Listed, 110 type contacts.
- PT7 series supplied with Hubbell pre-wired HBL5352 or IG5362 (isolated ground) series receptacle, NEMA 5-20R, 20A, 125V.
- PT7 series supplied with two (2) ½ in. low voltage feed through holes. Two (2) feed through bushings supplied (cover will not accept data jacks).
- Wired with three (3) #12 AWG THHN stranded copper conductors.
- Supplied with 13.0 cu. in. junction box having eight (8) ¾ in. knockouts.

### **Application Data**

- Mounted in 3 in. (76.2) cored concrete diameter through hole.
- Floor thickness range: 21/4 to 7 in. (57.2 to 177.8).
- UL Listed for fire resistance in 1 4 hour rated floors.
- Approved for use in the City of Chicago (PT2X2 series).
- Not intended to be used in high traffic installations and not intended to support furniture.

Wire Size (AWG)	Area for Solid or Stranded Conductors
#24	.00032 sq. in. (.206mm²)
#23	.00040 sq. in. (.258mm²)
#22	.00050 sq. in. (.322mm²)
#14	.00323 sq. in. (2.083mm²)
#12	.00512 sq. in. (3.303mm²)
#10	.00815 sq. in. (5.258mm²)
# 8	.01296 sq. in. (8.361mm²)

### **UL Listed Wiring Capacity**

	PT2X2 Series		PT7 Series	
Fire Resistance Rating	4-Hrs. (D900)		4-Hrs. (D900)	
Max. Copper Cross Section	¾ in. Power EMT .0155 sq. in.	½ in. Data EMT .0026 sq. in.	¾ in. Power EMT .0155 sq. in.	Low Voltage EMT .0250 sq. in.

### **UL Characteristics**

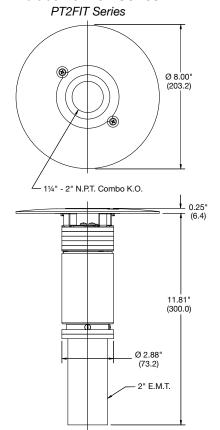
Listing	UL File Number	ULC File Number
Outlet Box	E31999	CEYYC
Fire Resistance	R8429	B8429

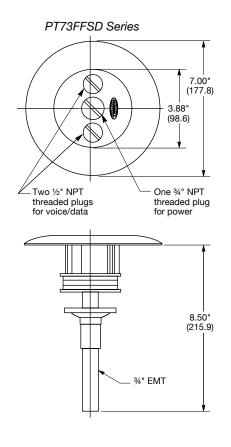
For use in 1, 1½, 2, 3 or 4 hour rated unprotected reinforced floors or in 1, 2, or 3 hour rated floors employing steel floor units and concrete topping (D900 Series designs). UL Spacing Restrictions - Minimum of 2 ft. on center and not more than one unit per each 65 square feet of floor area in each span.

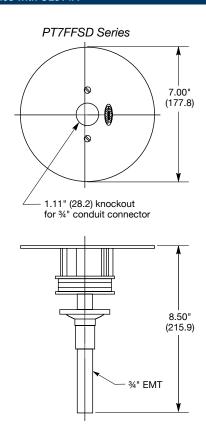
Note: When connecting conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.

The above product data pertains to both one-piece units and through-floor fittings.

### **Hubbell 3 Inch Series**







Wire

Size

(AWG)

#24

#23

#22

#14

#12

#10

#8

Copper Cross Sectional

Conductors

Area for Solid or Stranded

.00032 sq. in. (.206mm<sup>2</sup>)

.00040 sq. in. (.258mm<sup>2</sup>)

.00050 sq. in. (.322mm<sup>2</sup>)

.00323 sq. in. (2.083mm²)

.00512 sq. in. (3.303mm<sup>2</sup>)

.00815 sq. in. (5.258mm²)

.01296 sq. in. (8.361mm<sup>2</sup>)

### **Product Information**

### PT2FIT series

- Flush aluminum service fitting with epoxy paint finish (gray, black and brass finish).
- Aluminum conduit cover with 2.47 in. (62.7) and 1.74 in. (44.2) combination knockouts to accept a 2 in. or 11/4 in. NPT flexible metal conduit connector.

### PT73FFSD series

- Flush painted aluminum service fitting and carpet flange (color finish options: black, gray and ivory).
- Aluminum conduit insert cover with one (1) ¾ in. and two (2) ½ in. die-cast threaded plugs.
- $\bullet$  Supplied with one (1) % in. and two (2) % in. screw-in flexible metal conduit connectors.

### PT73FFSD series

- Flush aluminum service fitting with epoxy paint finish (color finish options: gray, ivory and brass finish).
- Aluminum conduit cover with 1.11 in. (28.2) knockout to accept a ¾ in. NPT flexible metal conduit connector.

### **Application Data**

- Mounted in 3 in. (76.2) cored concrete diameter through hole.
- Floor thickness range: 21/4 in. to 7 in. (57.2 to 177.8).
- PT2FIT series has single-service, power or data.
- UL Listed for fire resistance in 1 2 hour (PT2FIT series) rated floors.
- UL Listed for fire resistance in 1 4 hour (PT73FFSD and PT7FFSD series) rated floors.
- Approved for use in the City of Chicago (PT2FIT series).
- Not intended to be used in high traffic installations and not intended to support furniture.

### **UL Listed Wiring Capacity**

	PT2FIT Series	PT73FFSD Series	PT7FFSD Series	
Fire Resistance Rating	2-Hrs. (D900)	4-Hrs. (D900)	4-Hrs. (D900)	
Max. Copper Cross Section	2 in. EMT	¾ in. EMT ½ in. Feed Through	¾ in. EMT	
	.0922 sg. in.	.0470 sa. in0250 sa. in.	.0500 sg. in.	

### **UL Characteristics**

Listing	UL File Number	ULC File Number
Outlet Box	E31999	CEYYC
Fire Resistance	R8429	R8429

For use in 1, 1½, or 2 hour rated unprotected reinforced floors or in 1 or 2 hour rated floors employing steel floor units and concrete topping (D900 Series designs). UL Spacing Restrictions - Minimum of 2 ft. on center and not more than one unit per each 65 square feet of floor area in each span.

Note: The above product data pertains to both one-piece units and through-floor fittings.

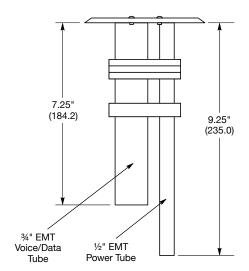
When connection conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.

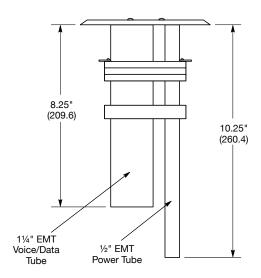




### **Pedestal FRPT Series**

Pedestal Fitting Series





Applications	PT27A	PT7XC	
Mounting	2 in. (50.8) diameter hole.	3 in. (76.2) diameter hole.	
Floor Thickness Range	2¼ in. to 7 in. (57.2 to 177.8)	21/4 in. to 7 in. (57.2 to 177.8)	
Fire Rating	For use in 1, 1½, 2, 3 or 4 hour rated unprotected reinforced concrete floors or in 1, 2 or 3 hour rated employing steel floor units and concrete topping (D900 series design).	For use in 1, $1\frac{1}{2}$ , 2, 3 or 4 hour rated unprotected reinforced concrete floors or in 1, 2 or 3 hour rated floors employing steel floor units and concrete topping (D900 series design).	
Service Pedestal Options	FR280, FR480, FR680 Series.	FR480 and FR680 Series.	

Note: Not intended to be used in high traffic installations and not intended to support furniture.

### **UL Listed Wiring Capacity**

Power Wiring Capacity	½ in. inch EMT power tube		½ in. inch EMT power tube	
	Handles:		Handles:	
	Up to ten #12 AWG	type THHN wires, or	Up to ten #12 AWG	G type THHN wires, or
	Up to six #12 AWG	and two #10 AWG type THHN wires.	Up to six #12 AWG	and two #10 AWG type THHN wires.
Voice/Data Wiring Capacity	3/4 in. inch EMT low-	3/4 in. inch EMT low-voltage tube		v-voltage tube
	Up to two 25 pair tel./data cables (100 #22 AWG tel./data conductors), or (2		Handles:	
			Up to four 25 pair tel./data cables	
			(200 #22 AWG tel./data conductors), or	
			Up to five IBM Type	e 2 data cables and
			four 8-conductor te	l./data cables.
Total Allowable	½" Power EMT	3/4" Low Voltage EMT	½" Power EMT	1½" Low Voltage EMT
Copper Cross-Sectional Area	.0461 sq. in.	.0500 sq. in.	.0461 sq. in.	.1000 sq. in.

When conductors larger than #22 AWG are used, the total cross-sectional area of the copper conductors shall not exceed the total cross-sectional area of the #22 AWG conductors permitted in the low voltage compartment.

Note: When connecting conduit sweeps to through-floor fittings, ensure compliance with NEC fill tables.

### **UL Characteristics**

Listing	UL File Number	UL File Number
Outlet Box	E31999	E31999
Fire Resistance	R8429	R8429

For use in 1, 1½, 2, 3, or 4 hour rated unprotected reinforced concrete floors or in 1, 2 or 3 hour rated floors employing steel floor units and concrete topping (D900 Series designs).

UL Spacing Restrictions - Minimum of 2 ft. O.C. and not more than one unit per each 65 sq. ft. of floor area in each span.

### Chicago Approved

Catalog Number	City of Chicago File Number
PT27A, PT7XC	5587E

These through-floor fittings are approved for the City of Chicago. Installation requires a plenum-rated 1900 series box or a handy box with gasketed cover. These boxes are to be affixed with compression gland-type connectors.

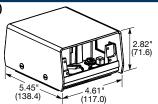


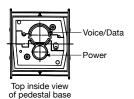
### **Pedestal FRPT Series**

Painted and Brushed Aluminum Series

### **Dimensions**

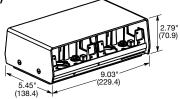
### 2-Gang - FR280 Series (Use with PT27A Only)

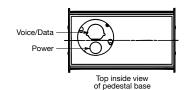




Total Cubic Inch Capacity (Single-Service)	39.00 in. (638	8cm <sup>3</sup> )	
Cubic Inch Capacity	Power	19.5 in. (319.4cm³)	
(when divided for multi-service)	Voice/Data	19.5 in. (319.4cm³)	
Service Pedestal Construction	Heavy gauge galvanized steel frame with aluminum housing and face plates.		
Pedestal Finish	Textured black or gray epoxy paint.		

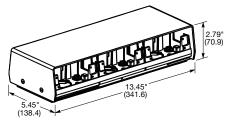
### 4-Gang - FR480 (Use with PT27A or PT7XC)

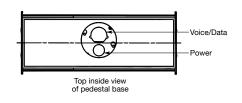




Total Cubic Inch Capacity (Single-Service)	78.00 in. (1277.6cm <sup>3</sup> )		
Cubic Inch Capacity	Power	39.00 in. (638.8cm <sup>3</sup> )	
(when divided for multi-service)	Voice/Data	39.00 in. (638.8cm³)	
Service Pedestal Construction	Heavy gauge galvanized steel frame with aluminum housing and face plates.		
Pedestal Finish	Textured black or gray epoxy paint.		

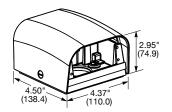
### 6-Gang - FR680 (Use with PT27A or PT7XC)

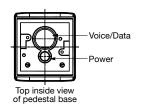




Total Cubic Inch Capacity (Single-Service)	117.00 in. (19	016.4cm³)	
Cubic Inch Capacity	Power	58.5 in. (958.2cm³)	
(when divided for multi-service)	Voice/Data	58.5 in. (958.2cm³)	
Service Pedestal Construction	Heavy gauge galvanized steel frame with aluminum housing and face plates.		
Pedestal Finish	Textured black or gray epoxy paint.		

### 2-Gang - FR80AL (Use with PT7XC Only)





Total Cubic Inch Capacity (single service)	33.00 in. (540	.9 cu cm³)
Cubic Inch Capacity	Power	8.80 in. (144.2cm³)
(when divided for multi-service)	Voice/Data	26.70 in. (437.6cm³)
Service Pedestal Construction	Heavy gauge a	aluminum frame with satin anodized aluminum housing with 302/304 stainless steel face plates.
Pedestal Finish	Brushed.	

# SECTION R









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Hubbell Artwork Logo Guidelines	R-10

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PlugTrak® Raceway with USB Charger Outlets	R-9



### **Features and Benefits**

### **Powered Seating Boxes**

Hubbell's On-the-Go Powered Seating Boxes fulfill customers' need for power accessibility. As the use of electronic devices has increased, the demand for charging has followed. Powered Seating Boxes provide an easy means of charging user's devices while meeting custom space requirements. Seating boxes can easily be attached to waiting area seating arrangements, conference tables, lecture halls, anywhere convenient power is needed.

# **HUBBELL ON-the-GO CHARGING**

Convenient Charging Stations





### **Housing Design**

- Rugged design features satin aluminum construction body with impact-resistant polycarbonate end caps
- Make any furniture or seating area into a convenient charging station
- Available with up to 4 boxes per unit



### **Powered Seating Boxes**

- Parallel module wiring keeping individual seating boxes from losing power up and downstream
- Push to reset circuit breaker—trip electronically and reset manually



### **Charging Power**

- Fast charging speeds delivering up to 5 amps of charging power
- Green power LED provides visual indication of power to the devices



### Installation

- Security Torx-screw minimizes the potential for customers to open or tamper with units
- Hardwired permanently connected power and interconnecting cords
- Available with heavy-gauge durable powder coated steel mounting bracket



### **USB** ports

- Smooth insertion tamper-resistant devices provide an extra level of safety to your customers
- Overcurrent protection—12 amp string and 5 amp individual module protection



### Configurations

- Powered seating boxes are available in convenient bracketed configurations that easily attach to any flat surface
- Unbracketed configurations are also available







SP15USB1

### **Powered Seating Boxes**

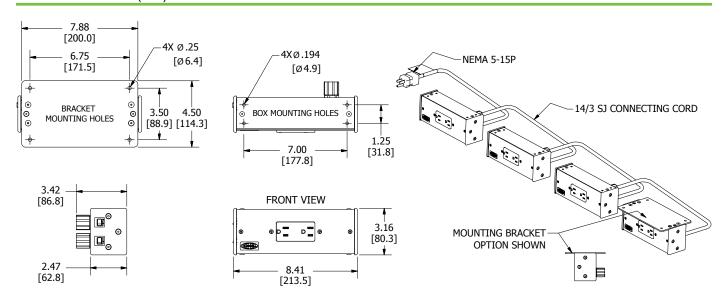
Description	Cord Length*	Boxes per Unit*	Without Mounting Bracket	With Mounting Bracket
Powered Seating Box with (2) USB Type A	10 ft power and 5 ft	1	SP15USB1	SP15USB1B
high power 5 Amp, 5 volt USB output and a Commercial Grade Tamper-Resistant duplex receptacle.	connecting cords	2	SP15USB2	SP15USB2B
		3	SP15USB3	SP15USB3B
		4	SP15USB4	SP15USB4B

Note: \*Special constructions are available with up to 7 boxes and up to 25 ft. of power cord. Contact you local Hubbell representative for more information. Options for USB Type-C and Combination Type A & C configurations and hospital grade receptacles are also available

### **Specifications**

- UL, cULus
- Meets construction and safety testing standards for UL962A Furniture Power Distribution Units
- · Assembled in the USA

### **Dimensions** Inches (mm)





### **Features and Benefits**

# **HUBBELL ON-the-GO CHARGING**

### **Cabled Charging Stations**

Hubbell's On-the-Go Cabled Charging Stations require minimal assembly and install easily. There are two styles available; a semi-permanent wall-mount unit or a relocatable floor stand.

The standard configuration includes (3) Apple<sup>®</sup> Lightning, (3) Micro USB and (2) USB Type-C cords, allowing for 8 devices to be charging at once. Each unit features an 18 inch wide by 1 inch deep device tray to accommodate a wide range of wireless devices.

Cabled Charging Stations can be ordered with the standard design (as shown below), blank, or with a custom logo or graphic. Custom artwork will be applied and shipped from the factory.

# Cabled Charging Stations





### **Housing Design**

- Eight charging connectors provide flexibility to charge a variety of smart devices
- The 18 inch tray holds multiple devices at once



### **Power Stands**

• Blank charging stations available



### **Charging Power**

- Charge up to 8 devices simultaneously without slowing charging speeds, up to 2.4A per port
- Efficient charging technology with automatic authentication of nearly all mobile devices



### Installation

- Each unit includes a 6 foot cord with a 15A 125V plug
- Ships as kit making for easy installation and assembly
- Floor stand unit is 4 feet tall and weighs approximately 30 pounds



### Wall Mount

 Wall mount unit includes mounting bracket and hardware



### **Custom Branding**

- Custom branding/graphics available
- Designed for indoor use

 $\mbox{\rm Apple}^{\mbox{\tiny (B)}}$  is a registered trademarks of Apple Inc.

# **Charging Solutions**





**Cabled Charging Stations** 

Description	Floor Stand Unit	Wall Mount Unit
Standard Cabled Charging Stations.	HCSFS	HCSWM
Blank Cabled Charging Stations.	HCSFSBLANK	HCSWMBLANK
Replacement floor stand with power supply.	HCSREPFSKIT	_
Replacement wall mounting hardware kit.	_	HCSWMREPWMKIT
Replacement USB cord sets (Floor and Wall Units).	HCSUSBREPCORDSET	

### **Specifications**

• UL, cUL, FCC, CE, RoHS, MFi Certified

### **Custom Branding**

Custom branding or graphic artwork can be added to both the wall mount and floor stands with three templates to choose from (Template A, B or C as shown below). Contact your local Hubbell Territory Manager to special order a custom charging station. **See Guidelines on page R-10.** 

Description	Floor Stand Unit	Wall Mount Unit	
Custom Branded Charging Station.	HCSFSLOGOxxxx	HCSFSLOGOxxxx	
Custom Artwork Specification.	Maximum print area: 10" W x 6" H		
	Preferred file formats: Adobe Illustrator, Vector File,		
	Encapsulated Postscript an	d Layered PDF.	

Note: No Minimum Order Quantity for special order units.

Floor Stand



Template B



**Template C** 

Dimensions Inches (mm)

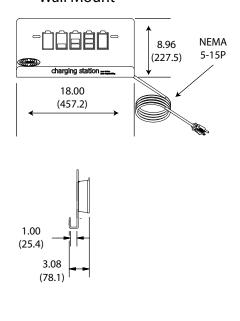
Template A

LOGO

HERE

# charging station ==== 47.79 (1213.9) NEMA 5-15P

### Wall Mount







**HCSWMBLANK** 



**HCSFSBLANK** 



Dimensions in Inches (mm)

(381.0)



### **Features and Benefits**

# **HUBBELL ON-the-GO CHARGING**

### **Power Charging Pedestals**

Hubbell's On-the-Go Power Charging pedestals ships ready to install with four 20A 125V tamper-resistant USB Type A and Type C combination duplex receptacles, with a ¾ inch NPT hub in the base and 36 inch long wire leads the assembly will accommodate all installations when fed from the floor below. The pedestal can also be mounted and wired over one of Hubbell's flush round floor boxes or single gang rectangular floor boxes.

Our 2 inch by 8 inch wing-shaped aluminum extrusion has a sturdy ¼ inch thick aluminum base plate with four pre-drilled counter sunk holes for mounting. Because of its shallow design, the pedestals can be mounted between most back-to-back transportation seating arrangements.

# Power Charging Pedestals







### **Housing Design**

- Durable powder coated aluminum extrusion offers a permanent solution for high traffic areas
- Ships ready to install



### **Power Stands**

 Back to back 39.79 inch and 34.29 inch receptacle heights will clear backs of transportation seating chairs



### **Charging Power**

- Duplex receptacles include Hubbell's patented tamper-resistant technology allowing the plug to slide in effortlessly
- Combination Type A and Type-C USB configuration meets most charging needs



### Installation

- Integral ¾ inch conduit hub in base
- Single circuit pre-wired assembly with 36 inch long #12 AWG wire leads
- Sleek 2 inch by 8 inch powder coated aluminum extrusion design at 52.40 inches tall



### **USB Ports**

 Heavy-duty stainless steel USB ports are rated for 10,000 cord insertions and removals



### **Custom Branding**

- Custom branding/graphics available for light kit
- Available with energy efficient LED light kit to add visibility
- Indoor use only





Description	Color	Catalog Number
Hubbell Charging Power Stand, 52.40 inches tall.	Gray	HCPWRPED52GRY
Hubbell Charging Power Stands, 52.40 inches tall, Light Kit.	Gray	HCPWRPED52LKGRY

### **Custom Branding**

At the factory, custom branding/graphic artwork can be added to the Power Charging Pedestals with light kits. Contact your local Hubbell Territory Manager to special order a custom pedestal. See Guidelines on page R-10.

Description	Color	Catalog Number
Hubbell Charging Power Stands, 52.40 inches tall, Light Kit with Custom Branding.	Gray	HCPWRPED52LKGRYxxx
Custom Artwork Specification.	Preferred file fo	area: 6.75" W x 9.13" H rmats: Adobe Illustrator, Vector File, Postscript and Layered PDF

Note: No Minimum Order Quantity for special order units.



**HCPWRPED52LKGRY** Standard Light Kit



**HCPWRPED52LKGRYxxx** - Example-Custom Light Kit Graphics



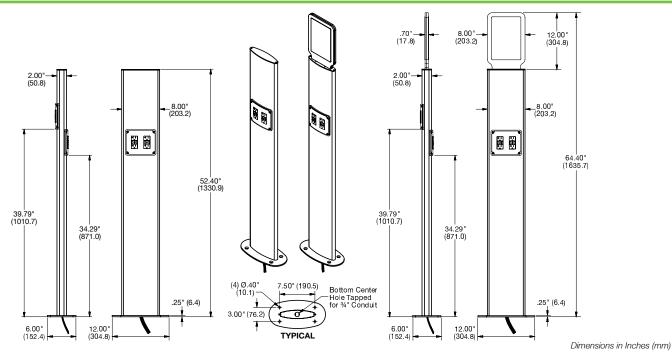




**HCPWRPED52LKGRY** 

### **Specifications**

• UL 1773 Listed, CSA Certified



# **Charging Solutions**



### **Features and Benefits**

### **USB Charging Receptacles Type-C • Type A&C • Type A**

Hubbell USB Chargers are available in the new Type-C port, a combination unit with Type A & C, and the legacy Type A, all with more power. The increase in power to a 5 Amp 5 Volt USB port adds capacity so that there is always ample current to support multiple device charging. Portable mobile manufacturers are using the faster Type-C ports. More phones, tablets and other electronic devices are expected to use this new standard.

### **Features**

- Compliant with USB BC1.2 battery charging and 3.0 power delivery. Compatible with USB 2.0, 3.0 and 3.1 devices
- USB Type-C port is legacy USB Type A compatible (adapter cord not included)
- Heavy duty stainless steel USB ports; rated for 10,000 cord insertions and removals
- Patented Hubbell Tamper-Resistant technology uses cam action shutters
- Designed for commercial, industrial and home use

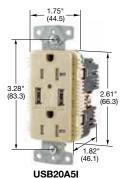




USB8300C5W



USB15AC5GY



Dimensions in Inches (mm)

### USB Charging Receptacles Type-C, Type A&C and Type A



Description	Color	Catalog Number	
Hospital Grade USB Charger Outlet,	Black	USB8200C5BK	USB8300C5BK
two Type-C port configurations,	Brown	USB8200C5	USB8300C5
high power 5 Amp, 5 Volt USB output,	Gray	USB8200C5GY	USB8300C5GY
Tamper-Resistant duplex receptacle,	lvory	USB8200C5I	USB8300C5I
USB ports rated 10,000 cycles.	Light Almond	USB8200C5LA	USB8300C5LA
•	Red	USB8200C5R	USB8300C5R
	White	USB8200C5W	USB8300C5W
Hospital Grade USB Charger Outlet,	Black	USB8200AC5BK	USB8300AC5BK
one Type A and one Type-C port configurations,	Brown	USB8200AC5	USB8300AC5
high power 5 Amp, 5 Volt USB output,	Gray	USB8200AC5GY	USB8300AC5GY
Tamper-Resistant duplex receptacle,	lvory	USB8200AC5I	USB8300AC5I
USB ports rated 10,000 cycles.	Light Almond	USB8200AC5LA	USB8300AC5LA
•	Red	USB8200AC5R	USB8300AC5R
	White	USB8200AC5W	USB8300AC5W
Hospital Grade USB Charger Outlet,	Black	USB8200A5BK	USB8300A5BK
two Type A port configurations,	Brown	USB8200A5	USB8300A5
high power 5 Amp, 5 Volt USB output,	Gray	USB8200A5GY	USB8300A5GY
Tamper-Resistant duplex receptacle,	Ivory	USB8200A5I	USB8300A5I
USB ports rated 10,000 cycles.	Light Almond	USB8200A5LA	USB8300A5LA
, ,	Red	USB8200A5R	USB8300A5R
	White	USB8200A5W	USB8300A5W
Commercial Grade USB Charger Outlet,	Black	USB15C5BK	USB20C5BK
two Type-C port configurations,	Brown	USB15C5	USB20C5
high power 5 Amp, 5 Volt USB output,	Gray	USB15C5GY	USB20C5GY
Tamper-Resistant duplex receptacle,	lvory	USB15C5I	USB20C5I
USB ports rated 10,000 cycles.	Light Almond	USB15C5LA	USB20C5LA
	White	USB15C5W	USB20C5W
Commercial Grade USB Charger Outlet,	Black	USB15AC5BK	USB20AC5BK
one Type A and one Type-C port configurations,	Brown	USB15AC5	USB20AC5
high power 5 Amp, 5 Volt USB output,	Gray	USB15AC5GY	USB20AC5GY
Tamper-Resistant duplex receptacle,	lvory	USB15AC5I	USB20AC5I
USB ports rated 10,000 cycles.	Light Almond	USB15AC5LA	USB20AC5LA
	White	USB15AC5W	USB20AC5W
Commercial Grade USB Charger Outlet,	Black	USB15A5BK	USB20A5BK
two Type A port configurations,	Brown	USB15A5	USB20A5
high power 5 Amp, 5 Volt USB output,	Gray	USB15A5GY	USB20A5GY
Tamper-Resistant duplex receptacle,	lvory	USB15A5I	USB20A5I
USB ports rated 10,000 cycles.	Light Almond	USB15A5LA	USB20A5LA
	White	USB15A5W	USB20A5W

Note: See page Tech-10 for Tamper-Resistant description. See section N for wallplates.



### SNAPConnect® USB Charger Duplex Receptacles



Description	Color	15A 125V AC	20A 125V AC
Hospital Grade SNAPConnect® USB Charger Tamper-Resistant Receptacle, two USB type 2.0 ports, 3.0 Amp, 5 Volt DC, 15 or 20 Amp, 125 Volt AC, Style Line® decorator duplex.	Black	SNAP8200USBBK	SNAP8300USBBK
	Brown	SNAP8200USB	SNAP8300USB
	Gray	SNAP8200USBGY	SNAP8300USBGY
	Ivory	SNAP8200USBI	SNAP8300USBI
	Light Almond	SNAP8200USBLA	SNAP8300USBLA
	Red	SNAP8200USBR	SNAP8300USBR
	White	SNAP8200USBW	SNAP8300USBW
SNAPConnect® USB Charger Tamper-Resistant Receptacle, two USB type 2.0 ports, 3.0 Amp, 5 Volt DC, 15 or 20 Amp, 125 Volt AC, Style Line® decorator duplex.	Black	SNAP15USBBK	SNAP20USBBK
	Brown	SNAP15USB	SNAP20USB
	Gray	SNAP15USBGY	SNAP20USBGY
	Ivory	SNAP15USBI	SNAP20USBI
	Light Almond	SNAP15USBLA	SNAP20USBLA
	White	SNAP15USBW	SNAP20USBW
Clear right angle terminal with 6 inch leads #12 AWG THHN/THWN-2; Polycarbonate housing material.	Solid	SNAP1RA	SNAP1RA
	Stranded	SNAP2RA	SNAP2RA



SNAP8300USBW





USB102W

### **USB Charger 2 and 4 Port Outlets**

Description	Color	2 Port Outlet, 3 Amp, Shallow Profile	4 Port Outlet, 5 Amp
USB Charger Outlet, USB type 2.0 ports, 5 Volt DC decorator.	Black	USB2BK	USB4BK
	Brown	USB2	USB4
	Gray	USB2GY	USB4GY
	Ivory	USB2I	USB4I
	Light Almond	USB2LA	USB4LA
	White	USB2W	USB4W

c (UL) us

### **Switch Combo Outlets**

Description	Color	Catalog Number
Switch Combo Outlet, two USB type 2.0 ports, 2.1 Amp, 5 Volt DC, Style Line® decorator.	Black Brown	USB102BK USB102
	Gray Ivory Light Almond White	USB102GY USB102I USB102LA USB102W



### WSB2X2USBALU

### 2X2 USB Work Surface Pop-Up Boxes

Surface Dimensions	Cut Out Dimensions	Product Depth	Maximum Surface Thickness	Finish	Catalog Number
5" x 5"	4.62" x 4.62"	3.55"	1.125"	Brushed Aluminum	WSBUSB2X2ALU
5" x 5"	4.62" x 4.62"	3.55"	1.125"	Black Powder Coat	WSBUSB2X2BLK

### PlugTrak® Raceway with USB Charger Outlets

USB type 2.0 ports, 2.4 Amp, 5 Volt DC, 15 Amp, 125 Volt AC receptacles.										
Material	Length	Ends	# of USB Ports	# of Single Receptacles	Color	Catalog Number				
Steel	3 ft.	6 in. leads	2	2	lvory	HBL20GB312UIV				
Steel	6 ft.	6 in. leads	4	4	lvory	HBL20GB612UIV				
Aluminium	3 ft.	6 in. leads	2	2	Aluminum	HBLALU20GB312U				
Aluminium	6 ft.	6 in. leads	4	4	Aluminum	HBLALU20GB612U				
Non-metallic	6 ft.	6 in. leads	4	8	Office White	PT156112U*				
Portable - Plug	in									
Steel	40 in.	6 ft. cord and plug	2	4	lvory	HBL20C215UIV				
Non-metallic	36 in.	6 ft. cord and plug	2	4	Office White	PT153112UP*				



Dimensions in Inches (mm)

Note: \*For additional colors add "BK" for Black or "W" for white.

# **Charging Solutions**



### ON-the-GO CHARGING Artwork/Logo Guidelines

Most Preferred

Least Preferred

Note: \*To achieve the most accurate colors please provide Pantone PMS Color information (when possible). All files should be sent in CMYK color mode if possible.

- File Formats | Options
- Al (Adobe Illustrator): These files are built in "layers" which makes it efficient to edit or manipulate them if necessary if changes/adjustments need to be made prior to submitting for production.
- **SVG (Vector File):** These files are pure vector format and are typically more than sufficient for producing production ready artwork.
- EPS (Encapsulated Postscript): These are self contained image files that usually contain everything we will need to prepare and produce production ready artwork, if generated from layered files.
- 4 Layered PDF (Portable Document Format): Most PDFs are compatible with Illustrator and if layers are preserved we can prepare and produce production ready artwork.

### The file formats below may not be sufficient for production ready artwork.

- PSD (Adobe Photoshop): If built and saved the correct way can usually be used to prepare and produce production ready artwork.
- PNG (Portable Network Graphic): These files contain only foreground images and will have a blank or no background, making them easy to place on any color or type of background. These file types may be sufficient for production ready artwork if the file is HD resolution, i.e. 1920 x 1080 or better.
- 7 JPG: The least compatible file to use with design and therefore should be considered a "last resort." If supplying a logo pulled off the Internet or saved down from a larger layered file, it more than likely will not be sufficient to prepare and produce production ready artwork.

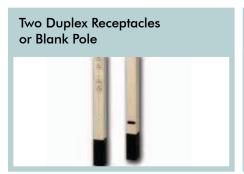
### **Process for Custom ON-the-GO Charging.**

- 1. Email custom artwork to Hubbell Territory Manager\* with the following information:
  - \* If you don't know your local Territory Manager call Hubbell Customer Service at (800) 288-6000.
  - A. Art must conform to one of the 7 formats
  - B. Type of unit; power charging pedestal, wall mount or floor stand
  - C. Quantity of order
  - D. Name or title for artwork
- 2. Proof will be generated based on product type and artwork submitted and emailed to customer for approval.
- 3. Upon Approval, submit signed approval form and PO to Hubbell TM for order processing.

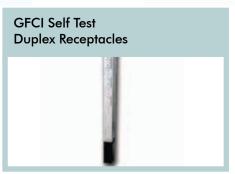
# **SECTION S**

# **Table of Contents**









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Aluminum Series Offering	S-4
Custom Pole Configurations	S-5
Division 16 Specifications	S-6

### Products at a Glance



### Two Duplex Receptacles or Blank Pole

- (2) 20A 125V Style Line® duplex receptacles; one circuit
- Available in three standard lengths: 10' 2", 12' 2" and 15' 2" to accommodate a variety of applications
- Available in five attractive durable paint colors: gray, ivory, black, white and office white painted or clear anodized aluminum finish to suit every need



# Isolated Ground with and without Surge Suppression

- (1) Orange isolated ground 20A 125V Style Line® duplex receptacle;
   (1) 20A 125V Style Line® duplex receptacle; two circuits
- (2) Orange isolated ground 20A 125V
   Style Line<sup>®</sup> duplex receptacles;
   (1) isolated ground surge suppression 20A 125V duplex receptacle; one circuit



### **GFCI Self Test and Duplex Receptacles**

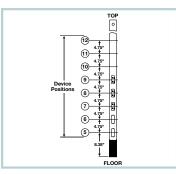
 (1) 20A 125V GFCI Self Test duplex receptacle with (2) ground fault protected 20A 125V Style Line<sup>®</sup> duplex receptacles; one circuit





### Adjustable T-Bar and Trim Kit

- Adjustable T-bar for mounting poles in the center of the ceiling tiles
- All service poles include ceiling trim plates, replacements also available in office white



### **Custom Pole Configurations**

- Create your own custom service poles using the chart on page S-5
- For configurations that require additional customization, please consult Hubbell Technical Services

### **Features and Benefits**

### **Aluminum Series Offering**

Hubbell offers a line of attractive and durable Aluminum Service Poles which distribute wiring from above the ceiling to workstations below.

They are offered in standard lengths of 10' 2", 12' 2" and 15' 2" with a variety of electrical wiring devices. Poles with three service capability have a divider to separate power and low voltage wiring.

Available in varying lengths and colors, custom options maximize space and allow workstations, retail checkout areas, collaboration areas, digital signage, vending machines, appliances and kiosks to be positioned away from the wall.

- Factory ordered custom pole lengths and configurations available for special applications
- UL listed





### Colors Available

 Available in five attractive durable paint colors: gray, ivory, black, white and office white painted and clear anodized aluminum finishes to suit every need



### Accessories

• Each pole include a ceiling trim mounting plate and bottom scuff boot



Black











Clear Anodized Aluminum



### **Aluminum Series Offering**



HBLPP10AI





### Three Service Aluminum Service Poles

Description	Color	10' 2" (3.10m)	12' 2" (3.71m)	15' 2" (4.62m)
(2) 20A 125V Style Line <sup>®</sup> duplex receptacles; one circuit	Black Gray Ivory Office White White Clear Anodized Aluminum	HBLPP10BK HBLPP10A HBLPP10AI HBLPP10OW HBLPP10W HBLPP10AAL	HBLPP12BK HBLPP12A HBLPP12AI HBLPP12OW HBLPP12W HBLPP12AAL	HBLPP15BK HBLPP15A HBLPP15AI HBLPP15OW HBLPP15W HBLPP15AAL
(1) Orange isolated ground 20A 125V Style Line® duplex receptacle; (1) 20A 125V Style Line® duplex receptacle; two circuits	Black Gray Ivory Office White White Clear Anodized Aluminum	HBLPP10IGBK HBLPP10IGA HBLPP10IGAI HBLPP10IGOW HBLPP10IGW HBLPP10IGAL	- - - - -	- - - - -
(2) Orange isolated ground 20A 125V Style Line® duplex receptacles; (1) isolated ground surge suppression 20A 125V duplex receptacle; one circuit	Black Gray Ivory Office White White Clear Anodized Aluminum	HBLPP10SBK HBLPP10SA HBLPP10SAI HBLPP10SOW HBLPP10SW HBLPP10SAL	- - - - -	- - - - - -
(1) 20A 125V GFCI Self Test duplex receptacle with (2) ground fault protected 20A 125V Style Line® duplex receptacles; one circuit	Black Gray Ivory Office White White Clear Anodized Aluminum	HBLPP10GFBK HBLPP10GF HBLPP10GFI HBLPP10GFOW HBLPP10GFW HBLPP10GFAL	HBLPP12GFBK HBLPP12GF HBLPP12GFI HBLPP12GFOW HBLPP12GFW HBLPP12GFAL	HBLPP15GFBK HBLPP15GF HBLPP15GFI HBLPP15GFOW HBLPP15GFW HBLPP15GFAL
Blank pole; divider; (4) Style Line <sup>®</sup> device knockouts	Black Gray Ivory Office White White Clear Anodized Aluminum	HBLPPOBK HBLPPOAI HBLPPOOW HBLPPOW HBLPPOAAL	HBLPPO12BK HBLPPO12A HBLPPO12AI HBLPPO12OW HBLPPO12W HBLPPO12AAL	HBLPPO15BK HBLPPO15A HBLPPO15AI HBLPPO15OW HBLPPO15W HBLPPO15AAL



HBLPP10GFW

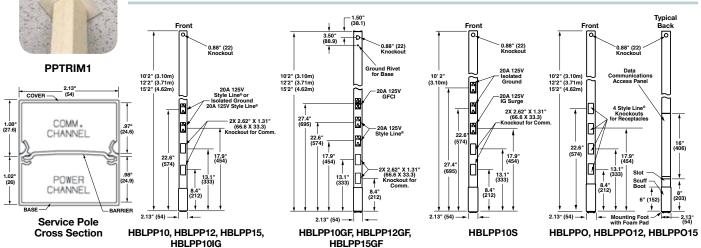
### **Accessories**

Description	Catalog Number
Adjustable T-bar assembly for mounting poles in the middle of ceiling tile.	ATB*
Replacement service pole trim kit (office white).	PPTRIM1*

Note: \* Not UL listed.



### **Dimensions**



### **Custom Pole Configurations**

Using the chart below, you can create a custom service pole. For configurations that require additional customization, please consult Hubbell Technical Service at (475) 882-4800.

### Position Selections

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
S P	1	0	0	2	1	1	В	В	В	Х	Х	Х	С	_

### Example: SP100211BBBXXXCI

10 Feet 02 Inches, (2) Rectangular Style Line® Knockouts for Data, (3) HBL2162 Duplex Receptacles, (2) Circuits (First 2 Receptacles on Circuit #1, Remaining Receptacles on Circuit #2), Ivory.

### Worksheet

Position Selections

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
S P														

Position 1 & 2: Height to the nearest foot.	08-22 Feet.	
Position 3 & 4: Height in inches up to 11".	00-11 Inches.	_
Position 5, 6, 7, 8, 9, 10, 11, 12: Starting at Position 5 Select Datacom Knockouts/Device Frames followed by Power Receptacle/Power Knockout options. If the service pole is power only, select receptacle options starting at Position 5. Empty Positions should be filled with an "X" to designate an empty field.  Note: If power receptacles are chosen, then power knockouts may not be chosen in the same service pole.	Power Selections  6 - Rectangular Style Line® Knockout (for blank poles only).  7 - ½" NPT Knockout (0.875" diameter, for blank poles only).  8 - ¾" NPT Knockout (1.109" diameter, for blank poles only).  A - 5362, 20A, 125V AC, Duplex.  B - HBL2162, 20A, 125V AC, Style Line® Decorator Duplex.  C - IG5362, 20A, 125V AC, I.G. Duplex.  D - IG2162, 20A, 125V AC, I.G. Style Line® Decorator Duplex.  G - HBL4700, 15A, 125V AC, I.G. Twist-Lock® Duplex.  H - IG4700A, 15A, 125V AC, I.G. Twist-Lock® Duplex.  I - IG2310, 20A, 125V AC, I.G. Twist-Lock® Dingle.  J - IG5361, 20A, 125V AC, Single.  K - HBL5361, 20A, 125V AC, Single.  L - HBL2310, 20A, 125V AC, Twist-Lock® Single.  N - HBL2610, 30A, 125V AC, Twist-Lock® Single.  N - HBL2320, 20A, 250V AC, Twist-Lock® Single.  O - HBL2620, 30A, 250V AC, Twist-Lock® Single.	TOP  12
Position 13: Power Circuits	<ul> <li>Z - No Circuits (Should only be selected when the service poles has ONLY Data and/or Power knockouts).</li> <li>A - All devices on a single circuit.</li> <li>B - 2 Circuits, First Receptacle on Circuit #1, Remaining Receptacles on Circuit #2.</li> <li>C - 2 Circuits, First 2 Receptacles on Circuit #1, Remaining Receptacles on Circuit #2.</li> <li>D - 2 Circuits, First 3 Receptacles on Circuit #1, Remaining Receptacles on Circuit #2.</li> <li>E - 2 Circuits, First 4 Receptacles on Circuit #1, Remaining Receptacles on Circuit #2.</li> <li>F - 2 Circuits, First 5 Receptacles on Circuit #1, Remaining Receptacles on Circuit #2.</li> <li>G - 2 Circuits, First 6 Receptacles on Circuit #1, Remaining Receptacles on Circuit #2.</li> <li>H - 2 Circuits, First 7 Receptacles on Circuit #1, Remaining Receptacles on Circuit #2.</li> </ul>	_
Position 14: Color	I - Ivory. G - Gray. W -White. K - Black. A - Aluminum with clear anodized finish.	-

### **Division 16 Specifications**

### Part 2: Products

2.01 Manufacturer

A. The power poles specified herein for branch circuit wiring shall be Hubbell Service Poles as manufactured by Hubbell Inc., Wiring Device-Kellems<sup>®</sup> or approved equal. Other manufacturers may be considered equal if they meet the performance requirements of this specification and have received prior written approval.

2.02 Components/Accessories

A. The hardware for mounting Service Poles in the middle of a ceiling tile shall be Hubbell adjustable T-Bar type ATB with trim plate kit type PPTRIM1.

2.03 Materials

### A. Standard and Custom Aluminum Service Poles

These Service Poles shall be extruded aluminum with a heavy gauge body (.050 ±.005 inches thick) to resist denting. These poles shall be two-channel to accommodate both power and low voltage services on the same side of the pole. Service poles shall be prewired with #12 AWG wire and equipped with specification grade Style Line® decorator receptacles (20A, 125V). These receptacles shall be Hubbell type HBL2162xx or an approved equal. The low voltage (back) channel of the service pole shall incorporate an access panel that provides a passageway to two Style Line® communication knockouts located on the front of the pole.

### **Finish**

Service Poles will include a painted or clear anodized finish.

Custom poles are available in Black, Gray, Ivory, Office White, White, and Clear Anodized Aluminum.

### Heights

Standard Service Poles shall be available in three sizes to accommodate various ceiling heights: 10 ft. 2 in. (3.10m), 12 ft. 2 in. (3.71m) and 15 ft. 2 in. (4.62m). Custom Poles shall be available in a range of sizes, a configurator pole is 8 through 22 ft. Other custom poles can be as short as 6 in. through 22 ft.

10 ft. 2 in. (3.10m): Hubbell type HBLPP10BK, HBLPP10A, HBLPP10AI, HBLPP10OW, HBLPP10W, and HBLPP10AAL. 12 ft. 2 in. (3.71m): Hubbell type HBLPP12BK, HBLPP12A, HBLPP12AI, HBLPP12OW, HBLPP12W, and HBLPP12AAL. 15 ft. 2 in. (4.62m): Hubbell type HBLPP15BK, HBLPP15A, HBLPP15AI, HBLPP15OW, HBLPP15W, and HBLPP15AAL. 8-22 feet: Hubbell Custom Poles.

### 2. Isolated Ground

The following Service Poles contain one Hubbell isolated ground receptacle Hubbell #IG2162 and one #HBL2162xx, both 20A, 125V Style Line® decorator receptacles (wired on separate circuits). Custom poles with a variety of receptacles may also include isolated ground type devices. 10 ft. 2 in. (3.10m): Isolated Ground; Hubbell Type HBLPP10IGBK, HBLPP10IGA, HBLPP10IGAL.

### 3. Surge Suppression/Isolated Ground

The following Service Poles contain one Hubbell #IG5362xxSA (20A, 125V Surge/IG Style Line® decorator duplex) and two #IG2162 (20A, 125V IG Style Line® decorator duplex) receptacles. All receptacles are wired on the same circuit, therefore providing surge protection at each outlet. Custom poles with a variety of receptacle options may also include surge suppression. 10 ft. 2 in. (3.10m): With Surge; Hubbell Type HBLPP10SBK, HBLPP10SAL, HBLPP10SAL, HBLPP10SOW, HBLPP10SW, and HBLPP10SAL.

### 4. GFCI

The following Service Poles contain one Hubbell #GFST20 (20A, 125V GFCI Self Test Style Line® decorator duplex) and two #HBL2162 (20A, 125V Style Line® decorator duplex) receptacles. All receptacles are wired on the same circuit, the two HBL2162 are GFCI protected by being wired to the load side of the GFST20.

10 ft. 2 in. (3.10m): Hubbell type HBLPP10GFBK, HBLPP10GF, HBLPP10GFI, HBLPP10GFOW, HBLPP10GFW, and HBLPP10GFAL. 12 ft. 2 in. (3.71m): Hubbell type HBLPP12GFBK, HBLPP12GF, HBLPP12GFI, HBLPP12GFOW, HBLPP12GFW, and HBLPP12GFAL. 15 ft. 2 in. (4.62m): Hubbell type HBLPP15GFBK, HBLPP15GF, HBLPP15GFI, HBLPP15GFOW, HBLPP15GFW, and HBLPP15GFAL.

### 5. Blank

The following Service Poles are two-channel and do not include receptacles or wiring. All poles include a barrier which starts between the second and third knockout positions from the bottom of the pole. Custom poles with or without a barrier are available as well. 10 ft. 2 in. (3.10m): Hubbell type HBLPPOBK, HBLPPOA, HBLPPOAI, HBLPPOOW, HBLPPOW, and HBLPPOAAL. 12 ft. 2 in. (3.71m): Hubbell type HBLPPO12BK, HBLPPO12A, HBLPPO12AI, HBLPPO12OW, HBLPPO12W, and HBLPPO15AAL. 15 ft. 2 in. (4.62m): Hubbell type HBLPPO15BK, HBLPPO15AA, HBLPPO15AI, HBLPPO15OW, HBLPPO15W, and HBLPPO15AAL.

### B. Voice/Data Interface

All Service Poles must allow for acceptance of Hubbell Style Line® communication outlets.

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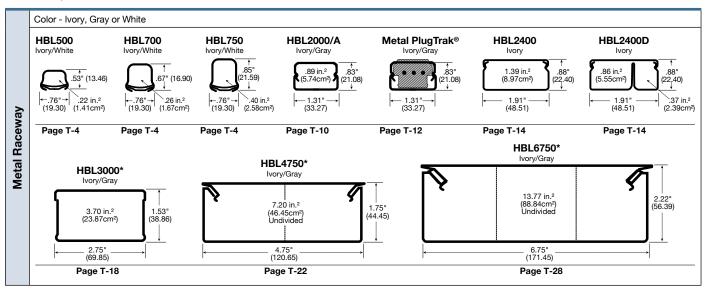
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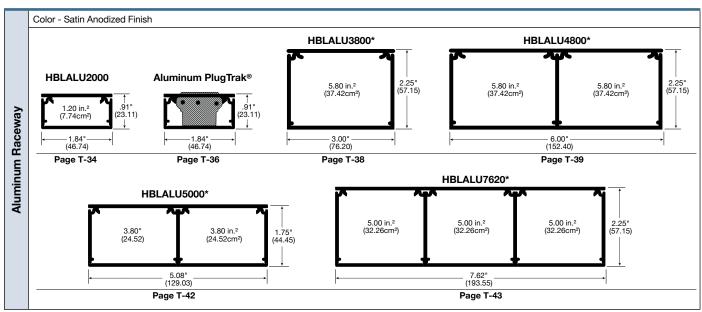
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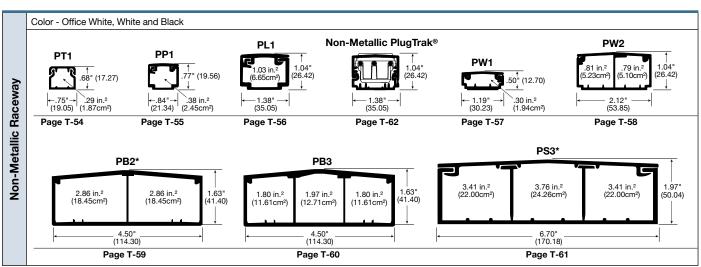
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### Raceway Profiles - Quick Reference Guide







Note: \*Available in PRE-WIRED.

Channel Area in Square Inches (square centimeters).

# **Metal Raceway**

### Products at a Glance



### HBL500, HBL700 and HBL750 Series

 Hubbell's exclusive HBL750 Series adds an additional profile for data and electrical applications



### Innovative Box Design

- Hubbell Handi-Screw<sup>®</sup> eases installation by eliminating difficult to install long screws
- Rounded corners with no sharp edges
- One seam construction provides a "clean" look
- Box design allows standard wallplates to be mounted flush with virtually no perimeter profile exposed
- Full line of metal wallplates available
   See page T-45 for selection



### **Enhanced Datacom Capabilities**

- Capacity for up to five Category 5e, three Category 6, or two Category 6A cables
- Available with 1½ in. (38.10) Category 6 and 6A bend radius fittings
- Largest single channel low profile raceway available in its class
- Ideal for datacom and oversized neutral applications



### White Metal Raceway

- HBL750 Series available in white
- Full line of product
- Additional color options available for architects and interior designers



### **Retrofit Box for Fire Alarm Detectors**

- Fits most manufacturers of audible alarm systems
- Compatible with HBL500, HBL700 and HBL750 Series Metal Raceway
- Available in white and ivory



	Description	Color	Length	HBL500 Series	HBL700 Series	HBL750 Series
ב	Base and Cover	lvory	5 ft.	_ 	_	HBL7505IV
0 al	Available in 5 ft. (1.5m) lengths, packed 50 ft. (15m) per carton and 10 ft. (3m)	lvory White	10 ft. 10 ft.	HBL50010IV HBL50010W	HBL700IV HBL700W	HBL75010IV HBL75010W
-700 Serie	lengths, packed 100 ft. (30m) per carton.			A: .53" (13.46)	A: .67" (16.90)	A: .85" (21.59)
田宮	HBL5701C coupling furnished with each length.			B: .76" (19.30)	B: .76" (19.30)	B: .76" (19.30)
, L	oder longui.					
<b>모</b> 2				В .	⊢ B →	T B
兕						A
					A	















	Color	1-Gang	2-Gang	3-Gang	4-Gang	5-Gang	6-Gang
Standard	Ivory White	<b>HBL5748IVA HBL5748WA</b> A: 4.54" (115.32) B: 2.82" (71.63) C: 1.75" (44.45)	HBL57482IVA HBL57482WA A: 4.54" (115.32) B: 4.64" (117.86) C: 1.75" (44.45)	<b>HBL57483IVA HBL57483WA</b> A: 4.54" (115.32) B: 6.45" (163.88) C: 1.75" (44.45)	HBL57484IVA — A: 4.54" (115.32) B: 8.26" (209.91) C: 1.75" (44.45)	HBL57485IVA — A: 4.54" (115.32) B: 10.01" (255.93) C: 1.75" (44.45)	HBL57486IVA —
Shallow	Ivory White	<b>HBL5747IVA HBL5747WA</b> A: 4.54" (115.32) B: 2.82" (71.63) C: 1.38" (35.05)	HBL57472IVA HBL57472WA A: 4.54" (115.32) B: 4.64" (117.86) C: 1.38" (35.05)	HBL57473IVA — A: 4.54" (115.32) B: 6.45" (163.88) C: 1.38" (35.05)	_	_	-
Deep	Ivory White	HBL5744SIVA HBL5744SWA A: 4.54" (115.32) B: 2.82" (71.63) C: 2.25" (57.00)	HBL5744S2IVA HBL5744S2WA A: 4.54" (115.32) B: 4.64" (117.86) C: 2.25" (57.00)	HBL5744S3IVA — A: 4.54" (115.32) B: 6.45" (163.88) C: 2.25" (57.00)	=	Ξ	-
Extra Deep	Ivory White	<b>HBL5744IVA HBL5744WA</b> A: 4.54" (115.32) B: 2.82" (71.63) C: 2.75" (69.85)	HBL57442IVA HBL57442WA A: 4.54" (115.32) B: 4.64" (117.86) C: 2.75" (69.85)	HBL57443IVA  A: 4.54" (115.32) B: 6.45" (163.88) C: 2.75" (69.85)	Ξ	Ξ	=
	e Trade KOs	2- ½"	1 - ½", ¾" Concentric 1 - Rectangular	3 - ½"	4 - ½"	5 - ½"	6 - ½"

Note: For datacom applications, box selection is dependent on depth of connectors (jacks). See pages T-45 and T-46 for datacom product selection, or visit our site at www.hubbell-wiring.com for our Full Line Catalog and additional information.













	Description	Color	1-Gang	1-Gang Deep	1-Gang Blank	2-Gang	3-Gang
nsion	Extension Boxes To extend exisiting flush switch and receptacle boxes. Blank is used where	Ivory White	HBL5751IVA HBL5751WA	HBL5751AIVA HBL5751AWA	HBL5760IVA	HBL57512IVA —	HBL57513IVA —
Exter	receptacle boxes. Blank is used where it is desired to blank original outlet.		A: 4.54" (115.32) B: 2.82" (71.63) C: 1.38" (35.05)	A: 4.54" (115.32) B: 2.82" (71.63) C: 1.75" (44.45)	A: 4.54" (115.32) B: 2.82" (71.63) C: 1.13" (28.70)	A: 4.54" (115.32) B: 4.64" (117.86) C: 1.38" (35.05)	A: 4.54" (115.32) B: 6.45" (163.88) C: 1.38" (35.05)



	E300, TIBE 700 and TIBE 7	00 00110					
	Description	Color	1-Gang		Description	Color	2-Gang
es	Low Profile Switch/Receptacle Base has ½ in. trade size KOs.	lvory White	HBL5748SIVA HBL5748SWA A: 4.54" (115.32) B: 2.82" (71.63) C: 1.13" (28.70)	Se Se	Alarm Device Box Surface mounting of alarm devices and safety signals.	Ivory White Red	HBL5752IVA — HBL5752RA A: 4.54" (115.32) B: 4.64" (117.86) C: 1.38" (35.05)
-Gang Specialty Boxes	Combination Switch/Recept. Connects surface runs of ½ in. trade size conduit, one raceway twistout each side and three raceway twistouts top and bottom.	lvory White	HBL5745IVA HBL5745WA A: 4.54" (115.32) B: 2.82" (71.63) C: 1.75" (44.45)	ang Specialty Boxes	Extra Deep Alarm Device Box For surface mounting of alarm devices and safety signals. Cover is 2.75 in. (69.85) deep.	Ivory White Red	HBL5753IVA — HBL5753RA A: 4.54" (115.32) B: 4.64" (117.86) C: 2.75" (69.85)
1-9	Utility Box* For use as a tee, cross, pull box, junction box or blank box. Base has ½ in. trade size KOs.	lvory White	HBL57242IVA HBL57242WA A: 4.12" (104.78) B: 2.00" (50.80) C: 1.39" (35.31)	2-Gang	Distribution Box Twistouts permit three parallel raceway runs on each side. Cover takes devices with mounting screw centers of 2.75 in. (69.85), 3.5 in. (89.00), 4.06 in. (103.00) and canopy fixture not larger than 4.63 in. (117.00). Can be used with HBL5736IV (blank cover) to create junction box.	Ivory White	A: 4.54" (115.32) B: 4.64" (117.86) C: 1.38" (35.05)
Note:	*Use catalog number HBL5791 for connec	ting ½ in. EM	T to HBL5745 and HBL5	7242	boxes.		









	Description	Color	4.75 inches O.D.	5.50 inches O.D.	6.38 inches O.D	
d Boxes	Extension Box (Open Base) For mounting on 3.25 in. (83.00) or 4 in. (102.00) round or square conduit boxes or other recessed outlets. Cover takes any device with mounting screw centers of 2.75 in. (69.85), 3.5 in. (89.00) and 4.06 in. (103.00).	lvory White	<b>HBL5737IVA HBL5737WA</b> A: 1.02" (26.00) B: 4.75" (120.65)	HBL5737AIVA HBL5737AWA A: 1.02" (26.00) B: 5.50" (140.00)	HBL5739AIVA — A: 1.02" (26.00) B: 6.38" (162.01)	
Roun	Fixture Box (Solid Base) To hang fixtures. Cover takes any device with mounting screw centers of 2.75 in. (69.85), 3.5 in. (89.00) and 4.06 in. (103.00). Both boxes can be used as a pull or junction box when used with HBL5736IV/W (blank cover).	lvory White	<b>HBL5738IVA HBL5738WA</b> A: 1.02" (26.00) B: 4.75" (120.65)	<b>HBL5738AWA HBL5738AWA</b> A: 1.02" (26.00) B: 5.50" (140.00)	<b>HBL5739IVA HBL5739WA</b> A: 1.02" (26.00) B: 6.38" (162.01)	

	Description	Color	Catalog Number		Description	Color	Catalog Number
Boxes	Outlet Box For devices with mounting screw centers of 1.47 in. (37.00), 1.63 in. (41.00), 1.69 in. (44.00) or 1.84 in. (46.00).	Ivory White	HBL5733IVA — A: 1.02" (26.00) B: 3.00" (76.00)		Blank Cover For use with HBL5733IVA. Has ½ in. trade size KO in center.	Ivory White	HBL5731IV — A: .24" (6.10) B: 2.40" (60.96)
Specialty Round B	Fanbox with Solid Base Cover accepts fan bracket with mounting centers of 3.2 in. (81.00). Rated for fans and fixtures up to 50 lbs.	Ivory White	HBL5738AFIVA HBL5738AFWA A: .38" (9.75) B: 4.19" (106.30)	Round Covers	Blank Cover For use with HBL5735IVA, HBL5737IVA/ WA, HBL5737AIVA/WA, HBL5739AIVA, HBL5738IVA/WA, HBL5738AIVA/WA and HBL5739IVA/WA. Has ½ in. trade size KO in center.	lvory White	HBL5736IV HBL5736W A: .38" (9.75) B: 4.19" (106.30)
Ø	Retrofit Box for Fire Alarm Detectors For installing round alarm sensors.	Ivory White	<b>HBL5739AABWA HBL5739AABWA</b> A: 1.62" (41.15) B: 6.50" (165.10)				



	Description	Color	HBL500 Series	HBL700 and HBL750 Series	Description	Color	HBL500, HBL700 & HBL750 Series
	Internal Elbow For inside surfaces at right angles.	Ivory White	HBL517IV HBL517W A: 3.33" (84.51) B: .58" (14.73) C: 3.33" (84.51)	HBL717IVA HBL717WA A: 3.33" (84.51) B: .90" (22.86) C: 3.33" (84.51)	Internal Elbow Bend Radius For inside surface at right angles requiring a 1.5 in. (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	lvory White	HBL5717BRIVA — A: 3.33" (84.51) B: .91" (23.11) C: 3.33" (84.51)
		С				C B	
	External Elbow For outside surfaces at right angles.	Ivory White	HBL518IV HBL518W A: 2.59" (65.71) B:58" (14.73) C: 2.59" (65.71)	HBL718IVA HBL718WA A: 2.59" (65.71) B: .90" (22.86) C: 2.59" (65.71)	External Elbow Bend Radius For outside surfaces at right angles requiring a 1.5 in. (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	Ivory White	HBL5718BRIVA
Elbows			ÎB		A A	<u> </u>	
፱	<b>90° Flat Elbow</b> For right angle turns on same surface.	Ivory White	HBL511IV HBL511W A: 2.68" (68.13) B: .61" (15.50) C: 2.68" (68.13)	HBL711IVA HBL711WA A: 2.68" (68.13) B: .90" (22.86) C: 2.68" (68.13)	Flat Elbow Bend Radius For right angle turns requiring a 1.5 in. (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	lvory White	A: 3.16" (80.34) B: .91" (23.11) C: 3.16" (80.34)
	· Pi	A	В				
	<b>45° Flat Elbow</b> For diagonal 45° turns on same surface.	Ivory White	HBL512IV  A: 2.46" (62.61)  B: .58" (14.73)  C: 2.46" (62.61)	HBL712IVA — A: 2.70" (68.49) B: .91" (23.06) C: 2.70" (68.49)	Internal Twisted Elbows For 90° twist with 90° turn. For double turn at right angles from one to another From a flat run on a side wall to a flat run on a ceiling, edge of door or	lvory	Right Elbow HBL5711RHIVA HBL5711RHWA Left Elbow HBL5711LHIVA
		A C			window trim.	White	HBL5711LHWA A: 2.98" (75.72) B: .94" (23.75) C: 3.00" (76.20)

		Description	Color	HBL500, HBL700 & HBL750 Series	Description	Color	HBL500, HBL700 & HBL750 Series
		Tee Fitting	Ivory	HBL5715IVA	Tee Fitting Bend Radius	Ivory	HBL5715BRIVA
ı	Lees	For branches at right angles.	White	<b>HBL5715WA</b> A: 3.06" (77.67) B: 1.14" (28.86) C: 3.03" (76.96)	For branches at right angles requiring a 1.5 in. (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	White	A: 5.55" (140.88) B: .90" (22.86) C: 3.16" (80.34)
		BI			в		

	Description	Color	HBL500, HBL700 & HBL750 Series	Description	Color	HBL500, HBL700 & HBL750 Series
Fittings	Support Clip For supporting lengths of HBL500, HBL700 or HBL750 Raceway.	lvory White	<b>HBL5703IV</b> <b>HBL5703W</b> A: 2.51" (63.75)	Flexible Section For getting around offsets, side bends, twisted turns or curved surfaces.	Ivory White	HBL5700FIVA HBL5700FWA A: 18.00" (457.20)

nipple and locknut.



Description	Color	HBL500, HBL700 & HBL750 Series	Description	Color	HBL500, HBL700 & HBL750 Series
Entrance Connector One ¾ in. KO for panel or conduit connection. One ¾ in. chase nipple and locknut furnished.	Ivory White	HBL5786AIVA HBL5786AWA A: 1.50" (38.10) B: 1.84" (46.74) C: 3.89" (98.87)	1 -	Ivory White	HBL5786IVA HBL5786WA A: 1.50" (38.10) B: 1.84" (46.74) C: 3.89" (98.87)
Elbow Box Connector For connecting raceway at right angles to conduit boxes, panel boxes, etc. having ½ in. nipple for trade size conduit.	lvory White	HBL5783IVA — A: 2.13" (54.05) B: 1.24" (31.50)	1	Ivory White	HBL5784IVA — A: 2.13" (54.05) B: 1.24" (31.50)
Combination Connector For connecting raceway without offsetting to any 3.25 in. (83.00) or 4 in. (102.00) outlet box mounted on the surface with a KO for ½ in. trade size conduit. Spring steel bushing eliminates need for conduit	lvory White	<b>HBL5785AIVA</b> <b>HBL5785AWA</b> A: 1.50" (38.10) B: 1.84" (46.74) C: 3.89" (98.87)	Corner Box For connecting HBL500, HBL700 or HBL750 Raceway from ceiling or corner. Each leg of base has ½ in. trade size KO.	Ivory White	HBL5719IVA HBL5719WA A: 2.50" (63.50) B: 2.50" (63.50) C: 2.40" (60.96)

			<i>→</i>	
Color	HBL500 Series	HBL700 Series	HBL750 Series	
lvory White	HBL500TFIV	HBL700TFIV	HBL750TFIV	
	B: .89" (22.61)	B: .89" (22.61)	B: .89" (22.61)	
C	C: 2.15" (54.61)	C: 2.15" (54.61)	C: 2.15" (54.61)	
lvory White	HBL504IV HBL504W	HBL7004IV HBL7004W	HBL7504IV HBL7504W	
	B: .50" (12.70)	B: .50" (12.70)	B: .50" (12.70)	
AD B				
lvory White	<b>HBL506IV</b> <b>HBL506W</b> A: .60" (15.24) B: .80" (20.31)	HBL7006IV HBL7006W A: .69" (17.40) B: .80" (20.31)	<b>HBL7506IV</b> <b>HBL7506W</b> A: .91" (23.10) B: .80" (20.31)	
B				
Steel*	<b>HBL502B</b> A: .35" (8.83) B: .70" (17.68)	<b>HBL7002B</b> A: .49" (12.50) B: .78" (19.80)	<b>HBL7502B</b> A: .60" (15.24) B: .70" (17.68)	
B				
	lvory White  Company And	Vory   HBL500TFIV	Vory	Nory White

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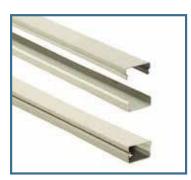
	Description	Material	HBL500, HBL700 & HBL750 Series		Description	Material	HBL500, HBL700 & HBL750 Series
	Box Connector For connecting raceway to conduit boxes or panel boxes having KO for conduit. May also be used for conduit type fittings.	Steel*	HBL5781 1½" NPT (13) Male A: .75" (19.1) B: 1.24" (31.62)	<b>HBL5781A</b> 3/4" NPT (19) Male A: .75" (19.1) B: 1.24" (31.62)	1/2 in. EMT Connector For connecting raceway to conduit boxes or panel boxes having KO for conduit.	Steel*	<b>HBL5791</b> A: 1.20" (30.48) B: 1.09" (27.70)
	type illungs.	A					
	Conduit Connector For connecting raceway to conduit.	Steel*	HBL5782C ½" NPT (13) Female A: .75" (19.1) B: 1.75" (44)	<b>HBL5782A</b> 3/4" (19.1) Female A: .75" (19.1) B: 1.75" (44)	Coupling For joining and supporting lengths of HBL500, HBL700 or HBL750 Raceway.	Steel**	<b>HBL5701C</b> A: 2.00" (50.80)
		B	٨			A	
Fittings	Grounding Clamp Provides grounding means for ½ in. trade size conduit using locknut.	Steel**	HBL5709GC A: 1.04" (26.03) B: 1.18" (29.84)		Ground Clamp Used to provide additional grounding of raceway or to ground remotely located devices. Attach ground wire to screw as required by National Electrical Code.	Steel**	<b>HBL5709</b> A: 2.00" (50.80)
	0		ſ			A	
	Special Nipple For hanging or connecting either .375 in. (9.5) or .5 in. (12.7) fixtures to Hubbell fittings with ½ in. trade size KOs.	Steel*	<b>HBL5780</b> A: .63" (16.00)		Armored Cable Connector For connecting 14/2, 14/3, 12/2 and 12/3 "MC" and armored cable to Hubbell fittings. A short piece of HBL500, HBL700 or HBL750 Series Raceway must be used between this connector and the Hubbell fitting.  Not for connection to ½ in. (12.7)	Steel**	<b>HBL5790B</b> A: 2.00" (50.80) B: .99" (25.25)
					flex conduit.	B A	

Note: \*Zinc Plated Steel. \*\*Galvanized Steel.

	Description	HBL500 Series	HBL700 Series	HBL750 Series	Description	Color	HBL500, HBL700 & HBL750 Series
Tools	Cutter Portable cutter for HBL500, HBL700 or HBL750 Series Raceways.	HBL605CUT	HBL700CUT	HBL607CUT	Raceway Bender Portable bender for HBL500, HBL700 or HBL750 Series Raceways.	•	HBL600B
	Cutter Replacement Blade	HBL605K	HBL700K	HBL607K	Touch-Up Paint Pen	Ivory White	HBLIWEP HBLWWEP
		)	·				

# **Metal Raceway**

### Products at a Glance



### **HBL2000A Raceway**

- Cover is 0.040 in. (1.016) thick which allows up to 600V AC
- Higher capacity power applications (up to 26 #12 AWG wires)
- Available in cover only or base and cover options



### Innovative Box Design

- Hubbell Handi-Screw® eases installation by eliminating difficult to install long screws
- Rounded corners with no sharp edges
- One seam construction provides a "clean" look
- Box design allows standard wallplates to be mounted flush with virtually no perimeter profile exposed
- Full line of metal wallplates available
   See page T-45 for selection



### **Bend Radius Fittings**

- 1½ in. (38.10) bend radius
- Ideal for high speed data cables including Category 5, 5e, 6 and 6A applications

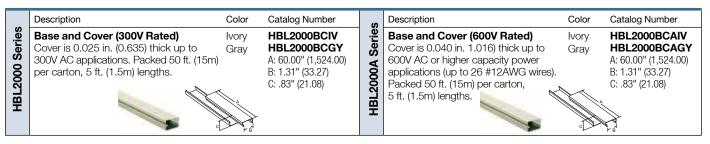


# Metal PlugTrak® Featuring Exclusive Receptacle Design

- Gray or ivory scratch resistant finish
- Multiple spacing configurations
- Hubbell designed and manufactured single receptacle
- Insulation displacement wiring provides superior wire retention
- Mates with HBL2000 Series Metal Raceway
- Available in 3 ft. (0.9m), 5 ft. (1.5m) and 6 ft. (1.8m) lengths
- Tamper-Resistant and USB versions available



### HBL2000 and HBL2000A Series



	Description	Color	Catalog Number	Description	Color	Catalog Number
over	<b>5 Ft. Base Only</b> For use with HBL2000 and HBL2000A raceway. Packed 50 ft. (15m) per carton, 5 ft. (1.5m) lengths.	Ivory Gray	HBL2000B5IV HBL2000B5GY A: 60.00" (1,524.00) B: 1.31" (33.27)	5 Ft. Cover Only (300V Rated) Cover is 0.025 in. (0.635) thick. Packed 50 ft. (15m) per carton, 5 ft. (1.5m) lengths.	lvory Gray	HBL2000CIV HBL2000CGY A: 60.00" (1,524.00) B: 1.31" (33.27)
Base and C		A B		5 Ft. Cover Only (600V Rated) Cover is 0.040 in. (1.016) thick up to 600V AC or higher capacity power applications (up to 26 #12AWG wires). Packed 50 ft. (15m) per carton, 5 ft. (1.5m) lengths.	lvory Gray	HBL2000CAIV HBL2000CAGY A: 60.00" (1,524.00) B: 1.31" (33.27)

	Description	Color	Catalog Number	Description	Color	Catalog Number
Device Boxes	1-Gang Device Box For deep switches and receptacles. Base has one ½ in. trade size KO and rectangular KO for extension to wall box.	Ivory Gray	HBL2048IV HBL2048GY A: 4.54" (115.32) B: 2.82" (71.63) C: 1.75" (44.45)	2-Gang Device Box For deep switches and receptacles. Base has one ½ in. trade size KO and rectangular KO for extension to wall box.	lvory Gray	HBL20482IV HBL20482GY A: 4.54" (115.32) B: 4.64" (117.86) C: 1.75" (44.45)
	Internal Corner Coupling For surfaces at right angles, or for use a straight-through fitting. Furnished wit one fiber bushing.		HBL2017TC A: 1.30" (32.98) B: 1.40" (35.56)	Internal Elbow Bend Radius For inside surface at right angles requiring a 1.5" (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	lvory Gray	HBL2017BRIV* HBL2017BRGY* A: .85" (21.56) B: 3.47" (88.11)
Elbows	External Elbow Coupling For right angle turns around external corners.	lvory Gray	HBL2018CIV HBL2018CGY A: 1.88" (47.75)	External Elbow Bend Radius For outside surfaces at right angles requirir a 1.5 in. (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	Ivory ag Gray	HBL2018BRIV* HBL2018BRGY* A: 5.11" (129.72)
	90° Flat Elbow For right angle turns on same surface.	lvory Gray	<b>HBL2011IV* HBL2011GY*</b> A: 2.56" (65.02)	Flat Elbow Bend Radius For branches at right angles requiring a 1.5 in. (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	lvory Gray	HBL2011BRIV* HBL2011BRGY* A: 4.29" (109.03)
Tees	<b>Tee Fitting</b> For branches at right angles. Couplings furnished.	lvory Gray	HBL2015IV* HBL2015GY* A: 6.00" (152.40) B: 2.81" (71.44) C: 4.00" (101.60)	Tee Fitting Bend Radius For branches at right angles. Couplings furnished. Suitable for Category 5, 5e, 6 and 6A applications.	lvory Gray	HBL2015BRIV* HBL2015BRGY* A: 7.35" (186.78) B: 4.33" (110.00)

Note: \*HBL2001C couplings included. \*\*Galvanized Steel. Dimensions in Inches (mm)



## HBL2000 and HBL2000A Series

	Description Color	Catalog Number	Description	Color	Catalog Number
	For transitioning from Wiremold® 2000 Gray Raceway to Hubbell HBL2000 Raceway.	HBL2000TFIV HBL2000TFGY A: .82" (20.71) B: 1.38" (35.12) C: 2.04" (51.82)	Entrance End Fitting For connecting HBL2000 Raceway with one ½ in. conduit and armored cable connectors.	Ivory Gray	HBL2010A2IV HBL2010A2GY A: 3.01" (76.45) B: 1.30" (33.02) C: 1.49" (37.85)
End Fittings	Blank End Fitting Ivory For closing open end of HBL2000 Gray Raceway.	HBL2010BIV HBL2010BGY A: .78" (19.94)	Large Capacity Entrance End Fitti Offers larger capacity than HBL2010A2 GY. One ½ in. trade size KO on each si ½ in. and ¾ in. concentric KOs on end and bottom.	IV/ Gray de,	HBL2010A3IV HBL2010A3GY A: 3.69" (93.80) B: 2.02" (51.18) C: 1.79" (45.36)
	End Reducing Connector For connecting HBL2000 Raceway to HBL500 Raceway through end of HBL2000 Raceway.	<b>HBL2089EIV</b> A: .78" (19.81)	Side Reducing Connector For connecting HBL2000 Raceway to HBL500 Raceway through side of HBL2000 Raceway.	Ivory	<b>HBL2089IV*</b> A: 6.00" (152.40) B: 3.25" (82.55)
	Cover Clip Use to cover potential openings where two pieces of HBL2000 Raceway cover come together.	HBL2006IV HBL2006GY A: .75" (19.05)	Flush Plate Adaptor For feeding HBL2000 Raceway from an existing wall outlet. ½ in. threaded stud with steel locknut for grounding.	Ivory Gray	HBL2051HIV HBL2051HGY A: 4.50" (114.30)
Fittings	Wire Clip For holding conductors in place in the raceway base. For use with HBL2000ClV/GY cover only.	HBL2000WC A: .44" (11.18) B: .24" (6.03) C: 1.24" (31.50)	Wire Clip For holding conductors in place in the raceway base. For use with HBL2000CAIV/GY cover only.	Steel**	HBL2000WCA A: .44" (11.18) B: .60" (15.17) C: 1.24" (31.50)
Ē	Coupling Steel** For joining lengths of HBL2000 Raceway.	<b>HBL2001C</b> A: 2.00" (50.80)	Supporting Clip For temporarily supporting lengths of HBL2000 Raceway at any point. Mount with #6 flat head fastener. Has set screw for locking to raceway. Raceway must be screwed to the	Steel**	<b>HBL2003SC</b> A: 2.00" (50.80)
	Ground Clamp For connection of equipment grounding conductor to provide an additional ground to raceway. Galvanized steel.	<b>HBL2009GC</b> A: 1.00" (25.64)	wall for secure fastening.		

Note: \*HBL2001C couplings included. \*\*Galvanized Steel.

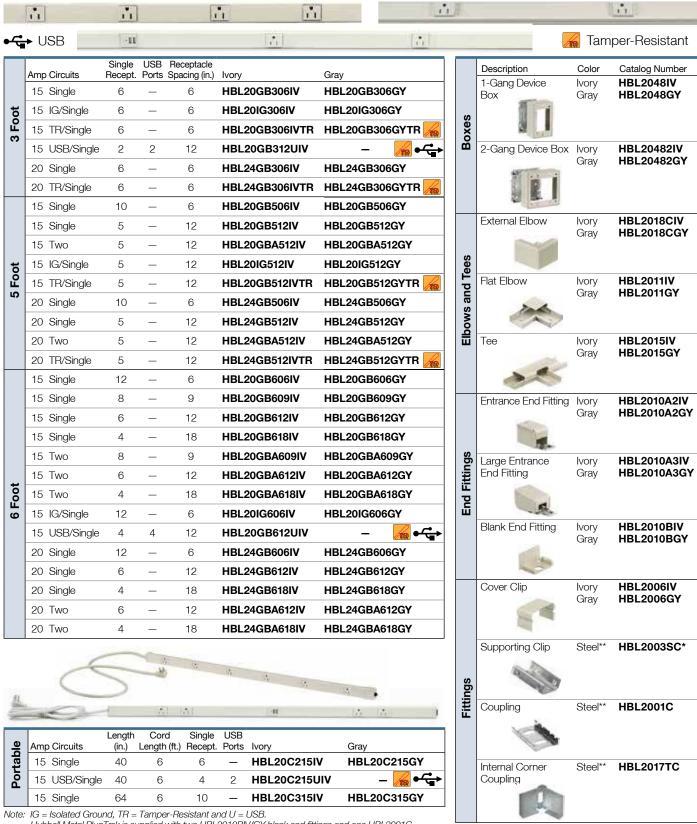
	Description	Catalog Number	Description	Color	Catalog Number
Tools	Cutter Portable cutter for HBL2000 Series Raceway. (Not for use with HBL2000A series).	HBL620C	Touch-Up Paint Pen	lvory Gray	HBLIWEP HBLGWEP
	Cutter Replacement Blade Set	HBL620BCK			

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### Metal PlugTrak® Series

Available in Standard, Isolated Ground (IG), Tamper-Resistant (TR) and USB (U) versions.



Hubbell Metal PlugTrak is supplied with two HBL2010BIV/GY blank end fittings and one HBL2001C coupling. Catalog number suffix "IV" for ivory finish and "GY" for gray finish. Outlets match raceway color. "IG" Isolated ground receptacles have orange triangles. Portable PlugTrak includes 15A circuit breaker.

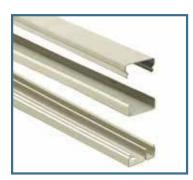
Dimensions in Inches (mm)

Note: \*Support clip HBL2003SC for supporting Portable Metal PlugTrak only.

\*\*Galvanized Steel.

See pages T-10 and T-11 for additional information.

### Products at a Glance



### HBL2400 and HBL2400D Raceway

- Increased capacity, over HBL2000 Series Raceway
- Divided base allows for dual services within one raceway profile



### Innovative Box Design

- Hubbell Handi-Screw® eases installation by eliminating difficult to install long screws
- Rounded corners with no sharp edges
- One seam construction provides a "clean" look
- Box design allows standard wallplates to be mounted flush with virtually no perimeter profile exposed
- Full line of metal wallplates available See page T-45 for selection



### **Bend Radius Fittings**

- 1½ in. (38.10) bend radius
- Ideal for high speed data cables including Category 5, 5e, 6 and 6A applications



## HBL2400 and HBL2400D Series

es	Description	Color	Catalog Number
HBL2400 Serie	Undivided Base and Cover Packed 50 ft. (15m) per carton, 5 ft. (1.5m) lengths.	lvory	HBL2400BCIV A: 60.00" (1,524.00) B: 1.91" (48.51) C: .88" (22.40)

	Description	Color	Catalog Number	Description	Color	Catalog Number
Series	10 Ft. Base, Undivided Packed 50 ft. (15m) per carton, 10 ft. (3m) lengths.	lvory	<b>HBL2400B10IV</b> A: 120.00" (3,048.00) B: 1.91" (48.51)	5 Ft. Cover Packed 50 ft. (15m) per carton, 5 ft. (1.5m) lengths.	Ivory	<b>HBL2400CIV</b> A: 60.00" (1,524.00) B: 1.89" (48.00)
HBL2400 Base and	<b>5 Ft. Base, Undivided</b> Packed 50 ft. (15m) per carton, 5 ft. (1.5m) lengths.	lvory	<b>HBL2400BIV</b> A: 60.00" (1,524.00) B: 1.91" (48.51)		A B	
HBL2400D Series Base and Cover	10 Ft. Base, Divided Packed 50 ft. (15m) per carton, 10 ft. (3m) lengths.	lvory	HBL2400BDIV A: 120.00" (3,048.00) B: 1.91" (48.51)			



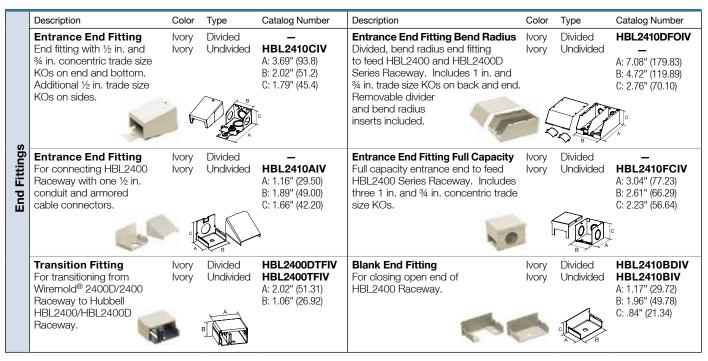
			1-	Gang	2-	Gang
Description	Color	Type	Standard	Extra Deep	Standard	Extra Deep
Device Box For deep switches and receptacles. Base has one ½ in. trade size KO and rectangular KO for extension to wall box.	Ivory Ivory	Divided Undivided		HBL2444DIVA HBL2444IVA A: 4.54" (115.32) B: 2.82" (71.63) C: 2.75" (69.85)	HBL24482IV A: 4.54" (115.32) B: 4.64" (117.86) C: 1.75" (44.45)	HBL 2444D2AIV HBL 24442IV A: 4.54" (115.32) B: 4.64" (117.86) C: 2.75" (69.85)

	Description	Color	Type	Catalog Number	Description	Color	Туре	Catalog Number
ows and Tees	Internal Elbow Bend Radius For inside surfaces at right angles, requiring a 1.5 in. (38.10) bend radius. Suitable for Category 5, 5e, 6 and 6A applications.	lvory lvory	Divided Undivided	HBL2417DFOIV* HBL2417IV** A: 1.91" (48.51) B: 3.60" (91.30)	External Elbow Bend Radius For right angle turns around external corners. Suitable for Category 5, 5e, 6 and 6A applications.	lvory lvory	Divided Undivided	HBL2418DFOIV* HBL2418IV** A: 1.91" (48.51) B: 3.83" (97.28)
Elbow	90° Flat Elbow Bend Radius For right angle turns on same surface. Suitable for Category 5, 5e, 6 and 6A applications.	lvory lvory	Divided Undivided	HBL2411DFOIV* HBL2411IV** A: 6.00" (152.40) B: 5.00" (127.00) C: .90" (22.86)	<b>Tee Fitting Bend Radius</b> For branches at right angles. Suitable for Category 5, 5e, 6 and 6A applications.	lvory lvory	Divided Undivided	HBL2415DFOIV* HBL2415IV** A: 7.30" (185.42) B: 4.99" (126.75) C: 1.44" (36.58)

Note: \*HBL2401DC couplings included. \*\*HBL2401C couplings included.



### HBL2400 and HBL2400D Series



	Description	Color	Catalog Number	Description	Color	Catalog Number
	End Reducing Connector For connecting HBL2400 Raceway to HBL2000 Raceway through end of HBL2400 Raceway.	lvory	HBL2420REDIV* A: 3.81" (96.77) B: 2.07" (52.58) C: .90" (22.86)	End Reducing Connector For connecting HBL4750 Raceway to HBL2400 Raceway through end of HBL4750 Raceway. Includes HBL2401DC coupling (HBL4751AC not included).	lvory	HBL4724REDIV A: 4.75" (120.65) B: 3.00" (76.20) C: 1.55" (39.37)
	Side Reducing Connector For connecting HBL2400 Raceway to HBL500 Raceway through side of HBL2400 Raceway.	lvory	HBL2489IV* A: 3.75" (95.25) B: 1.91" (48.51) C: .82" (20.83)	Bridge Fitting For allowing HBL2400 Series Raceway to bridge over existing installations of HBL2400, HBL750 and HBL500 Series Raceways.	lvory	HBL2475DBRIV A: 5.60" (142.24) B: 2.92" (74.17) C: 1.63" (41.40)
Fittings	Cover Clip Use to cover potential openings where two pieces of HBL2400 Raceway cover come together.	Ivory	<b>HBL2406IV</b> A: 1.50" (38.10)	Flush Plate Adaptor For feeding HBL2400 Raceway from an existing wall outlet box ½ in. trade size male nipple. Provided with locknut for grounding.	lvory	<b>HBL2451HIV*</b> A: 4.50" (114.30)
	Wire Clip (Plated) For holding conductors in place.	Steel**	HBL2400WC A: 1.69" (42.93) B: 1.00" (25.40) C: .79" (20.00)	Ground Clamp (Plated) For connection of equipment grounding conductor to provide an additional ground to raceway.	Steel**	<b>HBL2409GC</b> A: .41" (10.41)
	Coupling (Plated), Divided For joining lengths of HBL2400 Raceway.	Steel**	<b>HBL2401DC</b> A: 2.00" (50.80) B: 1.86" (47.24)	Coupling (Plated), Undivided For joining lengths of HBL2400 Raceway.	Steel**	<b>HBL2401C</b> A: 2.00" (50.80) B: 1.86" (47.24)

Note: \*Only used on HBL2400 Series Undivided Raceway.

\*\*Galvanized Steel

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## HBL2400 and HBL2400D Series

	Description	Color	Catalog Number	Description	Color	Catalog Number
s and Frames	Receptacle Bracket and Frame For use with power devices with maximum width of 1.35 in. (84.3) and in low voltage applications with ISFxxAL frames found on page T-45.	lvory	HBL24106RRK* A: 6.00" (152.40) B: 2.02" (51.31)	Duplex Bracket and Frame For use with power devices with maximum width of 1.35 in. (84.3) and in low voltage applications with BR106AL and Q106AL frames found on page T-45.	lvory	HBL24106DRK* A: 6.00" (152.40) B: 2.02" (51.31)
Devices	Lamp Holder Medium base lamp holder 660W 250V ceramic. Ivory (Cover) White Ceramic (Lamp Holder).	lvory	HBL2426IV* A: 5.00" (127.00) B: 1.89" (48.01) C: 1.03" (26.16)			

Note: \*Only used on HBL2400 Series Undivided Raceway.

	Description	Catalog Number	Description	Color	Catalog Number
Tools	Cutter Portable cutter for HBL2400/ HBL2400D Series Raceway.	HBL624CUT	Touch-Up Paint Pen	Ivory	HBLIWEP
	Cutter Replacement Blade Set	HBL624BCK			

### Products at a Glance



### **HBL3000 Series Extensive Line**

- Full line of large, single channel, two piece metal raceway
- Easily mounts on walls or bench tops
- Large single channel base for power or datacom cables
- UL Listed and CSA Certified
- Available in ivory or gray powder coat finish



#### Innovative Box Design

- Hubbell Handi-Screw® eases installation by eliminating difficult to install long screws
- Rounded corners with no sharp edges
- One seam construction provides a "clean" look
- Large capacity allows for the installation of 30, 50 or 60A receptacles
- Utility box can be used as a tee, cross, junction box or as a branch circuit extension



### **Transition Fittings**

- UL Classified to transition from Wiremold® 3000 Series Metal Raceway to Hubbell HBL3000 Series Metal Raceway
- Reducer fitting provides transition from Hubbell HBL3000 Series to Hubbell HBL2000 Series Raceway



### **Plates and Covers**

- Wide range of covers and cover plates accommodate the most demanding applications
- Removable cover and cover plates provide easy access to wiring compartment
- Precut covers and plates provide quick installation and are available in common configurations





### **HBL3000 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Single Channel Base Packed 100 ft. (30.5m) per carton, 10 ft. (3m) lengths.	Ivory Gray	<b>HBL3000BIV</b> <b>HBL3000BGY</b> A: 2.73" (69.34) B: 1.47" (37.34)	<b>5 Ft. Cover</b> Packed 100 ft. (30.5m) per carton, 5 ft. (1.5m) lengths.	Ivory Gray	HBL3000CEIV HBL3000CEGY A: 60.00" (1,524.00) B: 2.75" (69.85)
000 Series	Assembled cover and base dimensions. W: 2.75" (69.85) H: 1.53" (38.86)		В	19.5 In. Precut Cover* For mounting devices on 24 in. (610.00) centers.	lvory Gray	<b>HBL3000C195IV</b> <b>HBL3000C195GY</b> A: 19.50" (495.30) B: 2.75" (69.85)
HBL3000			I A	7.5 In. Precut Cover* For mounting devices on 12 in. (305.00) centers.	lvory Gray	<b>HBL3000C075IV</b> <b>HBL3000C075GY</b> A: 7.50" (190.50) B: 2.75" (69.85)
					A La	>

Note: \*Packed 10 pieces per carton. Device centers vary based on cover selection. Consult factory for details.

	Description	Color	Catalog Number	Description	Color	Catalog Number
Boxes	Utility Box Cover has twistouts on all sides, allows for box to be used as tee, cross, junction box or for branch circuit extensions.	Ivory Gray	HBL3028IV HBL3028GY A: 6.41" (162.89) B: 6.41" (162.89) C: 1.90" (48.26)	2-Gang Extra Deep Switch and Receptacle Box For standard 30, 50 and 60A straight blade receptacles.	Ivory Gray	HBL30442IV HBL30442GY A: 6.38" (162.05) B: 6.38" (162.05) C: 2.75" (69.85)

	Description	Color	Catalog Number	Description	Color	Catalog Number
and Tees	Internal Corner Coupling For surfaces at right angles or for use as a straight-through fitting.	lvory Gray	HBL3017TCEIV HBL3017TCEGY A: 2.61" (66.29)	External Corner Coupling For right angle turns around external corners.	Ivory Gray	HBL3018AEIV HBL3018AEGY A: 4.00" (101.60)
Elbows	90° Flat Elbow For right angle turns on same surface.	lvory Gray	HBL3011EIV HBL3011EGY A: 6.40" (162.40) B: 6.00" (152.40)	Tee Fitting For branches at right angles. Couplings furnished.	Ivory Gray	HBL3015EIV HBL3015EGY A: 10.31" (261.94) B: 8.00" (203.20)



## **HBL3000 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number	
	Entrance End Fitting For connecting HBL3000 Raceway with ½ in. conduit and armored cable connectors.	lvory Gray	HBL3010AEIV HBL3010AEGY A: 2.75" (69.85) B: 3.42" (86.87)	Entrance End Fitting For connecting HBL3000 Raceway with rigid or flexible conduit. Concentric ½ in., % in. and 1 in. trade size KOs on end and each side.	lvory Gray	HBL3010CIV HBL3010CGY A: 2.75" (69.85) B: 3.25" (82.55) C: 2.00" (50.80)	
End Fittings	Blank End Fitting For closing open end of HBL3000 Raceway. Has concentric ½ in. and ¾ in. trade size KOs.	lvory Gray	HBL3010BIV HBL3010BGY A: 2.71" (68.92) B: 1.79" (45.36) C: 1.41" (35.84)	Panel Connector To connect HBL3000 Raceway with surface type boxes.	lvory Gray	-	
	Conduit Connector To connect end of HBL3000 Raceway to 1½ in. trade size conduit or connector.	Gray	<b>HBL3082GY</b> A: 2.91" (74.00) B: 2.75" (69.85)	D. T.	E		

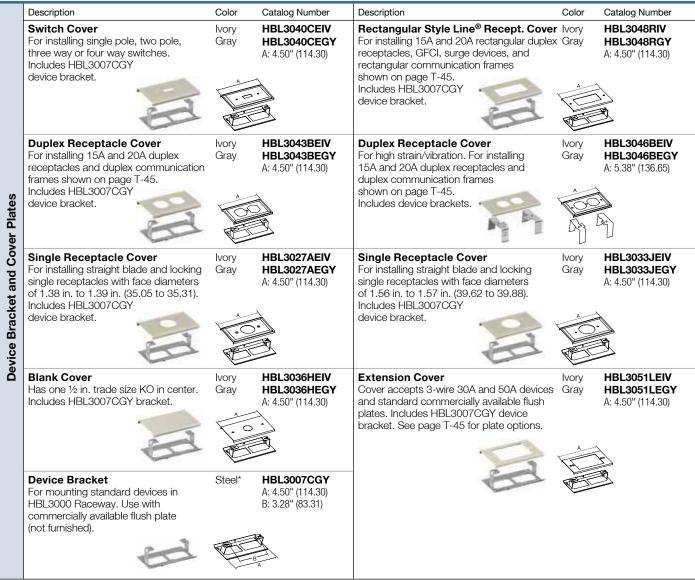
	Description Color	Catalog Number	Description	Color	Catalog Number
	Transition Fitting For transitioning from Wiremold® 3000 Raceway to Hubbell HBL3000 Raceway.	HBL3000TFIV HBL3000TFGY A: 2.85" (72.39) B: 2.15" (54.61) C: 1.50" (38.04)	Take-Off Connector (Reducer) Transition Hubbell HBL3000 Raceway to Hubbell HBL2000 Raceway.	Ivory Gray	HBL3200REDIV HBL3200REDGY A: 2.75" (69.85) B: 2.25" (57.15)
Fittings	Wall Box Connector For connecting to HBL3000 Raceway from a flush mounted wall box.	HBL3014CIV HBL3014CGY A: 8.00" (203.20) B: 3.28" (83.31)	Tap-Off Fitting Has concentric ½ in. and ¾ in. trade size KOs and twistout for communication cables.	Ivory Gray	HBL3046H2IV HBL3046H2GY A: 4.75" (120.65)
	Cover Clip Use to cover potential openings where two pieces of HBL3000 Raceway come together.	HBL3006EIV HBL3006EGY A: 2.78" (70.60) B: .75" (19.05)	Supporting Clip For supporting lengths of HBL3000 Raceway at any point. Mount with #8 flat head fastener. Has set screw for locking to raceway.	Ivory Gray	HBL3003IV HBL3003GY A: 2.81" (71.33) B: .75" (19.05)
	Wire Clip (Plated) For holding conductors in place.	<b>HBL3000WCGY</b> A: 1.00" (25.40)	Rigid Inside Coupling (Plated) For joining lengths of HBL3000 Raceway when added rigidity is required, i.e. raceway suspended overhead.	Steel*	<b>HBL3001AGY</b> A: 6.00" (152.40)
	Coupling (Plated) Steel* For joining lengths of HBL3000 Raceway.	<b>HBL3001GY</b> A: 2.20" (55.75)	A		

Note: \*Galvanized Steel.

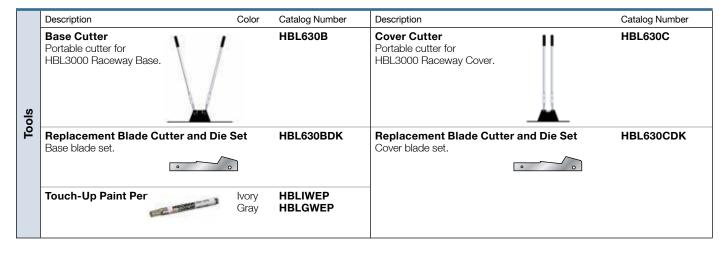
Wiremold® is a registered trademark of the Wiremold Company.



### **HBL3000 Series**



Note: \*Galvanized Steel.

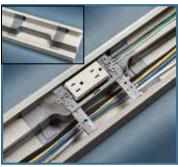


### Products at a Glance



### **HBL4750 Device Bracket**

- HBL4750 Device Bracket Plate provides excellent solution for power, data, voice, audio and video applications
- For use with Hubbell KP plates and Hubbell iSTATION modules and bezels
- Provides flush finish with overlap feature to hide potential miscuts



#### Application Capacity and Flexibility

- Flexible channel divider provides industry leading data capacity in the same profile with a 2/3 datacom split
- By-Pass Divider opening accepts GFCI or surge devices to be mounted in 70/30 divided channel
- Greater capacity offers more room for moves, adds and changes
- 50/50 split available by utilizing standard divider and divider clips
- Raceway channel can also be used with no divider for maximum cable fill in single service applications



#### **End Reducing Connector**

- Connects HBL4750 Raceway to HBL2400 Raceway through the end of HBL4750 Raceway
- Used to connect two different sized raceway profiles



#### **Extensive Line**

- 11/4 in. (31.75mm) bend radius fittings meet TIA/EIA requirements
- Integral bend radius offers a fixed solution that does not have to be installed as an option
- Large cross sectional area provides for maximum cable capacity throughout entire system
- · Available external, internal, flat, tee and entrance end fittings
- UL Listed, CSA Certified
- Available in ivory or gray powder coat finish





### **HBL4750 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Single Channel Base Packed 50 ft. (15.24m) per carton, 10 ft. (3m) lengths.	lvory Gray	HBL4750B10IV HBL4750B10GY A: 120.00" (3048.00) B: 4.75" (120.65) C: 1.62" (41.20)	<b>5 Ft. Cover</b> Packed 50 ft. (15.24m) per carton, 5 ft. (1.5m) lengths.	lvory Gray	HBL4750CIV HBL4750CGY A: 60.00" (1,524.0) B: 4.75" (120.65)
	Assembled cover and base dimensions. W: 4.75" (120.65) H: 1.75" (44.45)		0.1.02 (41.20)	31 In. Precut Cover* For 36 in. (915.00) centers with HBL4747 and HBL4750 Plates.	Ivory Gray	HBL4750C315IV HBL4750C315GY A: 31.50" (800.10) B: 4.75" (120.65)
HBL4750 Series		A	8	19 In. Precut Cover* For 24 in. (610.00) centers with HBL4747 and HBL4750 Plates.	lvory Gray	HBL4750C195IV HBL4750C195GY A: 19.50" (495.30) B: 4.75" (120.65)
HBL				13 In. Precut Cover* For 18 in. (457.00) centers with HBL4747 and HBL4750 Plates.	lvory Gray	HBL4750C135IV HBL4750C135GY A: 13.50" (342.90) B: 4.75" (120.65)
				7 In. Precut Cover* For 12 in. (305.00) centers with HBL4747 and HBL4750 Plates.	lvory Gray	HBL4750C075IV HBL4750C075GY A: 7.50" (190.50) B: 4.75" (120.65)
					A B	ने

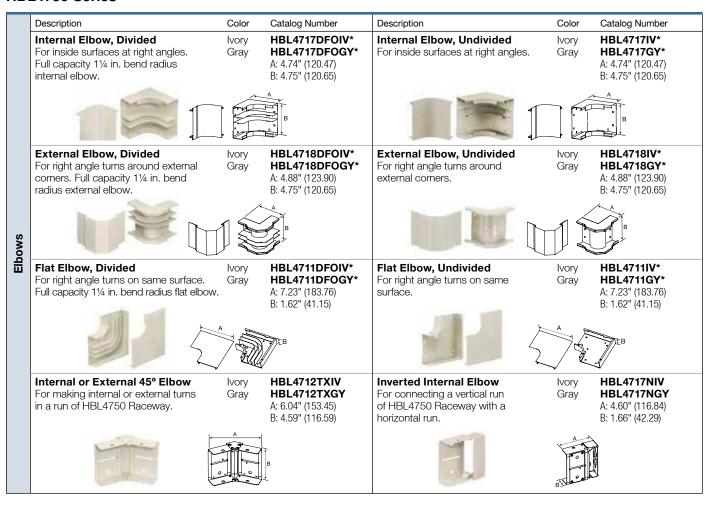
Note: \*Packed 10 pieces per carton. Device centers vary based on cover selection. Consult factory for details.

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Divider Divides HBL4750 Raceway into two channels. Packed 50 ft. (15.24m) per carton, 5 ft. (1.5m) lengths. HBL4751DA Divider Clips are required to hold divider in place.	Painted Steel	<b>HBL4750DGY</b> A: 60.00" (1,524.0) B: 1.51" (38.46)	By-Pass Divider Divides HBL4750 Raceway into two channels with a 70/30 split. Allows for a larger power or datacom wire fill HBL4751DA Divider Clips are required to hold divider in place.	Painted Steel	<b>HBL4750BP</b> A: 7.12" (180.74) B: .89" (22.54)
		A B	3		A B	
Fittings	<b>Divider Clip</b> Required for holding HBL4750DGY in place. Use one every 2.5 ft. (.762m).	Steel**	<b>HBL4751DA</b> A: 4.64" (117.77) B: 1.46" (37.07)	Wire Clip (Plated) For holding conductors in place.	Steel**	HBL4750WCGY A: 4.60" (116.74) B: 1.58" (40.13) C: 1.00" (25.40)
	4	A JB		B	A V.C	
	Internal Corner Coupling (Plated) Concealed fitting for making an internal corner while continuing original run in a straight line.	Steel**	HBL4717TCAGY A: 4.59" (116.59) B: 2.71" (68.73) C: 1.47" (37.34)	Coupling (Plated) For joining lengths of HBL4750 Raceway. Sold in pairs.	Steel**	<b>HBL4751AC</b> A: 1.47" (37.30) B: .42" (10.59)
	**Colorainad Otaci	A A B			A PIBE	

Note: \*\*Galvanized Steel.



### **HBL4750 Series**



	Description	Color	Catalog Number	Description	Color	Catalog Number
Tees	Tee Fitting, Divided For branches at right angles. Full capacity 1¼ in. bend radius tee fitting.	Ivory Gray	HBL4715DFOIV* HBL4715DFOGY* A: 10.93" (277.63) B: 7.27" (184.54) C: 1.62" (41.15)	<b>Tee Fitting, Undivided</b> For branches at right angles.	Ivory Gray	HBL4715IV* HBL4715GY* A: 10.93" (277.63) B: 7.27" (184.54) C: 1.62" (41.15)
	5		A C	1		A C

Note: \*HBL4751AC couplings included.



## **HBL4750 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
End Fittings	Entrance End Fitting, Divided For connecting HBL4750 Raceway with rigid or flexible conduit. Concentric ¾ in., 1 in. and 1¼ in. trade size KOs on back and end. Full capacity 1¼ in. bend radius entrance end fitting. Includes ¾ in., 1 in., 1¼ in. KO and removable divider.	Ivory Gray	HBL4710DFOIV* HBL4710DFOGY* A: 6.76" (171.70) B: 4.75" (120.65) C: 2.66" (67.50)	Entrance End Fitting, Undivided For connecting HBL4750 Raceway with rigid or flexible conduit. Concentric ¾ in., 1 in. and 1¼ in. trade size KOs on back and end.	lvory Gray	HBL4710IV* HBL4710GY* A: 6.76" (171.70) B: 4.75" (120.65) C: 2.66" (67.50)
	Blank End Fitting For closing open end of HBL4750 Raceway. Has two ½ in. trade size KOs.	Ivory Gray	HBL4710BIV HBL4710BGY A: 4.59" (116.50) B: 1.64" (41.60) C: 1.31" (33.37)	Panel Connector To connect HBL4750 Raceway with surface type panel boxes.	Ivory Gray	HBL4786AIV HBL4786AGY A: 7.50" (190.50)

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Transition Fitting For transitioning Wiremold® 4000 Raceway to Hubbell HBL4750 Raceway.	lvory Gray	HBL4750TFIV HBL4750TFGY A: 5.02" (127.53) B: 2.79" (70.78)	Wall Box Connector For back feeding HBL4750 Raceway.	Ivory Gray	HBL4714AIV HBL4714AGY A: 12.00" (304.80) B: 4.75" (120.65) C: 1.62" (41.15)
	End Reducing Connector For connecting HBL4750 Raceway to HBL2400 Raceway through the end of HBL4750 Raceway. Includes HBL2401Da coupling (HBL4751AC not included).	Ivory Gray	HBL4724REDIV A: 4.75" (120.65) B: 3.00" (76.20) C: 1.55" (39.37)	Bridge Fitting To bridge HBL4750 series raceway over perpendicular run of raceway or other obstruction. Use standard raceway base and cover, cut in field to required length. Consists of two bridge pieces.	, e	HBL4775DKITIV HBL4775DKITGY A: 4.76" (120.90) B: 5.00" (127.00) C: 3.38" (85.85)
Fittings	c B				B	
	Take-Off Connector (HBL4750 To HBL3000) For 90° tee connection of HBL3000 Raceway from HBL4750 Raceway.	Ivory Gray	HBL4774AIV HBL4774AGY A: 11.31" (287.38) B: 4.88" (124.00) C: 3.14" (79.78)	2-Gang Tap-Off Fitting Has four concentric ½ in. and ¾ in. trade size KOs.	Ivory Gray	HBL4746H2IV HBL4746H2GY A: 4.75" (120.65) B: 4.75" (120.65)
	Connection Cover For covering potential openings where two covers come together.	Ivory Gray	HBL4756AIV HBL4756AGY A: 4.77" (121.16) B: .75" (19.05) C: .13" (3.36)			

Note: \*HBL4751AC couplings included.



## **HBL4750 Series**

	Description Colo	r Catalog Number	Description	Color	Catalog Number
ng Bracket	1-Gang Commercial Device Plate Vertical Mount Gray Use with commercially available 1-gang flush plates. See page T-45 for plate options. For single service applications only.		2-Gang Commercial Device Plate Vertical Mount Use with commercially available 2-gang flush plates. See page T-45 for plate options. For single service applications only.	Ivory Gray	HBL4747CVM2IV HBL4747CVM2GY A: 4.32" (109.86) B: 4.75" (120.65)
Device Plates and Mounting Bracket	2-Gang, One Opening for 1-Gang Comm. Device Plate, One Blank Use with commercially available 1-gang flush plates. See page T-45 for plate options.		2-Gang, One Opening for 2-Gang Commercial Device Plate Use with commercially available 2-gang flush plates. See page T-45 for plate options.	lvory Gray	HBL4747C2IV HBL4747C2GY A: 5.12" (130.18) B: 4.75" (120.65)
Device	Device Mounting Bracket  Mounting bracket for mounting Hubbell  KP Plates, iSTATION Modules and Bezels. See pages T-45 and T-46 for datacom product selection.			r	
	2-Gang Cover, Single Round Opening, One Blank For single receptacle with face diameter of 1.38 in. to 1.39 in. (35.00 to 36.00).		2-Gang, Single Round Opening, One Blank For single receptacle with face diameter of 1.56 in. to 1.58 in. (39.62 to 40.13).	Ivory Gray	HBL4747JXIV HBL4747JXGY A: 5.43" (137.97) B: 4.75" (120.65)
Mounting Bracket)	2-Gang, One Duplex Opening, One Blank For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45.		2-Gang, One Style Line® Opening, One Blank For Style Line rectangular receptacles, GFCI and surge devices and rectangular communication frames shown on page T-45.	lvory Gray	HBL4747RXIV HBL4747RXGY A: 5.43" (137.97) B: 4.75" (120.65)
2-Gang Cover Plates (Include Mountin	2-Gang, Two Duplex Openings For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45.		2-Gang, One Style Line® Opening, One Modular Furniture For Style Line rectangular receptacles, GFCI, surge devices and rectangular communication frames shown on page T-45. Includes modular furniture with two keystone twistouts.	Ivory Gray	HBL4747RFIV HBL4747RFGY A: 5.43" (137.97) B: 4.75" (120.65)
	2-Gang, One Duplex Opening, One Modular Furniture Gray For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes modular furniture with two keystone twistouts.		2-Gang, One Duplex Opening, One Style Line® Opening For 15A and 20A duplex receptacles and Style Line rectangular receptacles, GFCI, surge devices and rectangular communication frames shown on page T-45.	Ivory Gray	HBL4747BRIV HBL4747BRGY A: 5.43" (137.97) B: 4.75" (120.65)
	2-Gang, One Duplex Opening, One Ortronics® Series II® Mini Adapter Bezel For 15A and 20A duplex recept. and duplex communication plates. Includes Ortronics® Series II® Mini Adapter Bezel.		2-Gang, One Duplex Opening, One Ortronics® TracJack® Mini Adapter Bezel For 15A and 20A duplex recept. and duplex communication plates. Includes Ortronics® TracJack® Mini Adapter Bezel.	Ivory Gray	HBL4747BTIV HBL4747BTGY A: 5.43" (137.97) B: 4.75" (120.65)

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## **HBL4750 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
4-Gang Cover Plates (Include Mounting Bracket)		Ivory Gray	HBL47472BBBBIV HBL47472BBBBGY A: 10.22" (259.56) B: 4.75" (120.65)	4-Gang, Two Style Line® Openings, Two Blanks For Style Line rectangular receptacles, GFCI, surge devices and rectangular communication frames shown on page T-45. Includes two blanks.	Ivory Gray	HBL47472RRXXIV HBL47472RRXXGY A: 10.22" (259.56) B: 4.75" (120.65)
	4-Gang, Two Duplex Openings, Two Style Line® Openings For 15A and 20A duplex receptacles. Includes Style Line openings for rectangular receptacles, GFCI, surge devices and rectangular communication frames shown on page T-45.	Ivory Gray	HBL47472BBRRIV HBL47472BBRRGY A: 10.22" (259.56) B: 4.75" (120.65)	4-Gang, Two Duplex Openings, Two Ortronics® Series II® Mini Adapter Bezels For 15A and 20A duplex receptacles and duplex communication plates. Includes two Ortronics® Series II® Mini Adapter Bezels.	Ivory Gray	HBL47472BBSSIV HBL47472BBSSGY A: 10.22" (259.56) B: 4.75" (120.65)
	4-Gang, Two Duplex Openings, Two Modular Furniture For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes two modular furniture with two keystone twistouts.	Ivory Gray	HBL47472BBFFIV HBL47472BBFFGY A: 10.22" (259.56) B: 4.75" (120.65)	4-Gang, Two Duplex Openings, Two Ortronics® TracJack® Mini Adapter Bezels For 15A and 20A duplex receptacles and duplex communication plates. Includes two Ortronics® TracJack® Mini Adapter Bezels.	Ivory Gray	HBL47472BBTTIV HBL47472BBTTGY A: 10.22" (259.56) B: 4.75" (120.65)
	4-Gang, Two Duplex Openings, Two Blanks For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes two blanks.	Ivory Gray	HBL47472BBXXIV HBL47472BBXXGY A: 10.22" (259.56) B: 4.75" (120.65)			

	Description	Color	Catalog Number	Description	Catalog Number
Tools	Base Cutter Cutter for cutting base of HBL4750 Raceway.		HBL640B	Cover Cutter Cutter for cutting cover of HBL4750 Raceway.	HBL640C
P	Replacement Blade Cutter and Die S Base blade set.	Set	HBL640BDK	Replacement Blade Cutter and Die Set Cover blade set.	HBL640CDK
	Touch-Up Paint Pen	lvory Gray	HBLIWEP HBLGWEP		

Dimensions in Inches (mm)

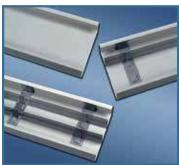
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### Products at a Glance



#### **HBL6750 Device Bracket**

- HBL6750 Device Bracket Plate provides excellent solution for three channel power, data, voice, audio and video applications
- For use with Hubbell KP plates and Hubbell iSTATION Modules and Bezels
- Provides flush finish with overlap feature to hide potential miscuts



#### **Maximum Capacity**

- HBL6750 Series options include single channel (no divider), two channel (1/3, 2/3 divider) or three channel (1/3, 1/3, 1/3 divider)
- HBL6750 Series offers maximum capacity in a low profile raceway
- HBL6750, two channel version, features industry leading capacity equivalent to a HBL4750 single channel profile with an additional channel
- Low profile raceway provides a less conspicuous profile than competitive versions
- Available in 10 ft. (3m) lengths



### Unique Line of Fittings

- 11/4 in. (31.75mm) bend radius fittings meet TIA/EIA requirements
- Integral bend radius offers a fixed solution that does not have to be field installed
- Large cross sectional area provides for maximum cable capacity throughout entire system
- Available external, internal, flat, tee and entrance end fittings
- UL Listed, CSA Certified
- Available in ivory or gray powder coat finish



#### **Plates and Covers**

- Wide variety of overlapping cover plates provide flexibility for power, data, voice, audio and video applications
- Available in both three and six-gang options
- Cover plates accept wide selection of Hubbell iSTATION Modules and Bezels
- Cover plates help to conceal unsightly gaps caused by miscuts
- Precut cover options allow for 12 in. (304.80mm), 18 in. (457.20mm), 24 in. (609.60mm) and 36 in. (914.40mm) "on-center" mounting
- Open System architecture available





### **HBL6750 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Single Channel Base Packed 20 ft. (6.1m) per carton, 10 ft. (3m) lengths.	lvory Gray	HBL6750B10IV HBL6750B10GY A: 120.00" (3048.00) B: 6.75" (171.45) C: 2.12" (53.85)	<b>5 Ft. Cover</b> Packed 20 ft. (6.1m) per carton, 5 ft. (1.5m) lengths.	lvory Gray	HBL6750CIV HBL6750CGY A: 60.00" (1,524.0) B: 6.75" (171.45)
	Assembled cover and base dimensions. W: 6.75" (171.45) H: 2.22" (56.39)		0. 2.12 (00.00)	31 In. Precut Cover* For 36 in. (915.00) centers with HBL6747 and HBL6750 Plates.	lvory Gray	<b>HBL6750C315IV</b> <b>HBL6750C315GY</b> A: 31.50" (800.10) B: 6.75" (171.45)
750 Series		A	В	19 In. Precut Cover* For 24 in. (610.00) centers with HBL6747 and HBL6750 Plates.	lvory Gray	<b>HBL6750C195IV</b> <b>HBL6750C195GY</b> A: 19.50" (495.30) B: 6.75" (171.45)
HBL6750				13 In. Precut Cover* For 18 in. (457.00) centers with HBL6747 and HBL6750 Plates.	lvory Gray	HBL6750C135IV HBL6750C135GY A: 13.50" (342.90) B: 6.75" (171.45)
				7 In. Precut Cover* For 12 in. (305.00) centers with HBL6747 and HBL6750 Plates.	lvory Gray	HBL6750C075IV HBL6750C075GY A: 7.50" (190.50) B: 6.75" (171.45)
					A	A

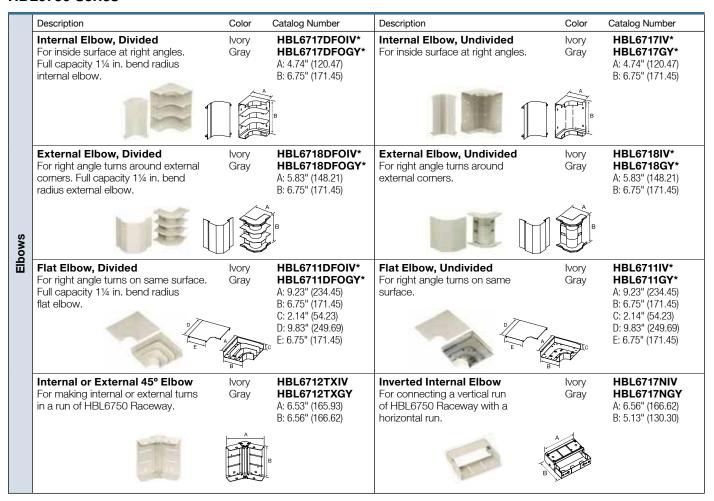
Note: \*Packed 10 pieces per carton. Device centers vary based on cover selection. Consult factory for details.

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Divider Divides HBL6750 Raceway into two or three channels. Packed 50 ft. (15.24m) per carton, 5 ft. (1.5m) lengths. HBL6751DAGY Divider Clips are require to hold divider in place.		HBL6750DAGY A: 60.00" (1524.00) B: 2.03" (51.56)	Wire Clip (Plated) For holding conductors in place.	Steel**	HBL6750WCGY A: 6.61" (167.80) B: 2.09" (53.05)
Fittings	Divider Clip (Plated) Required for holding HBL6750DAGY in place. Use one every 2.5 ft. (.762m).	Steel**	<b>HBL6751DAGY</b> A: 6.60" (167.67) B: 1.97" (50.10)	Coupling (Plated) For joining lengths of HBL6750 Raceway. Sold in pairs.	Steel**	<b>HBL6751A</b> A: 2.00" (50.71) B: .42" (10.59)
		A			A PART B	
	Internal Corner Coupling (Plated) Concealed fitting for making an internal corner while continuing original run in a straight line.	Steel**	HBL6717TCAGY A: 6.56" (166.62) B: 1.94" (49.28)			

Note: \*\*Galvanized Steel.



### **HBL6750 Series**



		Description	Color	Catalog Number	Description	Color	Catalog Number
1	Lees	Tee Fitting, Divided For branches at right angles. Full capacity 11/4 in. bend radius tee fitting.	Ivory Gray	HBL6715DFOIV* HBL6715DFOGY* A: 8.75" (222.25) B: 6.63" (168.40) C: 3.56" (90.48) D: 7.92" (201.07) E: 6.75" (171.45)	Tee Fitting, Undivided For branches at right angles.	lvory Gray	HBL6715IV* HBL6715GY* A: 8.75" (222.25) B: 6.63" (168.40) C: 3.56" (90.48) D: 7.92" (201.07) E: 6.75" (171.45)

Note: \*HBL6751A couplings included.



## **HBL6750 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
S	Entrance End Fitting, Divided For connecting HBL6750 Raceway with rigid or flexible conduit. Concentric % in., 1 in. and 1½ in. trade size KOs on back and end. Full capacity 1½ in. bend radius entrance end fitting. Includes ¾ in., 1 in. and 1¼ in. KO and removable dividers.	Ivory Gray	HBL6710DF0IV* HBL6710DF0GY* A: 6.75" (171.45) B: 6.75" (171.45) C: 3.18" (180.71)	Entrance End Fitting, Undivided For connecting HBL6750 Raceway with rigid or flexible conduit. Concentric ¾ in., 1 in. and 1¼ in. trade size KOs on back and end.	Ivory Gray	HBL6710IV* HBL6710GY* A: 6.75" (171.45) B: 6.75" (171.45) C: 3.18" (180.71)
<b>End Fittings</b>		100			000 000 B	
	Blank End Fitting For closing open end of HBL6750 Raceway. Has three ½ in. trade size KOs.	lvory Gray	HBL6710BIV HBL6710BGY A: 6.56" (166.62) B: 1.98" (50.41) C: 1.33" (33.90)	Panel Connector To connect HBL6750 Raceway with surface type panel boxes.	lvory Gray	HBL6786IV HBL6786GY A: 7.51" (190.86) B: 2.00" (50.83) C: 7.89" (200.37) D: 2.38" (60.34)

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Transition Fitting For transitioning from Wiremold® 6000 Raceway to Hubbell HBL6750 Raceway.	lvory Gray	HBL6750TFIV HBL6750TFGY A: 4.35" (110.42) B: 6.96" (176.87)	Wall Box Connector For back feeding HBL6750 Raceway.	lvory Gray	HBL6714AIV HBL6714AGY A: 6.75" (171.45) B: 2.14" (54.28) C: 9.90" (251.46)
Fittings	Take-Off Connector (HBL6750-HBL4750) For 90° tee connection of HBL4750 Raceway from HBL6750 Raceway.	Ivory Gray	HBL6774AIV HBL6774AGY A: 14.36" (364.76) B: 6.75" (171.45) C: 11.47" (291.29) D: 6.72" (170.69)	3-Gang Tap-Off Fitting Has six concentric ½ in. and ¾ in. trade size KOs.	lvory Gray	HBL6746HHHIV HBL6746HHHGY A: 4.35" (110.42) B: 6.96" (176.87)
	Connection Cover For covering potential openings where two covers come together.	lvory Gray	HBL6756AIV HBL6756AGY A: 6.75" (171.45) B: .59" (14.89)			

Note: \*HBL4751AC couplings included.



### **HBL6750 Series**

,	Description Cold	r Catalog Number	Description	Color	Catalog Number
ß	3-Gang, One Opening for 1-Gang Commercial Device Plate, Two Blanks Use with commercially available 1-gang flush plates. See page T-45 for plate options.		3-Gang, One Opening for 2-Gang Commercial Device Plate, One Blank Use with commercially available 2-gang flush plates. See page T-45 for plate options.	Ivory Gray	HBL6747C2IV HBL6747C2GY A: 5.43" (137.97) B: 6.75" (171.45)
	Device Mounting Bracket  Mounting bracket for mounting Hubbell KP Plates, iSTATION Modules and Bezels. See pages T-45 and T-46 for datacom product selection.				
	3-Gang, One Duplex Opening, Ivon Gravity Blanks For 15A and 20A duplex receptacles and duplex communication plates.		3-Gang, One Single Round Opening, Two Blanks For single receptacle with face diameter of 1.38 in. to 1.39 in. (35.05 to 35.31).	Ivory Gray	HBL6747AXXIV HBL6747AXXGY A: 5.43" (137.97) B: 6.75" (171.45)
	3-Gang, Three Duplex Openings For 15A and 20A duplex receptacles and duplex communication plates.		<b>3-Gang, One Single Round Opening, Two Blanks</b> For single receptacle with face diameter of 1.56 in. to 1.58 in. (39.62 to 40.13).	Ivory Gray	HBL6747JXXIV HBL6747JXXGY A: 5.43" (137.97) B: 6.75" (171.45)
	• 00 0 00 • 00 -	В		B	
	3-Gang, One Duplex Opening, Two Style Line® Openings For 15A and 20A duplex receptacles and duplex communication plates. Includes Style Line openings for rectangular receptacles, GFCI, surge devices and rectangular communication frames shown on page T-45.		3-Gang, One Style Line® Opening, Two Blanks For one Style Line rectangular receptacle, GFCI, surge device or rectangular communication device.	Ivory Gray	HBL6747RXXIV HBL6747RXXGY A: 5.43" (137.97) B: 6.75" (171.45)
	3-Gang, Two Duplex Openings, One Modular Furniture For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes modular furniture with two keystone twistouts.	W HBL6747BBFGY A: 5.43" (137.97) B: 6.75" (171.45)	3-Gang, Two Style Line® Openings, One Modular Furniture For two Style Line rectangular receptacles, GFCI, surge devices and rectangular communication frames shown on page T-45. Includes modular furniture with two keystone twistouts.		HBL6747RRFIV HBL6747RRFGY A: 5.43" (137.97) B: 6.75" (171.45)
	3-Gang, Two Duplex Openings, One Ortronics® Series II® Mini Adapter Bezel For two 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes Ortronics® Series II® Mini Adapter Bezel.		3-Gang, Two Duplex Openings, One Ortronics® TracJack® Mini Adapter Bezel For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes Ortronics® TracJack® Mini Adapter Bezel.	Ivory Gray	HBL6747BBTIV HBL6747BBTGY A: 5.43" (137.97) B: 6.75" (171.45)

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## **HBL6750 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
	6-Gang, Six Duplex Openings For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45.		HBL67473BBBBBBIV HBL67473BBBBBBBGY A: 10.22" (259.56) B: 6.75" (171.45)	6-Gang, Four Style Line® Openings, Two Blanks For four Style Line rectangular receptacles, GFCI, surge devices and rectangular communication frames shown on page T-45.	Ivory Gray	HBL67473RRRRXXIV HBL67473RRRRXXGY A: 10.22" (259.56) B: 6.75" (171.45)
Cover Plates (Include Mounting Bracket)	6-Gang, Two Duplex Openings, Four Style Line® Openings For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes Style Line openings for rectangular receptacles, GFCI, surge devices and rectangular communication devices.	Ivory Gray	HBL67473BBRRRRIV HBL67473BBRRRRGY A: 10.22" (259.56) B: 6.75" (171.45)	6-Gang, Four Duplex Openings, Two Ortronics® Series II® Mini Adapter Bezels For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes two Ortronics® Series II® Mini Adapter Bezels.	Ivory Gray	HBL67473BBBBSSIV HBL67473BBBBSSGY A: 10.22" (259.56) B: 6.75" (171.45)
s (Includ	6-Gang, Four Duplex Openings,	Ivory	HBL67473BBBBFFIV	6-Gang, Four Duplex Openings,	lvory	
	Two Modular Furniture For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes two modular furniture with two keystone twistouts.	Gray	HBL67473BBBBFFGY A: 10.22" (259.56) B: 6.75" (171.45)	Two Ortronics® TracJack® Mini Adapter Bezels For 15A and 20A duplex receptacles and duplex communication frames shown on page T-45. Includes two Ortronics® TracJack®	Gray	HBL67473BBBBTTGY A: 10.22" (259.56) B: 6.75" (171.45)
6-Gang	::::	(	OO OO   DO OO   B	Mini Adapter Bezels.	· 00 · 00	00   B
	6-Gang, Four Duplex Openings, Two Blanks For four 15A and 20A duplex receptacles and duplex communication frames shown on page T-45.	Ivory Gray	HBL67473BBBBXXIV HBL67473BBBBXXGY A: 10.22" (259.56) B: 6.75" (171.45)			
	::::		00 00 B			

	Description	Color	Catalog Number	Description	Catalog Number
Tools	Base Cutter Cutter for cutting base of HBL6750 Raceway.		HBL660B	Cover Cutter Cutter for cutting cover of HBL6750 Raceway.	HBL660C
P	Replacement Blade Cutter and Base blade set.	d Die Set	HBL660BDK	Replacement Blade Cutter and Die Set Cover blade set.	HBL660CDK
	Touch-Up Paint Pen	lvory Gray	HBLIWEP HBLGWEP		

Dimensions in Inches (mm)

Ortronics®, Series II® and TracJack® are registered trademarks of The Ortronics Company.

### Products at a Glance



### **HBLALU2000 Series**

- Single channel aluminum raceway
- Satin anodized finish
- · Resists oxidation, corrosion and fading
- · Can be installed as recessed or surface mounted
- UL Listed and CSA Certified



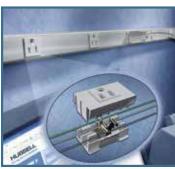
#### **Aluminum Boxes**

- Both in-line and standard boxes available
- Hubbell Handi-Screw<sup>®</sup> eliminates difficult to install long screws for easier installation
- Rounded corners eliminate sharp edges
- One seam construction provides "clean" look
- Box design allows standard wallplates to be mounted flush with virtually no perimeter profile exposed
- Full line of metal wallplates available. See section O for selection



### Wide Selection of Fittings

- Elbows (external, internal, flat) and tee fitting available to accommodate all types of applications
- HBLALU2001 Coupling included with elbows and tee fitting



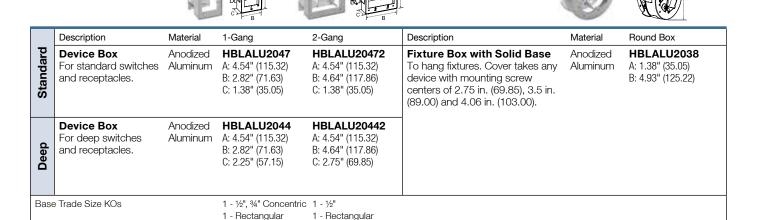
### Aluminum PlugTrak® Featuring Exclusive Receptacle Design

- Satin anodized scratch resistant finish
- Multiple spacing configurations
- Hubbell designed and manufactured single receptacle
- Insulation displacement wiring provides superior wire retention
- Mates with HBLALU2000 Aluminum Raceway
- Available in 3 ft. (0.9m), 5 ft. (1.5m) and 6 ft. (1.8m) lengths
- Tamper-Resistant versions available



### **HBLALU2000 Series**

		Description	Material	Catalog Number	Description	Material	Catalog Number
HBLALU2000 Series	Series	<b>5 Ft. Base</b> Satin anodized finish. Packed 60 ft. (18.3m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	HBLALU2000B5 A: .82" (21.00) B: 1.84" (46.74)	Cover Satin anodized finish. Packed 60 ft. (18.3m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	<b>HBLALU2000C5</b> A: 1.84" (46.74)
		10 Ft. Base Satin anodized finish. Packed 60 ft. (18.3m) per carton, 10 ft. (3m) lengths.	Anodized Aluminum	HBLALU2000B10 A: .82" (21.00) B: 1.84" (46.74)		A	1
	HE	Assembled cover and base dimensions. W: 1.84" (46.74) H: .91" (23.11)	Ā	В			



	Description	Material	Catalog Number	Description	Material	Catalog Number
Tees	Internal Elbow For making a 90° internal turn in a raceway run.	Anodized Aluminum	<b>HBLALU2017*</b> A: 3.00" (76.20) B: 3.00" (76.20)	External Elbow For making a 90° external turn in a raceway run.	Anodized Aluminum	<b>HBLALU2018*</b> A: 2.91" (74.04) B: 2.91" (74.04)
and		B				
Elbows	Flat Elbow For making a 90° flat turn in a raceway run.	Anodized Aluminum	<b>HBLALU2011*</b> A: 3.00" (76.20) B: 3.00" (76.20)	Tee Fitting For branch connections of right angles.	Anodized Aluminum	<b>HBLALU2015*</b> A: 4.00" (101.60) B: 3.40" (86.36)
	B A				A B	

Note: \*HBLALU2001 couplings included.



## **HBLALU2000 Series**

	Description	Material	Catalog Number	Description	Material	Catalog Number
End Fittings	Entrance End Fitting ½ in. NPT steel fitting.	Anodized Aluminum Plate	HBLALU2010A A: 1.84" (47.74) B: .91" (23.11) C: 1.51" (38.35)	Blank End Fitting For closing end of raceway.	Anodized Aluminum	HBLALU2010B A: 1.84" (46.74) B: .91" (23.11)

		Description	Material	Catalog Number	Description	Material	Catalog Number
		Cover Clip Use to cover potential openings where two pieces of HBLALU2000 Raceway cover come together.	Stainless Steel	<b>HBLALU2006</b> A: 1.00" (25.40)	Wire Clip For holding conductors in place.	Anodized Aluminum	<b>HBLALU2000WC</b> A: .44" (11.20)
11:	FITTINGS				/\ F	NA A	
Ľ		Flush Plate Adaptor For feeding HBL2000 Raceway from an existing wall outlet. Locknut included.	Anodized Aluminum	<b>HBLALU2051H</b> A: 4.50" (114.3) B: 4.50" (114.3)	Coupling (Pair) For joining lengths of HBLALU2000 Raceway.	Aluminum	<b>HBLALU2001</b> A: 1.67" (42.42) B: 1.67" (42.42)
			A B			B	

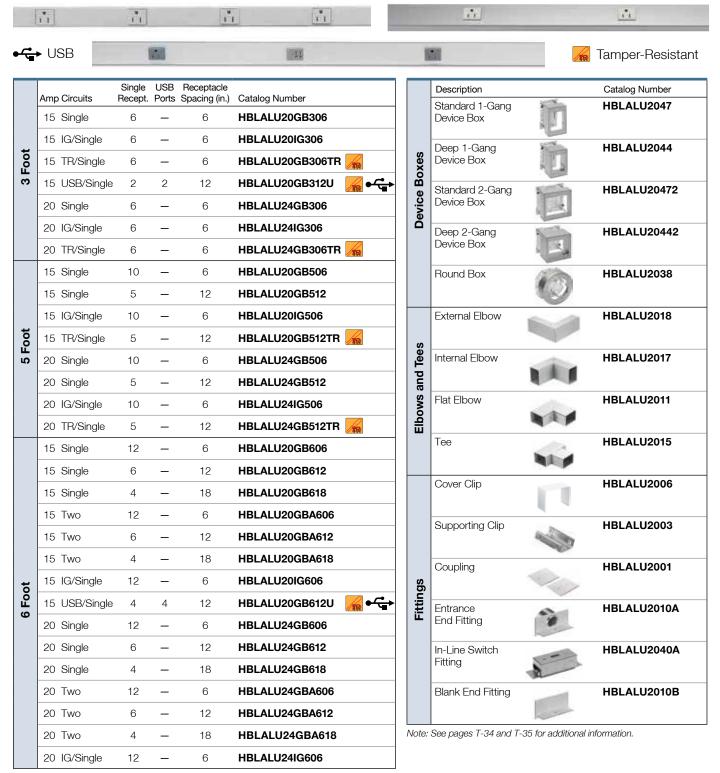
		Description	Material	Catalog Number	Description	Material	Catalog Number
	-Line Fittings	In-Line Switch Fitting (Switch sold separately).	Anodized Aluminum	HBLALU2040A A: 4.12" (104.65) B: 1.84" (46.74)	Ground Adapter (Plated) For connection of equipment grounding conductor to provide an additional ground to raceway. Screws included.	Steel**	HBLALU2009 A: 2.35" (59.8) B: 1.18" (30.0)
	Devices and In-	Supporting Clip For mounting lengths of HBLALU2000 Raceway at any point. Mount with #6 fla head fastener. Has set screw for locking to raceway. Raceway must be screwed to the wall for secure fastening.	at J	<b>HBLALU2003</b> A: 2.00" (50.80)			
		The state of the s					

Note: \*HBLALU2001 couplings included.
\*\*Galvanized Steel.



### Aluminum PlugTrak® Series

Available in Standard, Isolated Ground (IG), Tamper-Resistant (TR) and USB (U) versions.



Note: IG = Isolated Ground, TR = Tamper-Resistant and U = USB.

Hubbell Aluminum PlugTrak is supplied with two HBLALU2010B blank end fittings and one HBLALU2001 coupling.

### Products at a Glance



### HBLALU3800 and HBLALU4800 Series

- Single and two channel aluminum raceways
- Satin anodized finish
- Resists oxidation, corrosion and fading
- Can be installed as recessed or surface mounted
- UL Listed and CSA Certified



#### **Split Covers**

- Single and two channel raceways utilize common cover
- Split covers allow access to one service at a time
- Common aesthetics throughout line



### Wide Selection of Fittings

- External, internal, flat and tee fittings available to accommodate all types of applications
- Available in both single and two channel versions



### **Device Cover Plates**

- Cover plates can be used for both HBLALU3800 and HBLALU4800 Raceways
- Cover plates offer option for most common power device applications
- Low profile bezel cover accommodates Hubbell iSTATION Modules
- Open System data option available
- Base mounted cover plates available for added strength





## **HBLALU3800 Series**

တ္ဆ	Description	Color	Catalog Number	Description	Color	Catalog Number
13800 Serie	Single Channel Base Satin anodized finish. Packed 40 ft. (12.19m) per carton, 10 ft. (3m) lengths.	Anodized Aluminum	<b>HBLALU3800B10</b> A: 2.10" (53.34) B: 3.00" (76.20)	Cover Satin anodized finish. Packed 40 ft. (12.19m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	<b>HBLALUC5</b> A: 3.00" (76.20)
HBLALU3	Assembled cover and base dimensions. W: 3.00" (76.20) H: 2.25" (57.15)	A	В		A	

	Description	Color	Catalog Number	Description	Color	Catalog Number
	Internal Elbow For making a 90° internal turn in a raceway run.	Anodized Aluminum	HBLALU3817* A: 6.00" (152.40) B: 6.00" (152.40)	Inverted Internal Elbow For connecting a vertical run of HBLALU3800 with a horizontal run with its cover facing up.	Anodized Aluminum	HBLALU3817N* A: 6.00" (152.40) B: 5.98" (151.89)
Elbows and Tees	External Elbow For making a 90° external turn in a raceway run.	Anodized Aluminum	HBLALU3818* A: 6.00" (152.40) B: 6.00" (152.40)	Tee For branch connections of two runs of HBLALU3800 Raceway.	Anodized Aluminum	HBLALU3815* A: 6.00" (152.40) B: 6.00" (152.40)
	Flat Elbow For making a 90° flat turn in a raceway run.	Anodized Aluminum	<b>HBLALU3811*</b> A: 6.00" (152.40) B: 6.00" (152.40)		A	н
End Fittings	Entrance End Fitting For feeding raceway, has concentric ½ in. and ¾ in. trade size KOs.	Anodized Aluminum	HBLALU3810B1 A: 3.00" (76.20) B: 2.31" (58.74)	Blank End Fitting For closing end of raceway.	Anodized Aluminum	HBLALU3810B A: 3.00" (76.20) B: 2.31" (58.74)
	Cover Clip To cover seam where lengths of HBLALU3800 Raceway come together.	Stainless Steel	<b>HBLALU3806</b> A: 1.38" (34.92)	Wire Clip For holding conductors in place. Can be used for either HBLALU3800 or HBLALU4800 Raceway.	Anodized Aluminum )	HBLALUWC A: 1.00" (25.40)
Fittings	Internal Corner Coupling For butting two raceway sections to form an internal 90° turn in a raceway run.	Anodized Aluminum	HBLALU17A A: 4.00" (101.80) B: 2.00" (50.83)	Grounding Adapter For connection of equipment grounding. #10-32 Locking screws included.	Galvanized Steel	HBLALU09 A: 4.00" (101.80) B: 2.00" (50.83)
	Couplings (Pair) To join lengths of HBLALU3800 or HBLALU4800 base.	Aluminum	HBLALU01 A: 2.85" (72.39) B: 4.00" (101.80)			

Note: \*HBLALU01 couplings included. See page T-40 for cover plates.





## **HBLALU4800 Series**

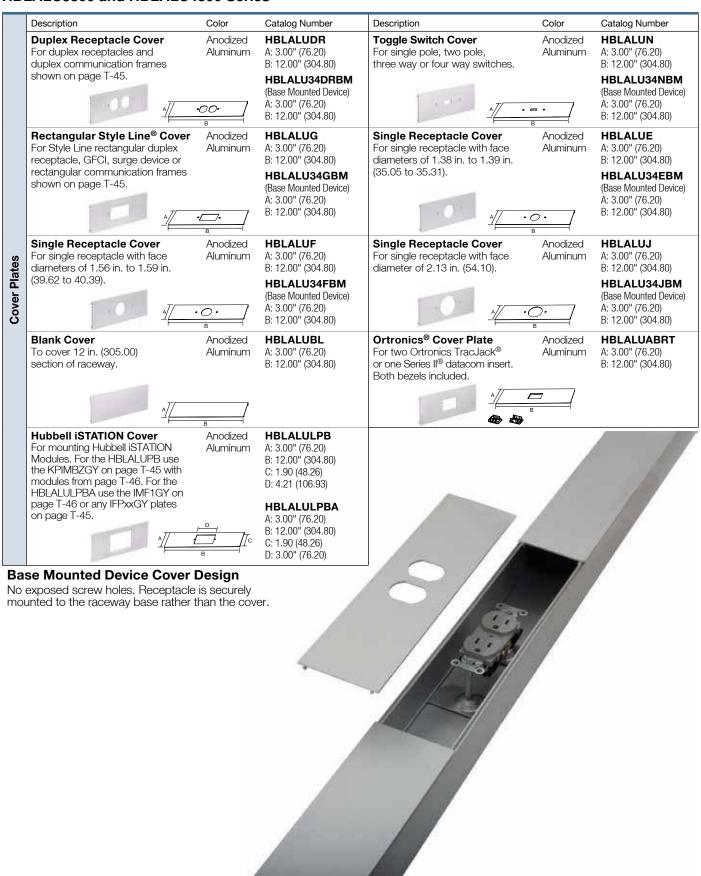
တ္ဆ	Description	Color	Catalog Number	Description	Color	Catalog Number
HBLALU4800 Serie	Two Channel Base Satin anodized finish. Packed 40 ft. (12.19m) per carton, 10 ft. (3m) lengths.	Anodized Aluminum	<b>HBLALU4800B10</b> A: 2.10" (53.34) B: 6.00" (152.40)	Cover (Single Channel) Satin anodized finish. Packed 40 ft. (12.19m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	<b>HBLALUC5</b> A: 3.00" (76.20)
	Assembled cover and base dimensions. W: 6.00" (152.40) H: 2.25" (57.15)	^_	В		A	<u>→</u>

				T		
	Description	Color	Catalog Number	Description	Color	Catalog Number
	Internal Elbow (Two Channel) For making a 90° internal turn in a raceway run.	Anodized Aluminum	<b>HBLALU4817*</b> A: 6.00" (152.40) B: 6.00" (152.40)	Inverted Internal Elbow (Two Channel) For connecting a vertical run of HBLALU4800 with a horizontal rur with its cover facing up.	Anodized Aluminum	HBLALU4817N* A: 6.00" (152.40) B: 5.98" (151.89)
Se					В	
Elbows and Tees	External Elbow (Two Channel) For making a 90° external turn in a raceway run.	Anodized Aluminum	<b>HBLALU4818*</b> A: 6.00" (152.40) B: 6.00" (152.40)	Tee (Two Channel) For branch connections of two runs of HBLALU4800 Raceway.	Anodized Aluminum	<b>HBLALU4815*</b> A: 9.00" (228.60) B: 9.00" (228.60)
Elbows		A	3			B
	Flat Elbow (Two Channel) For making a 90° flat turn in a raceway run.	Anodized Aluminum	<b>HBLALU4811*</b> A: 9.00" (228.60) B: 9.00" (228.60)			
	Carl Carl	B				
End Fittings	Entrance End Fitting (Two Channel) For feeding raceway, has two concentric ½ in. and ¾ in.	Anodized Aluminum	<b>HBLALU4810B2</b> A: 6.00" (152.40) B: 2.31" (58.74)	Blank End Fitting (Two Channel) For closing end of raceway.	Anodized Aluminum	HBLALU4810B A: 6.00" (152.40) B: 2.31" (58.74)
End	trade size KOs.	00	В			B
	Cover Clip To cover seam where lengths of HBLALU4800 Raceway come together	Stainless Steel	<b>HBLALU4806</b> A: 1.38" (34.92)	Wire Clip Used for holding conductors in place on raceway. Can be used for either HBLALU3800 or	Anodized Aluminum	<b>HBLALUWC</b> A: 1.00" (25.40)
			<u> </u>	HBLALU4800 Raceway.		À.
Fittings	Internal Corner Coupling For butting two raceway sections to form an internal 90° turn in a raceway run.	Anodized Aluminum y	<b>HBLALU17A</b> A: 4.00" (101.80) B: 2.00" (50.83)	Grounding Adapter For connection of equipment grounding. #10-32 Locking screws included.	Galvanized Steel	HBLALU09 A: 4.00" (101.80) B: 2.00" (50.83)
_	Countings (Pair)		UDI AL HOA		В	
	Couplings (Pair) To join lengths of HBLALU3800 or HBLALU4800 base.	Aluminum	HBLALU01 A: 2.85" (72.39) B: 4.00" (101.80)			
		B	77			

Note: \*HBLALU01 couplings included. See page T-40 for cover plates.



### HBLALU3800 and HBLALU4800 Series



### Products at a Glance



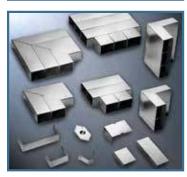
### HBLALU5000 and HBLALU7620 Series

- Two and three channel aluminum raceways
- Satin anodized finish
- Resists oxidation, corrosion and fading
- Can be installed as recessed or surface mounted
- UL Listed and CSA Certified



#### Covers

- Two and three channel raceway utilize common covers
- Available in single and dual channel cover designs
- Single covers allow access to one service at a time
- Dual channel cover fits over two channels for a seamless look
- Common aesthetics throughout line



### Wide Selection of Fittings

- External, internal, flat and tee fittings available to accommodate all types of applications
- Available in both two and three channel versions



### **Compatible Cover Plates**

- Cover plates can be used for both HBLALU5000 and HBLALU7620 Raceways
- Cover plates offer option for most common power device applications
- Low profile bezel cover accommodates Hubbell iSTATION Modules
- Open System data option available
- Base mounted cover plates available for added strength





## **HBLALU5000 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
U5000 Series	Two Channel Base Satin anodized finish. Packed 40 ft. (12.19m) per carton, 10 ft. (3m) lengths. Assembled cover and base dimensions.	Anodized Aluminum	HBLALU5000B10 A: 1.66" (42.16) B: 5.08" (129.03)	Cover (Single Channel) Satin anodized finish. Packed 40 ft. (12.19m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	HBLALUC57 A: 2.54" (64.52)
HBLALU5	W: 5.08" (129.03) H: 1.75" (44.45)	<u>1</u>	В	Cover (Two Channel) Satin anodized finish. Packed 40 ft. (12.19m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	HBLALU2C57 A: 5.08" (129.03)

	Description	Color	Catalog Number	Description	Color	Catalog Number
Ses	Internal Elbow For making a 90° internal turn in a raceway run.	Anodized Aluminum	HBLALU5017* A: 6.00" (152.40) B: 6.00" (152.40)	Inverted Internal Elbow For connecting a vertical run of HBLALU5000 with a horizontal run with its cover facing up.	Anodized Aluminum	HBLALU5017N* A: 5.91" (150.20) B: 5.98" (151.89)
Elbows and Tees	External Elbow For making a 90° external turn in a raceway run.	Anodized Aluminum	HBLALU5018* A: 6.00" (152.40) B: 6.00" (152.40)	Tee For branch connections of two runs of HBLALU5000 Raceway.	Anodized Aluminum	HBLALU5015* A: 9.00" (228.60) B: 8.08" (205.30)
	Flat Elbow For making a 90° flat turn in a raceway run.	Anodized Aluminum	HBLALU5011* A: 9.00" (228.60) B: 9.00" (228.60)			В
End Fittings	Entrance End Fitting For feeding raceway, has concentric ½ in. and ¾ in. trade size KOs.	Anodized Aluminum	HBLALU5010B2 A: 5.08" (129.10) B: 1.75" (44.40)	Blank End Fitting For closing end of raceway.	Anodized Aluminum	HBLALU5010B A: 5.08" (129.10) B: 1.75" (44.40)
	Cover Clip To cover seam where lengths of HBLALU5000 Raceway come together.	Stainless Steel	HBLALU5006 A: 1.38" (34.92)	Wire Clip For holding conductors in place. Can be used for either HBLALU5000 or HBLALU7620 Raceway.	Anodized Aluminum	HBLALU57WC A: 1.00" (25.40)
Fittings	Internal Corner Coupling For butting two raceway sections to form an internal 90° turn in a raceway run.	Anodized Aluminum	<b>HBLALU5717A</b> A: 3.50" (88.90) B: 2.38" (60.30)	Grounding Adapter For connection of equipment grounding. #10-32 Locking screws included.	Galvanized Steel	HBLALU5709 A: 3.37" (85.50) B: 2.00" (50.83)
	Couplings (Pair) To join lengths of HBLALU5000 or HBLALU7620 base.	Aluminum	HBLALU5701 A: 2.38" (60.30) B: 4.00" (101.80)			

Note: \*HBLALU5701 couplings included. See page T-44 for cover plates. Dimensions in Inches (mm)





## **HBLALU7620 Series**

	Description	Color	Catalog Number	Description	Color	Catalog Number
Series	Three Channel Base Satin anodized finish. Packed 40 ft. (12.19m) per carton, 10 ft. (3m) lengths.	Anodized Aluminum	<b>HBLALU7620B10</b> A: 2.16" (54.86) B: 7.62" (193.55)	Cover (Single Channel) Satin anodized finish. Packed 40 ft. (12.19m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	<b>HBLALUC57</b> A: 2.54" (64.52)
HBLALU7620	Assembled cover and base dimensions. W: 7.62" (193.55) H: 2.25" (57.15)	A	B 8	Cover (Two Channel) Satin anodized finish. Packed 40 ft. (12.19m) per carton, 5 ft. (1.5m) lengths.	Anodized Aluminum	HBLALU2C57 A: 5.08" (129.03)

					-	
	Description	Color	Catalog Number	Description	Color	Catalog Number
S	Internal Elbow For making a 90° internal turn in a raceway run.	Anodized Aluminum	HBLALU7617* A: 6.50" (165.10) B: 6.50" (165.10)	Inverted Internal Elbow For connecting a vertical run of HBLALU7620 with a horizontal run with its cover facing up.	Anodized Aluminum	HBLALU7617N* A: 6.50" (165.10) B: 5.98" (151.89)
Elbow Fittings	External Elbow For making a 90° external turn in a raceway run.	Anodized Aluminum	HBLALU7618* A: 5.50" (139.70) B: 5.50" (139.70)	Tee For branch connections of two runs of HBLALU7620 Raceway.	Anodized Aluminum	HBLALU7615* A: 9.00" (228.60) B: 10.62" (269.80)
	Flat Elbow For making a 90° flat turn in a raceway run.	Anodized Aluminum	HBLALU7611* A: 11.54" (293.10) B: 11.54" (293.10)			
End Fittings	Entrance End Fitting For feeding raceway, has concentric ½ in. and ¾ in. trade size KOs.	Anodized Aluminum	HBLALU7610B2 A: 7.62" (193.50) B: 2.31" (58.70)	Blank End Fitting For closing end of raceway.	Anodized Aluminum	HBLALU7610B A: 7.62" (193.50) B: 2.31" (58.70)
	Cover Clip To cover seam where lengths of HBLALU7620 Raceway come together.	Stainless Steel	<b>HBLALU7606</b> A: 1.38" (34.92)	Wire Clip For holding conductors in place. Can be used for either HBLALU5000 or HBLALU7620 Raceway.	Anodized Aluminum	HBLALU57WC A: 1.00" (25.40)
Fittings	Internal Corner Coupling For butting two raceway sections to form an internal 90° turn in a raceway run.	Anodized Aluminum	<b>HBLALU5717A</b> A: 3.50" (88.90) B: 2.38" (60.30)	Grounding Adapter For connection of equipment grounding. #10-32 Locking screws included.	Galvanized Steel	HBLALU5709 A: 3.37" (85.50) B: 2.00" (50.83)
	Couplings (Pair) To join lengths of HBLALU5000 or HBLALU7620 base.	Aluminum	<b>HBLALU5701</b> A: 2.38" (60.30) B: 4.00" (101.80)			

Note: \*HBLALU5701 couplings included. See page T-44 for cover plates.



	Description	Color	Catalog Number	Description	Color	Catalog Number
	Duplex Receptacle Cover For duplex receptacles and duplex communication frames	Anodized Aluminum	<b>HBLALU57DR</b> A: 2.54" (64.50) B: 12.00" (304.80)	Toggle Switch Cover For single pole, two pole, three way or four way switches.	Anodized Aluminum	<b>HBLALU57N</b> A: 2.54" (64.50) B: 12.00" (304.80)
	shown on page T-45.	DO•	HBLALU57DRBM (Base Mounted Device) A: 2.54" (64.50) B: 12.00" (304.80)	A// · =	<del></del>	HBLALU57NBM (Base Mounted Device A: 2.54" (64.50) B: 12.00" (304.80)
Cover Plates	Rectangular Style Line® Cover For Style Line rectangular duplex receptacle, GFCI, surge device or rectangular communication frames shown on page T-45.	Anodized Aluminum	HBLALU57G A: 2.54" (64.50) B: 12.00" (304.80)  HBLALU57GBM (Base Mounted Device) A: 2.54" (64.50) B: 12.00" (304.80)	Blank Cover To cover 12 in. (305.00) section of raceway.	Anodized Aluminum	<b>HBLALU57BL</b> A: 2.54" (64.50) B: 12.00" (304.80)
	<u>^// •/</u>			A//		
	Single Receptacle Cover For single receptacle with face diameters of 1.38 in. to 1.39 in.	Anodized Aluminum	<b>HBLALU57E</b> A: 2.54" (64.50) B: 12.00" (304.80)	Single Receptacle Cover For single receptacle with face diameters of 1.56 in. to 1.59 in.	Anodized Aluminum	<b>HBLALU57F</b> A: 2.54" (64.50) B: 12.00" (304.80)
	(35.05 to 35.31).	<u></u>	HBLALU57EBM (Base Mounted Device) A: 2.54" (64.50) B: 12.00" (304.80)	(39.62 to 40.39).	)·/	HBLALU57FBM (Base Mounted Device A: 2.54" (64.50) B: 12.00" (304.80)
	Hubbell iSTATION Cover For mounting Hubbell iSTATION modules. IMF1GY or IFPxxGY frames and plates on pages T-45 and T-46.	Anodized Aluminum	HBLALU57LPB A: 2.54" (64.50) B: 12.00" (304.80) C: 1.90 (48.26) D: 3.00" (76.20)	Ortronics® Cover Plate For two Ortronics TracJack® or one Series II® datacom insert. Both bezels included.	Anodized Aluminum	HBLALU57ABR A: 2.54" (64.50) B: 12.00" (304.80)
				A B		
	<b>2-Gang Raised Device Box</b> KP device plates only, found on page T-45.	Gray PVC	<b>HBLALU57KP2G</b> A: 5.08" (129.10) B: 7.64" (193.90)			1
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е	ie Mounted Device Cover Development of the Mounted Device Cover Development of the Mounted Service of the Mounted Service of the Mounted Service Office of the Mounted Service Office Of	s securely	er.	18/	7	
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# Metal and Aluminum Raceway



## **Device Brackets, Plates and Frames**

Description	Color	HBL4750 Series	HBL6750 Series
Device Mounting Bracket for HBL4750 and HBL6750 Series Metal Raceway. Ivory metal raceway matches almond devices and plates.	lvory	HBL4750IV	HBL6750IV
	Gray	HBL4750GY	HBL6750GY

- 2	<b>4</b>					
	Color	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
"KP" Plates	Almond Gray	KP8AL KP8GY Duplex	KP26AL KP26GY Style Line®	KP1AL KP1GY Toggle	KP7AL KP7GY Receptacle (1.41 ID)	KP720AL KP720GY Receptacle (1.60 ID)
se i-dalig r	Almond Gray	KP14AL KP14GY Blank	KP212AL KP212GY Coax (2)	KP2140AL KP2140GY Jack/Coax	KP2162AL KP2162GY Modular Jacks (2)	KP2163AL KP2163GY Modular Jacks (3)
<b>2.</b> OIIO	Almond Gray	KPORTAL KPORTGY Ortronics Series II® Data Module	KPPANAL KPPANGY Panduit Mini-Com® Data Module		ell iSTATION Modules k Wiring section Y).	
	Color	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
rames	Almond Gray	IFP126AL  — Style Line®	ISF2AL ISF2GY Style Line®	ISF3AL ISF3GY Style Line®	ISF4AL ISF4GY Style Line®	ISF6AL ISF6GY Style Line®

S	Color	Catalog Number	Catalog Number	r Catalog Nun	nber Catalog Number	Catalog Number
& Frame	Almond Gray	IFP126AL  — Style Line®	ISF2AL ISF2GY Style Line® 2-Port	ISF3AL ISF3GY Style Line® 3-Port	ISF4AL ISF4GY Style Line® 4-Port	ISF6AL ISF6GY Style Line® 6-Port
"IFP" Plates	Almond Gray	IFP18AL  - Duplex	BR106AL BR106G Duplex 2-Port	Q106AL Q106G Duplex 4-Port		
Comm.	Almond Gray	IFP12AL IFP12GY Flush 2-Port	IFP13AL IFP13GY Flush 3-Port	IFP14AL IFP14GY Flush 4-Port	IFP16AL IFP16GY Flush 6-Port	

Note: Ivory metal raceway matches almond devices and plates. For HBL3000 series raceway applications, catalog number HBL3051LEIV/GY must be used with plates and devices. See page T-46 or section Y for additional information on datacom products.

	Color	1-Gang	2-Gang	3-Gang		4-Gang	5-Gang	6-Gang
	Almond Gray	SP1AL SP1G	SP2AL SP2G	SP3AL -		SP4AL	SP5AL -	SP6AL
		Toggle	Toggle	Toggle		Toggle	Toggle	Toggle
	Almond Gray	SP8AL SP8G	SP82AL SP82G	SP83AL		_	_	_
Steel Plates	- 7		Duplex			Duplex	Duplex	Duplex
	Almond Gray	PHPS1AL PHPS1G	PHPS2AL PHPS2G	PHPS3AL		PHPS4AL	PHPS5AL	PHPS6AL
	Gitty	Style Line®	Style Line®	Style Line®		Style Line®	Style Line®	Style Line®
Painted	Almond Gray	SP7AL SP7G Single recept. (1.41" ID)	SP18AL SP18G Combination	SF	P28AL P28G ombinat	ion	PJS126AL PJS126G	PJS226G
	Color	1-Gang	2-Gang	3-Gang		1-Gang	2-Gang	3-Gang
	Almond Gray	SP14BAL SP14BG Blank, Box Mount	SP24BAL SP24BG Blank, Box Mount	SP34BAL — Blank, Box Mount		SP14AL SP14G Blank, Strap Mount	SP24AL SP24G Blank, Strap Mount	SP34AL — Blank, Strap Mount

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## Metal and Aluminum Raceway



## Frame Modules and Modular Connector Fittings

late	Description	Color	HBL4750 Series	HBL6750 Series
1. Choose Pla	Front loading plate will accept any modules in three unit combinations. Angled fixtures to be used in bottom opening only. Use KPIMBZAL/GY plate with modules for HBL4750 and HBL6750 Series device mounting bracket located on page T-45. See section Y for additional Hubbell iSTATION modules and datacom products. Ivory metal raceway matches almond devices and plates.	Office White Note: Each gang a	IMF1AL IMF1GY	IMF2AL IMF2GY

	Color	Catalog Number		Catalog Number		Catalog Number		Catalog Number		Catalog Number
2. Choose Modules	Almond Gray	IMB05AL IMB05GY Blank Module .5 Unit		IMB1AL IMB1GY Blank Module 1 Unit		IMB15AL IMB15GY Blank Module 1.5 Unit		IM1K1AL IM1K1GY Modular Flat 1 Unit		IM2K1AL IM2K1GY Modular Flat 1 Unit
	Almond Gray	IM1KA15AL IM1KA15GY Modular Angled 1.5 Unit	T	IM2KA15AL IM2KA15GY Modular Angled 1.5 Unit		IM1SCA15AL IM1SCA15GY SC 1 Duplex Angled, 1.5 Unit	0	IM2SCA2AL IM2SCA2GY SC 2 Duplex Angled, 2 Unit		IM1IA15AL IM1IA15GY Modular Recessed 1.5 Unit
	Almond Gray	IM2IA15AL IM2IA15GY Modular Recessed 1.5 Unit			•	e <b>Opening</b> for mounting ell Jacks.		: .580" (14.73) : .760" (19.30)	1	

Modular connectors to be used with any plate with a standard modular opening. Not recommended for use with KP plates. For KP applications use KPIMBZAL/GY bezel and appropriate Hubbell iSTATION modules located in the section Y. Use appropriate Hubbell iSTATION modules for SC fiber adapters. See section Y for additional modular connectors. Ivory metal raceway matches almond devices and plates.

	Color	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	
Fittings	Almond Gray	SFFGAL SFFGGY F-Type Coupler Gold	SFFALX SFFGX F-Type Coupler Nickel	SFBAL SFBGY BNC Connector	SF35SJAL SF35SJGY 3.5mm Stereo Jacks	SFBAL10 SFBG10 Blank (10 Pack)	
llar Connector	Almond Gray	SFRCRFFAL SFRCRFFGY RCA Gold Pass-through F/F Coupler Red Insulator	SFRCWFFAL SFRCWFFGY RCA Gold Pass-through F/F Coupler White Insulator	SFRCYFFAL SFRCYFFGY RCA Gold Pass-through F/F Coupler Yellow Insulator	SFSV110GY S-Video 110	SFSVAL SFSVGY S-Video F/F Coupler	
Modu	Black housing only	SFRC110R RCA 110 Punchdown Red Insulator	SFRC110W RCA 110 Punchdown White Insulator	SFRC110Y RCA 110 Punchdown Yellow Insulator	SFSPGBK* SFSPGR** Speaker Post Connector		

Note: \*Office white housing with black ring color. \*\*Office white housing with red ring color.

- S	Color Catalog Number		Catalog Number	Catalog Number		
Xcelerator Modular Jac	Almond Gray		<b>HXJ5EAL HXJ5EGY</b> Cat. 5e, T568A, T568B, RJ45	<b>HXJ6AL HXJ6GY</b> Cat. 6, T568A, T568B, RJ45		HXJUAL HXJUGY 6 Position USOC, RJ25

Note: Ivory metal raceway matches almond devices and plates.

Jack Color Options (Replace AL or GY suffix with additional colors below)

AL=Almond BK=Black B=Blue EI=Elec. Ivory GY=Gray GN=Green LA=Lt. Almond OR=Orange OW=Off. White R=Red W=White Y=Yellow



### **Wire Fill Capacity Chart and Technical Information**

	Metal and Aluminum Raceway Wire Fill Capacities															
				(THI	Power IN/T90 Ny	/lon)	Vo	ice		(Co	Data pper Cab	les)			(Multimo Optic Cab	
				14 AWG	12 AWG	10 AWG	4-Pair	25-Pair	Type RG59U	Cat. 5e	Cat. 6	Cat. 6A	Cat. 6 STP	(2) or (4) Fiber Round Cable		Fiber Optic Zip Cord
			Wire O.D. (in):	0.111	0.13	0.164	0.19	0.41	0.242	0.21	0.25	0.35	0.29	0.19	0.118	.12 X .24
			Wire Area (sq. in.):	0.0097	0.0133	0.0211	0.0283	0.1320	0.0460	0.0346	0.0491	0.0962	0.0660	0.0283	0.0109	0.0288
	Series		Channel Area (sq. in.)	Wire	Fill Capa	acity	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
	HBL500		0.22	7	5	3	2	0	1	2	1	1	1	2	8	2
	HBL700		0.26	10	7	4	3	0	2	3	2	1	1	3	8	3
	HBL750		0.40	12	9	5	6	1	3	5	3	2	2	6	15	6
	HBL2000		0.89	7	7	0	13	3	8	10	7	4	5	13	33	12
	HBL2000A		0.86	35	26	16	11	2	7	9	7	4	5	13	33	12
	HBL2400		1.39	57	41	26	19	4	12	16	11	5	8	19	51	19
a	HBL2400D	Channel– A	0.86	26	19	11	12	2	7	9	7	3	5	12	31	11
Raceway	АВ	Channel– B	0.37	11	9	6	5	1	3	4	3	1	2	5	13	5
Bac	HBL3000		3.70	152	111	70	52	11	32	43	30	15	22	52	136	51
<u>=</u>	HBL4750	No Barriers	7.20	296	216	136	102	22	63	83	59	30	44	102	264	100
Metal	АВ	Barrier Centered Ch. A	3.10	127	93	58	44	9	27	36	25	13	19	44	114	43
		Barrier Centered Ch. B	3.30	127	93	58	47	10	29	38	27	14	20	47	121	46
	A  B	Barrier Offset Ch. A	2.10	86	63	39	30	6	18	24	17	9	13	30	77	29
	HBL6750	Barrier Offset Ch. B	4.30	176	129	81	61	13	37	50	35	18	26	61	158	60
	AAA	No Barriers  Barrier Offset <sup>1</sup> / <sub>3</sub> Ch. A	13.77 4.59	566 189	412 138	259 86	195 65	42 14	120 40	159 53	112 37	57 19	83 28	195 65	505 168	191 64
	АВ	Barrier Offset <sup>2</sup> / <sub>3</sub> Ch. B	9.18	379	278	173	130	28	80	106	75	38	56	130	337	128
	HBLALU2000		1.20	49	36	22	16	3	10	13	9	4	7	16	44	16
	HBLALU3800		5.80	214	156	98	82	18	50	67	47	24	35	82	213	81
	HBLALU4800	Center Barrier/ Both Channels	11.60	428	312	196	164	35	101	134	95	48	70	164	426	161
Raceway		Center Barrier/ 1 Channel	5.80	214	156	98	82	18	50	67	47	24	35	82	213	81
틸	HBLALU5000	Center Barrier/ Both Channels	7.60	312	228	142	106	22	64	86	60	30	46	106	278	104
Alumin		Center Barrier/ 1 Channel	3.80	156	114	71	53	11	32	43	30	15	23	53	139	52
¥	HBLALU7620	2 Barriers with 3 Equal Channels/Total	15.00	618	450	282	210	45	129	171	120	60	90	210	549	207
		2 Barriers with 3 Equal Channels/ 1 Channel	5.00	206	150	94	70	15	43	57	40	20	30	70	183	69

Note: Pathway (Raceway) fill shall be 40% maximum. Raceway fittings and outlets/receptacles reduce the cross section of the raceway system, thus reducing overall cable fill capacity.

#### **Physical Properties**

Material Galvanized Steel or Anodized Aluminum

#### Metal PlugTrak Specifications

Receptacle Rating NEMA 5-15R and NEMA 5-20R Wire #12 AWG Stranded Copper

Receptacle Face Thermoplastic

#### Codes/Standards

TIA/EIA 569B UL Standard UL 5

Listings E253976 /E253830 /E253833 CSA Standard C22.2 no. 62

Certification C22.2 no. 6
Certification LR87514

#### **Cross Reference**

Cross Reference			
Hubbell Catalog Number	Wiremold <sup>®</sup> Catalog Number	Hubbell Catalog Number	Wiremold <sup>®</sup> Catalog Number
HBL500 Series	500 Series	HBL57482IVA	V5748-2
HBL502B	502	HBL57483IVA	V5748-3
HBL605CUT	605	HBL57484IVA	V5748-4
HBL600B	600B	HBL57485IVA	V5748-5
HBL605K	605K	HBL57486IVA	V5748-6
HBL500TFIV	N/A	HBL5751IVA	V5751
HBL50010IV	V500	HBL57512IVA	V5751-2
HBL504IV	V504	HBL57513IVA	V5751-3
HBL506IV	V506	HBL5751AIVA	V5751A
HBL511IV	V511	HBL5751AIVA	V5752
HBL512IV	V512	HBL5752IVA HBL5753IVA	V5753
HBL517IV	V512 V517		
HBL518IV	V517 V518	HBL5760IVA	V5760 V5783
HDLDIOIV	V316	HBL5783IVA	
UDI 750 Carias	700 Carias	HBL5784IVA	V5784
HBL750 Series	700 Series	HBL5785IVA	V5785
HBL607CUT	607	HBL5786IVA	V5786
HBL7502B	702	HBL5786AIVA	N/A
HBL607K	607K	HBL5711BRIVA	N/A
HBL750TFIV	N/A	HBL5715BRIVA	N/A
HBL75010IV	V700	HBL5717BRIVA	N/A
HBL7504IV	V704	HBL5718BRIVA	N/A
HBL7506IV	V706		
HBL711IVA	V711		
HBL712IV	V712	HBL2000 Series	2000 Series
HBL717IVA	V717	HBL620C	620
HBL718IVA	V718	HBL2001C	2001
		HBL2003SC	2003
HBL500/HBL750 Serie	os 500/700 Sorios	HBL2009GC	2009
		HBL2000WC	2000WC
HBL5701C	5701	HBL2000WCA	N/A
HBL5709	5709	HBL2000WCA	2017TC
HBL5780	5780		
HBL5781	5781	HBL620BCK	620BCK
HBL5782C	5782	HBL2000B5GY	G2000B-5
HBL5791	5791	HBL2000BCGY	G2000BC
HBL5709GC	5709GC	HBL2000BCAGY	N/A
HBL5781A	5781A	HBL2000CGY	G2000C
HBL5782A	5782A	HBL2000CAGY	G2100C
HBL5790B	5790B	HBL2006GY	G2006
HBL5752RA	R5752	HBL2010A2GY	G2010A2
HBL5753RA	R5753	HBL2010A3GY	G2010A3
HBL5700FIVA	V5700F	HBL2010BGY	G2010B
HBL5703IV	V5703	HBL2011GY	G2011
HBL5711LHIVA	V5711LH	HBL2011BRGY	N/A
HBL5711RHIVA	V5711RH	HBL2015GY	G2015
HBL5715IVA	V5715	HBL2015BRGY	N/A
HBL5719IVA	V5719	HBL2017BRGY	N/A
HBL57242IVA	V57242	HBL2018BRGY	N/A
HBL5731IV	V5731	HBL2018CGY	G2018C
HBL5733IVA	V5733	HBL2048GY	G2048
HBL5735IVA	V5735 V5735	HBL20482GY	G2048-2
HBL5736IV		HBL2051HGY	G2051H
	V5736	HBL2000TFIV	N/A
HBL5737IVA	V5737	HBL2000TFGY	N/A
HBL5737AIVA	V5737A		V2000B-5
HBL5738IVA	V5738	HBL2000B5IV	
HBL5738AIVA	V5738A	HBL2000BCIV	V2000BC
HBL5738AFIVA	V5738AF	HBL2000BCAIV	N/A
HBL5739IVA	V5739	HBL2000CIV	V2000C
HBL5739AIVA	V5739A	HBL2000CAIV	V2100C
HBL5744IVA	V5744	HBL2006IV	V2006
HBL57442IVA	V5744-2	HBL2010A2IV	V2010A2
HBL57443IVA	V5744-3	HBL2010A3IV	V2010A3
HBL5744SIVA	V5744S	HBL2010BIV	V2010B
HBL5744S2IVA	V5744S-2	HBL2011IV	V2011
HBL5744S3IVA	V5744S-3	HBL2011BRIV	N/A
HBL5745IVA	V5745	HBL2015IV	V2015
HBL5747IVA	V5745 V5747	HBL2015BRIV	N/A
HBL57472IVA	V5747-2	HBL2017BRIV	N/A
HBL57473IVA	V5747-2 V5747-3	HBL2018BRIV	N/A
HBL5748IVA	V5747-3 V5748	HBL2018CIV	V2018C
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### **Cross Reference**

Hubbell Catalog Number	Wiremold <sup>®</sup> Catalog Number	Hubbell Catalog Number	Wiremold <sup>®</sup> Catalog Number
HBL2048IV	V2048	HBL3007CGY	G3007C
HBL20482IV	V2048-2	HBL3010AEGY	G3010AE
IBL2051HIV	V2051H	HBL3010BGY	G3010B
1BL2089IV	V2089	HBL3010CGY	G3010C
BL2089EIV	V2089E	HBL3011EGY	G3011E
.5220002.1	120002	HBL3014CGY	G3014C
		HBL3015EGY	G3015E
HBL2400/HBL2400D	2400/2400D	HBL3017TCEGY	G3017TCE
		HBL3018AEGY	G3018AE
Series	Series	HBL3027AEGY	G3027AE
IBL624CUT	624	HBL3028GY	G3027AL G3028
1BL2401C	2401		
IBL2409GC	2409	HBL3033JEGY	G3033JE
HBL2400WC	2400WC	HBL3036HEGY	G3036HE
HBL2401DC	2401D	HBL3040CEGY	G3040CE
HBL624BCK	624BCK	HBL3043BEGY	G3043BE
HBL24DRK	N/A	HBL30442GY	G3044-2
HBL24SRK	N/A	HBL3046BEGY	G3046BE
HBL24106DRK	N/A	HBL3046H2GY	G3046H-2
BL24106RRK	N/A	HBL3048RGY	G3048R
BL4724REDIV	N/A	HBL3051LEGY	G3051LE
BL2420REDIV	N/A	HBL3082GY	G3082
BL2420NEDIV	N/A	HBL3086GY	G3086
		HBL3200REDIV	N/A
HBL2400DTFIV	N/A	HBL3200REDGY	N/A
HBL2400BIV	V2400B	HBL3000TFIV	N/A
1BL2400B10IV	V2400B-10		
HBL2400BCIV	V2400BC	HBL3000TFGY	N/A
HBL2400BDIV	V2400BD	HBL3000BIV	V3000B
HBL2400CIV	V2400C	HBL3000C075IV	V3000C075
HBL2406IV	V2406	HBL3000C195IV	V3000C195
HBL2410AIV	V2410A	HBL3000CEIV	V3000CE
HBL2410BIV	V2410B	HBL3003IV	V3003
HBL2410BDIV	V2410BD	HBL3006EIV	V3006E
HBL2410CIV	V2410C	HBL3010AEIV	V3010AE
BL2410DFOIV	V2410DFO	HBL3010BIV	V3010B
BL2410FCIV	V2410FC	HBL3010CIV	V3010C
BL2411DFOIV	V2411DFO	HBL3011EIV	V3011E
BL2415DFOIV	V2411DFO V2411DFO	HBL3014CIV	V3014C
		HBL3015EIV	V3015E
HBL2411IV	V2411FO	HBL3017TCEIV	V3017TCE
HBL2415IV	V2415FO	HBL3018AEIV	V3017 TOE V3018AE
IBL2417DFOIV	V2417DFO		V3016AE V3027AE
HBL2417IV	V2417FO	HBL3027AEIV	
HBL2418DFOIV	V2418DFO	HBL3028IV	V3028
1BL2418IV	V2418FO	HBL3033JEIV	V3033JE
1BL2426IV	V2426	HBL3036HEIV	V3036HE
HBL2444IVA	V2444	HBL3040CEIV	V3040CE
1BL24442IV	V2444-2	HBL3043BEIV	V3043BE
HBL2444DIVA	V2444D	HBL30442IV	V3044-2
IBL2444D2AIV	V2444D-2A	HBL3046BEIV	V3046BE
IBL2448IVA	V2448	HBL3046H2IV	V3046H-2
IBL24482IV	V2448-2	HBL3048RIV	V3048R
IBL2451HIV	V2451H	HBL3051LEIV	V3051LE
BL245THIV	V2475D	HBL3086IV	V3086
1BL2475DBRIV 1BL2489IV	V2475D V2489		
IDECTODIV	v∠≒U∂		
		HBL4750 Series	4000 Series
HBL3000 Series	3000 Series	HBL4751AC	4001A
HBL630B	630B	HBL4750IV	V4050
BL630BDK	630BDK	HBL640C	640C
1BL630C		HBL4750B10GY	G4000B-10
	630C	HBL4750C075GY	G4000C075
HBL630CDK	630CDK	HBL4750C075G1 HBL4750C195GY	G4000C073 G4000C195
HBL3000BGY	G3000B		
1BL3000C075GY	G3000C075	HBL640B	640B
HBL3000C195GY	G3000C195	HBL4747RXIV	V4047RX
HBL3000CEGY	G3000CE	HBL4747RFIV	V4047RF
HBL3000WCGY	G3000WC	HBL4747C1GY	G4047C-1
BL3001GY	G3001	HBL4747BXGY	G4047BX
BL3001AGY	G3001A	HBL4747RXGY	G4047RX
	J000 171		
	C3003	HBL4747RFGY	G4047RF
HBL3003GY HBL3006EGY	G3003 G3006E	HBL4747RFGY HBL4747JXGY	G4047RF G4047JX

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#### **Cross Reference**

Hubbell Catalog Number	Wiremold® Catalog Number	Hubbell Catalog Number	Wiremold® Catalog Number
HBL4747C2GY	G4047C-2	HBL4750DGY	G4000D
HBL4715DFOGY	G4015DFO	HBL4750WCGY	G4000WC
HBL4717NGY	G4017N	HBL4710BGY	G4010B
HBL4746H2GY	G4046H-2	HBL4710DFOGY	G4010DFO
HBL4718DFOGY	G4018FO	HBL4710GY	G4010
HBL47472BBFFGY	G4047-2BBFF	HBL4711DFOGY	G4011FO
HBL47472BBBBBGY	G4047-2BBBB	HBL4711GY	G4011
HBL47472BBSSGY HBL47472BBXXGY	G4047-2BBSS G4047-2BBXY	HBL4712TXGY HBL4714AGY	G4012TX G4014A
HBL47472BBTTGY	G4047-2BBXX G4047-2BBTT	HBL4717DFOGY	G4017FO
HBL4747AXGY	G4047AX	HBL4717GY	G4017
HBL47472RRXXGY	G4047-2RRXX	HBL4717TCAGY	G4017TCA
HBL4747BFGY	G4047BF	HBL4774AIV	V4074A
HBL4747BBGY	G4047BB	HBL4786AIV	V4086A
HBL4747BRGY	N/A	HBL4747CVMIV	V6007C-1
HBL4747BRIV	N/A	HBL4747CVM2IV	V6007C-2
HBL4747BTGY	G4047BT		
HBL4747BSGY	G4047BS	LIDI CZEO Carian	COOO Carian
HBL4774AGY HBL4750GY	G4074A G4050	HBL6750 Series HBL6751A	6000 Series 6001A
HBL47472RRXXIV	V4047-2RRXX	HBL660C	640C
HBL47472BBXXIV	V4047-2BBXX	HBL660CDK	640CDK
HBL4747BBIV	V4047BB	HBL660B	660B
HBL4747AXIV	V4047AX	HBL660BDK	660BDK
HBL4747BFIV	V4047BF	HBL6718DFOGY	G4018FO
HBL4747BTIV	V4047BT	HBL6718GY	G6017TX
HBL4747BSIV	V4047BS	HBL6746HHHGY	G4046H-2 (4000 Series 2-Gang)
HBL4747C1IV	V4047C-1	HBL67473BBBBBBBGY	G4047-2BBBB (4000 Series 2-Gang)
HBL4747BXIV	V4047BX	HBL67473BBBBFFGY HBL67473BBBBSSGY	G4047-2BBFF (4000 Series 2-Gang) G4047-2BBSS (4000 Series 2-Gang)
HBL4747JXIV HBL4747C2IV	V4047JX V4047C-2	HBL67473BBBBBTTGY	G4047-2BB33 (4000 Series 2-Gang)
HBL4750CIV	V400C	HBL67473BBBBXXGY	G4047-2BBXX (4000 Series 2-Gang)
HBL4750B10IV	V4000B-10	HBL6747AXXGY	G4047AX (4000 Series 2-Gang)
HBL4750C315IV	V4000C315	HBL6747BBBGY	G4047BB (4000 Series 2-Gang)
HBL4750C195IV	V4000C195	HBL6747BBFGY	G4047BF (4000 Series 2-Gang)
HBL4711DFOIV	V4011FO	HBL6747BBSGY	G4047BS (4000 Series 2-Gang)
HBL4711IV	V4011	HBL6747BBTGY HBL6747BXXGY	G4047BT (4000 Series 2-Gang) G4047BX (4000 Series 2-Gang)
HBL4710DFOIV	V4010DFO	HBL6747C1GY	V4047C-1 (4000 Series 1-Gang Overlapping)
HBL4710IV HBL4710BIV	V4010 V4010B	HBL6747C2GY	V4047C-2 (4000 Series 2-Gang Overlapping)
HBL4756AIV	V4006	HBL6747JXXGY	G4047JX (4000 Series 2-Gang)
HBL4714AIV	V4014A	HBL6747RRFGY	G4047RF (4000 Series 2-Gang)
HBL4712TXIV	V4012TX	HBL6747RXXGY	G4047RX (4000 Series 2-Gang)
HBL4750C135IV	V4000C135	HBL67473RRRRXXGY HBL6750GY	G4047-2RRXX G4050
HBL4750C075IV	V4000C075	HBL6750B10GY	G6000B-10
HBL4717DFOIV	V4017FO	HBL6750CGY	G6000C
HBL4717IV	V4017	HBL6750DAGY	G6000DA
HBL4715DFOIV	V4015DFO	HBL6750WCGY	G6000WC
HBL4715IV HBL4718DFOIV	V4015 V4018FO	HBL6751DAGY	G6001DA
HBL4718IV	V4018	HBL6756AGY	G6006
HBL4717NIV	V4017N	HBL6710BGY	G6010B
HBL47472BBBBIV	V4047-2BBBB	HBL6711DFOGY	G6011TX
HBL4746H2IV	V4046H-2	HBL6711GY HBL6712TXGY	G6011TX G6012TX
HBL47472BBTTIV	V4047-2BBTT	HBL6714AGY	G6014A
HBL47472BBSSIV	V4047-2BBSS	HBL6717DFOGY	G6017TX
HBL4747CVMGY	G6007C-1	HBL6717GY	G6017TX
HBL4786AGY HBL4750TFIV	G4086A N/A	HBL6774AGY	G6074A
HBL4747CVM2GY	G6007C-2	HBL6786GY	G6086
HBL4750BP	N/A	HBL6750C075IV	N/A
HBL4750TFGY	N/A	HBL6750C075GY	N/A
HBL4756AGY	G4006	HBL6750C135IV	N/A
HBL4751DA	4001DA	HBL6750C135GY HBL6750C195IV	N/A N/A
HBL640BDK	640BDK	HBL6750C195GY	N/A
HBL640CDK	640CDK	HBL6750C315IV	N/A
HBL4750CGY	G4000C	HBL6750C315GY	N/A
HBL4750C135GY	G4000C135 G4000C315	HBL6715DFOIV	N/A
HBL4750C315GY			

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#### **Cross Reference**

I/A I/A I/A I/A I/A I/A I/A I/A I/A I/A	HBL24GBA618GY HBL20GB306IV HBL20GB506IV HBL20GB512IV HBL20GB606IV HBL20GB609IV HBL20GB612IV HBL20GB618IV HBL20GBA512IV HBL20GBA509IV	G24GBA618 V20GB306 V20IG306 V20GB506 V20GB512 V20GB606 V20GB609 V20GB612 V20GB618 V20GBA512
I/A I/A I/A I/A I/A I/A I/A I/A I/A I/4018FO I/4046H-2 (4000 Series 2-Gang)	HBL20GB306IV HBL20IG306IV HBL20GB506IV HBL20GB512IV HBL20GB606IV HBL20GB609IV HBL20GB612IV HBL20GB618IV HBL20GBA512IV	V20GB306 V20IG306 V20GB506 V20GB512 V20GB606 V20GB609 V20GB612 V20GB618
I/A I/A I/A I/A I/A I/A I/A I/4018FO I/4046H-2 (4000 Series 2-Gang)	HBL20IG306IV HBL20GB506IV HBL20GB606IV HBL20GB609IV HBL20GB612IV HBL20GB618IV HBL20GBA512IV	V20IG306 V20GB506 V20GB512 V20GB606 V20GB609 V20GB612 V20GB618
I/A I/A I/A I/A I/A I/A 4018FO 4046H-2 (4000 Series 2-Gang)	HBL20GB512IV HBL20GB606IV HBL20GB609IV HBL20GB612IV HBL20GB618IV HBL20GBA512IV	V20GB512 V20GB606 V20GB609 V20GB612 V20GB618
I/A I/A I/A I/A I/A 4018FO 4046H-2 (4000 Series 2-Gang)	HBL20GB606IV HBL20GB609IV HBL20GB612IV HBL20GB618IV HBL20GBA512IV	V20GB606 V20GB609 V20GB612 V20GB618
I/A I/A I/A I/A '4018FO '4046H-2 (4000 Series 2-Gang)	HBL20GB609IV HBL20GB612IV HBL20GB618IV HBL20GBA512IV	V20GB609 V20GB612 V20GB618
I/A I/A I/A '4018FO '4046H-2 (4000 Series 2-Gang)	HBL20GB612IV HBL20GB618IV HBL20GBA512IV	V20GB612 V20GB618
I/A I/A '4018FO '4046H-2 (4000 Series 2-Gang)	HBL20GB618IV HBL20GBA512IV	V20GB618
I/A /4018FO /4046H-2 (4000 Series 2-Gang)	HBL20GBA512IV	
4018FO 4046H-2 (4000 Series 2-Gang)		V20GBA512
4046H-2 (4000 Series 2-Gang)	HBL20GBA609IV	
`		V20GBA609
4047-2BBBB (4000 Series 2-Gang)	HBL20GBA612IV	V20GBA612
(4047 ODDEE (4000 Corios O Cons)	HBL20GBA618IV	V20GBA618
4047-2BBFF (4000 Series 2-Gang)	HBL20IG512IV HBL20IG606IV	V20IG512
'4047-2BBSS (4000 Series 2-Gang) '4047-2BBTT (4000 Series 2-Gang)	HBL24GB306IV	V20IG606 V24GB306
4047-2BBTT (4000 Series 2-Gang)	HBL24GB506IV	V24GB506
4047-2BBXX (4000 Series 2-Gang)	HBL24GB512IV	V24GB512
		V24GBA512
( ),		V24GB606
		V24GB612
(		V24GB618
ν,	HBL24GBA612IV	V24GBA612
4047C-1 (4000 Series 1-Gang Overlapping)	HBL24GBA618IV	V24GBA618
4047C-2 (4000 Series 2-Gang Overlapping)		
4047JX (4000 Series 2-Gang)		
4047RF (4000 Series 2-Gang)	HBLALU2000 Series	ALA2000 Series
4047RX (4000 Series 2-Gang)	HBLALU2000B10	AL2000B-10
4047-2RRXX	HBLALU2000B5	AL2000B-5
4050		AL2000C-5
		AL2000WC
		AL2001 AL2003
		AL2003 AL2006
		AL2009
		AL2010A
	HBLALU2010B	AL2010B
6014A	HBLALU2011	AL2011
6074A	HBLALU2015	AL2015
6086		AL2017
		AL2018
		AL2038
fletal Plugmold®		AL2040A AL2043
'20-C2		AL2044
		AL2044-2
I/A		AL2047
	HBLALU20472	AL2047-2
	HBLALU2051H	AL2051H
		Aluminum Plugmold®
		AL20GB306
220GB612	HBLALU20GB506	AL20GB506
220GB618		AL20GB512
220GBA512		AL20GB606
G20GBA609		AL20GB612 AL20GB618
G20GBA612		AL20GB016 AL20GBA606
320GBA618	HBLALU20GBA612	AL20GBA612
G20IG512	HBLALU20GBA618	AL20GBA618
G20IG606	HBLALU20IG306	AL20IG306
624GB306	HBLALU20IG506	AL20IG506
	HBLALU20IG606	AL20IG606
	HBLALU24GB306	N/A
		N/A
		N/A
		N/A N/A
		N/A N/A
	### Add Process Series 2-Gang   ### Add Process Series 2-Gang Series S	1047BB (4000 Series 2-Gang)

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#### Cross Reference

Cross Reference	e		
Hubbell Catalog Number	Wiremold <sup>®</sup> Catalog Number	Hubbell Catalog Number	Wiremold <sup>®</sup> Catalog Number
HBLALU24GB612	N/A		
HBLALU24GB618	N/A		
HBLALU24GBA606	N/A		
HBLALU24GBA612	N/A		
HBLALU24GBA618	N/A		
HBLALU24IG606	N/A		
HBLALU3800 Series	ALA3800 Series		
HBLALU3800B10	ALA3800B-10		
HBLALU3806	ALA3806		
HBLALU3810B	ALA3810B		
HBLALU3810B1	ALA3810B1		
HBLALU3811	ALA3811		
HBLALU3815	ALA3815		
HBLALU3817	ALA3817		
HBLALU3817N	ALA3817N		
HBLALU3818	ALA3818		
HBLALUC5	ALAC-5		
HBLALUWC	ALAWC		
HBLALU4800 Series	ALA4800 Series		
HBLALU01	ALA01		
HBLALU09	ALA09		
HBLALU17A	ALA17A		
HBLALU4800B10	ALA4800B-10		
HBLALU4806	ALA4806		
HBLALU4810B	ALA4810B		
HBLALU4810B2	ALA4810B2		
HBLALU4811	ALA4811		
HBLALU4815	ALA4815		
HBLALU4817	ALA4817		
HBLALU4817N	ALA4817N		
HBLALU4818	ALA4818		
HBLALUABRT	ALA-ABRT		
HBLALUBL	ALA-BL		
HBLALUDR	ALA-DR		
HBLALUE	ALA-E		
HBLALUF	ALA-F		
HBLALUG	ALA-G		
HBLALUJ	ALA-J		
HBLALUN	ALA-N		
HBLALULPB	N/A		
Touch-Up Paint	Touch-Up Paint		
HBLGWEP	GWE-S		
HBLIWEP	IWE-S		

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#### Products at a Glance



#### Hubbell PolyTrak® Non-Metallic Surface Raceway

- PolyTrak® Non-Metallic Surface Raceway is a complete system with raceway, fittings, boxes and devices
- Sizes range from single channel PremiseTrak® to three channel Super BaseTrak® for all types of surface raceway requirements
- Single and two channel latching raceways are dual-rated for both power and data applications, reducing inventory requirements
- UL Listed and CSA Certified to 600 volts
- Office white color



#### One Box, Three Systems

- Boxes have three cut-aways that can be utilized with WallTrak<sup>®</sup>, LANTrak and PremiseTrak (Latching) systems
- Reduces inventory requirements
- Eliminates need to order three separate boxes
- Boxes available in low, standard and deep profiles.
- Two-gang divided box available for power, data, voice, audio and video applications
- Boxes utilize Hubbell KP plates or Hubbell iSTATION Modules and Bezels



#### Flush or Full Capacity Boxes

- Super BaseTrak® and BaseTrak® Raceway offer multiple solutions for box installation
- Super BaseTrak<sup>®</sup> in-line three-gang box allows maximum capacity in a flush design
- Super BaseTrak<sup>®</sup> and BaseTrak<sup>®</sup> available in single, two and threegang full capacity boxes
- Two and three channel BaseTrak<sup>®</sup> (PB2 and PB3) available with one and two-gang in-line boxes
- Full capacity in-line boxes eliminate the need to de-rate the wire fill
  capacity due to the intrusion of devices into the raceway channel



#### Non-Metallic PlugTrak®

- Available as hard wired multi-outlet assembly or relocatable power tap
- Hubbell designed and manufactured 15 or 20 Amp receptacles
- UL Listed and CSA Certified
- Office white color

#### Hard Wired Multi-Outlet PlugTrak®

- Available in 5 ft. (1.5m) or 6 ft. (1.8m) lengths
- Available in single, two circuit and is inherently an isolated ground product
- Multiple spacing configurations
- Hard wired PlugTrak® mates with LANTrak® fittings and boxes
- Tamper-Resistant versions available

#### Portable PlugTrak®

- Available in 3 ft. (0.9m) or 5 ft. (1.5m) lengths
- 6 ft. (1.8m) length 15 or 20 Amp molded cord set allows reliable access
- Pre-punched holes make mounting easy



### PT1 PremiseTrak® (Non-Latching)

© ¥	Description	Color	Length	Without Adhesive	With Adhesive
PT1 PremiseTrak	Base and Cover Single channel raceway. Available in 5 ft. (1.5m) and 7 ft. (2.1m) lengths.	Office White	5 ft. 7 ft.	PT1BC5 PT1BC7 A: .68" (17.27) B: .75" (19.05)	PT1ABC5 PT1ABC7 A: .68" (17.27) B: .75" (19.05)

	Description	Color	Catalog Number	Description	Color	Catalog Number
Device Boxes	1-Gang Low Profile Box For shallow switches and receptacles. See page T-63 for recommended plate options.	Office White	PT12LPB A: 4.90" (124.46) B: 3.25" (82.55) C: 1.12" (28.45)	1-Gang Deep Box For deep devices or applications where additional room is beneficial. See page T-63 for recommended plate options.	Office White	PT12DBA A: 4.90" (124.46) B: 3.25" (82.55) C: 1.91" (48.51)
	1-Gang Standard Box For standard switches and receptacles. See page T-63 for recommended plate options.	Office White	PT12SBA A: 4.90" (124.46) B: 3.25" (82.55) C: 1.63" (41.40)	2-Gang Deep Box For deep devices or applications where additional room is beneficial. Uses 2-gang "KP", "IMF", or "IFP" plates for power or data applications See page T-63 for recommended plate options.	Office White	PT12TGB A: 4.90" (124.46) B: 5.06" (128.52) C: 1.91" (48.51)
	Round Lighting Fixture Box To hang fixtures.	Office White	<b>PT12LFB</b> A: 5.31" (134.87) B: 1.04" (26.52)		A A	
	Internal Elbow, Cover Only For inside surfaces at right angles.	Office White	PT1IE A: 1.34" (34.04) B: 1.34" (34.04) C: 0.89" (22.61)	External Elbow, Cover Only For outside surfaces at right angles.	Office White	PT1EE A: 1.24" (31.50) B: 1.24" (31.50) C: 0.88" (22.35)
	Flat Elbow, Cover Only For right angle turns on same surface.	Office White	PT1FE A: 1.33" (33.78) B: 1.33" (33.78) C: 0.74" (18.80)	Tee, Cover Only For T-connection off PremiseTrak® Raceway.	Office White	PT1TC A: 1.77" (44.90) B: 1.33" (33.78) C: 0.74" (18.80)
Fittings	Splice Cover For covering potential openings where two lengths of raceway come together.	Office White	PT1SC A: 1.00" (25.40) B: 0.74" (18.80) C: 0.89" (22.61)	End Cap For closing end of raceway.	Office White	PT1EC A: 0.88" (22.35) B: 0.74" (18.80) C: 0.89" (22.61)
	Conduit Adapter/Ceiling Fitting For connecting conduit to raceway. Also use for ceiling feeds. Has combination ½ in., ¾ in. and 1 in. trade size KOs.	Office White	PT12CA A: 1.64" (41.66) B: 1.62" (41.15) C: 2.50" (63.50)		•	



### PP1 PremiseTrak® (Latching)

©_	Description	Color	Length	Without Adhesive	With Adhesive
PP1 Premise Tra	Base and Cover Single channel raceway. Available in 5 ft. (1.5m) and 7 ft. (2.1m) lengths.	Office White	5 ft. 7 ft.	PP1BC5 PP1BC7 A: 0.77" (19.56) B: 0.84" (21.34)	PP1ABC5 PP1ABC7 A: 0.77" (19.56) B: 0.84" (21.34)

	Description	Color	Catalog Number	Description	Color	Catalog Number
	1-Gang Low Profile Box For shallow switches and receptacles. See page T-63 for recommended plate options.	Office White	PDB12LP A: 4.90" (124.46) B: 3.25" (82.55) C: 1.25" (31.75)	1-Gang Deep Box For deep devices or applications where additional room is beneficial. See page T-63 for recommended plate options.	Office White	PDB12D A: 4.90" (124.46) B: 3.25" (82.55) C: 2.44" (61.98)
Device Boxes	1-Gang Standard Box For standard switches and receptacles See page T-63 for recommended plate options.	Office White	PDB12S A: 4.90" (124.46) B: 3.25" (82.55) C: 1.78" (45.21)	Round Lighting Fixture Box To hang fixtures.	Office White	<b>PDB12LF</b> A: 5.31" (134.87) B: 1.29" (32.77)
	2-Gang Deep Divided Box For deep switches, receptacles and communication devices. See page T-65 for single gang "KP" plate options. Comes with removable divider.	Office White	PDB12TGD A: 4.90" (124.46) B: 5.06" (128.52) C: 2.44" (61.98)	2-Gang Deep Undivided Box For low voltage applications only. Us with 2-gang "IFP" or "IMF" plates on See page T-63 for details.	Office White ly.	PDB12TGLV A: 4.90" (124.46) B: 5.06" (128.52) C: 2.44" (61.98)
	Internal Elbow Full capacity 11/4 in. bend radius internal elbow.	Office White	PP1IE* PP1IEBC** A: 2.40" (60.96) B: 1.03" (26.16) C: 2.40" (60.96)	External Elbow Full capacity 11/4 in. bend radius external elbow.	Office White	PP1EE* PP1EBC** A: 4.47" (113.54) B: 1.03" (26.16) C: 4.47" (113.54)
S	Flat Elbow Full capacity 11/4 in, bend radius flat elbow.	Office White	PP1FE* PP1FEBC** A: 2.62" (66.55) B: 2.62" (66.55) C: 0.85" (21.59)	Tee Full capacity 11/4 in. bend radius tee.	Office White	PP1TC* PP1TCBC** A: 4.22" (107.19) B: 2.62" (66.55) C: 0.85" (21.59)
Fittings	Splice Cover For covering potential openings where two lengths of raceway come together.	Office White	PP1SC A: 1.09" (27.69) B: 1.02" (25.91) C: 0.85" (21.59)	End Cap For closing end of raceway.	Office White	PP1EC A: 1.00" (25.40) B: 0.84" (21.34) C: 0.77" (19.56)
	Conduit Adapter/Ceiling Fitting For connecting conduit to raceway. Also use for ceiling feeds. Has combination ½ in., ¾ in. and 1 in. trade size KOs.	Office White	PLP1CACF A: 2.29" (58.17) B: 3.31" (84.07) C: 3.90" (99.06)	Safety Strap For preventing potential tampering with PP1 PremiseTrak cover. Can also be used as a splice cover.	Office White	PP1SS A: 0.62" (15.75) B: 1.94" (49.28) C: 0.86" (21.84)
				E Park	A Le B	

Note: \*Cover only. \*\*Base and Cover.

Dimensions in Inches (mm)

T-55



### PL1 LANTrak® (Latching)

	Description	Color	Length	Without Adhesive	With Adhesive
PL1 LANTrak®	Base and Cover Single channel raceway. Available in 5 ft. (1.5m) and 7 ft. (2.1m) lengths.	Office White	5 ft. 7 ft.	PL1BC5 PL1BC7 A: 1.04" (26.42) B: 1.38" (35.05)	PL1ABC5 PL1ABC7 A: 1.04" (26.42) B: 1.38" (35.05)

	Description	Color	Catalog Number	Description	Color	Catalog Number
	1-Gang Low Profile Box For shallow switches and receptacles. See page T-63 for recommended plate options.	Office White	PDB12LP A: 4.90" (124.46) B: 3.25" (82.55) C: 1.25" (31.75)	1-Gang Deep Box For deep devices or applications where additional room is beneficial. See page T-63 for recommended plate options.	Office White	PDB12D A: 4.90" (124.46) B: 3.25" (82.55) C: 2.44" (61.98)
Device Boxes	1-Gang Standard Box For standard switches and receptacles See page T-63 for recommended plate options.	Office s. White	PDB12S A: 4.90" (124.46) B: 3.25" (82.55) C: 1.78" (45.21)	Round Lighting Fixture Box To hang fixtures.	Office White	PDB12LF A: 5.31" (134.87) B: 1.29" (32.77)
	2-Gang Deep Divided Box For deep switches, receptacles and communication devices. See page T-6 for single gang "KP" plate options. Comes with removable divider.	Office White	PDB12TGD A: 4.90" (124.46) B: 5.06" (128.52) C: 2.44" (61.98)	2-Gang Deep Undivided Box For low voltage applications only. Us with 2-gang "IFP" or "IMF" plates or See page T-63 for details.	Office White	PDB12TGLV A: 4.90" (124.46) B: 5.06" (128.52) C: 2.44" (61.98)
	Internal Elbow Full capacity 11/4 in. bend radius internal elbow.	Office White	PL1IE* PL1IEBC** A: 2.51" (63.75) B: 1.57" (39.88) C: 2.51" (63.75)	External Elbow Full capacity 1¼ in. bend radius external elbow.	Office White	PL1EE* PL1EBC** A: 5.06" (128.52) B: 1.57" (39.88) C: 5.06" (128.52)
sbı	Flat Elbow Full capacity 11/4 in. bend radius flat elbow.	Office White	PL1FE* PL1FEBC** A: 3.19" (81.03) B: 3.19" (81.03) C: 1.11" (28.19)	Tee Full capacity 11/4 in. bend radius tee.	Office White	PL1TC* PL1TCBC** A: 4.75" (120.65) B: 3.15" (80.01) C: 1.11" (28.19)
Fittings	Splice Cover For covering potential openings where two lengths of raceway come together.	Office White	PL1SC A: 1.12" (28.45) B: 1.55" (39.37) C: 1.11" (28.19)	End Cap For closing end of raceway.	Office White	PL1EC A: 1.00" (25.40) B: 1.39" (35.31) C: 1.04" (26.42)
	Conduit Adapter/Ceiling Fitting For connecting conduit to raceway. Also use for ceiling feeds. Has combination ½ in., ¾ in. and 1 in. trade size KOs.	Office White	PLP1CACF A: 2.29" (58.17) B: 3.31" (84.07) C: 3.90" (99.06)	Safety Strap For preventing potential tampering with PL1 LANTrak cover. Can also be used as a splice cover.	Office White	PL1SS A: 0.62" (15.75) B: 2.68" (68.07) C: 1.12" (28.45)
		B	ì		A Le B	

Note: \*Cover only. \*\*Base and Cover. Dimensions in Inches (mm)

T-56



### PW1 WallTrak® Low Profile (Latching)

	Description	Color	Length	Without Adhesive	With Adhesive
PW1 WallTrak®	Base and Cover Single channel raceway. Available in 5 ft. (1.5m) and 7 ft. (2.1m) lengths.	Office White	5 ft. 7 ft.	PW1BC5 PW1BC7 A: .50" (12.70) B: 1.19" (30.23)	PW1ABC5 PW1ABC7 A: .50" (12.70) B: 1.19" (30.23)

	Description	Color	Catalog Number	Description	Color	Catalog Number
Se	1-Gang Low Profile Box For shallow switches and receptacles. See page T-63 for recommended plate options.	Office White	PW1LPB A: 4.90" (124.46) B: 3.25" (82.55) C: 1.13" (28.70)	1-Gang Deep Box For deep devices or applications where additional room is beneficial. See page T-63 for recommended plate options.	Office White	PW1DBA A: 4.90" (124.46) B: 3.25" (82.55) C: 1.91" (48.51)
Device Boxes	<b>1-Gang Standard Box</b> For standard switches and receptacles. See page T-63 for recommended plate options.	Office White	<b>PW1SBA</b> A: 4.90" (124.46) B: 3.25" (82.55) C: 1.63" (41.40)	2-Gang Deep Box For deep devices or applications where additional room is beneficial. Uses 2-gang "KP" or "IFP" plates for power or data applications. See page T-63 for recommended plate options.	Office White	PW1TGB A: 4.90" (124.46) B: 5.06" (128.52) C: 1.91" (48.51)
	Round Lighting Fixture Box To hang fixtures.	Office White	<b>PW1LFB</b> A: 5.31" (134.87) B: 1.04" (26.52)		A	
	Internal Elbow, Cover Only For inside surfaces at right angles.	Office White	<b>PW1IE</b> A: 1.75" (44.45) B: 1.43" (36.32) C: 1.75" (44.45)	External Elbow, Cover Only For outside surfaces at right angles.	Office White	<b>PW1EE</b> A: 1.50" (38.10) B: 1.43" (36.32) C: 1.50" (38.10)
sfi	Flat Elbow, Cover Only For right angle turns on same surface.	Office White	PW1FE A: 2.18" (55.37) B: 2.18" (55.37) C: .60" (15.24)	Tee, Cover Only For T-connection off PremiseTrak® Raceway.	Office White	PW1TC A: 2.93" (74.42) B: 2.18" (55.37) C: .60" (15.24)
Fittings	Splice Cover For covering potential openings where two lengths of raceway come together.	Office White	PW1SC A: 1.00" (25.40) B: 1.43" (36.32) C: .60" (15.24)	End Cap For closing end of raceway.	Office White	<b>PW1EC</b> A: 1.00" (25.40) B: 1.24" (31.50) C: .50" (12.70)
	Conduit Adapter/Ceiling Fitting For connecting conduit to raceway. Also use for ceiling feeds. Has combination ½ in., ¾ in. and 1 in. trade size KOs.	Office White	<b>PW1CA</b> A: 1.40" (35.56) B: 2.34" (59.44) C: 3.22" (81.79)			



### PW2 WallTrak® (Latching)

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©_	Description	Color	Length	Without Adhesive	With Adhesive
allTra	Base and Cover Two channel raceway. Available in 5 ft. (1.5m) and 7 ft. (2.1m) lengths.	Office White	5 ft. 7 ft.	<b>PW2BC5</b> <b>PW2BC7</b> A: 1.04" (26.42) B: 2.12" (53.85)	PW2ABC5 PW2ABC7 A: 1.04" (26.42) B: 2.12" (53.85)

	Description Color	Catalog Number	Description	Color	Catalog Number
	1-Gang Low Profile Box For shallow switches and receptacles. See page T-63 for recommended plate options.  Office White	PDB12LP A: 4.90" (124.46) B: 3.25" (82.55) C: 1.25" (31.75)	Round Lighting Fixture Box To hang fixtures.	Office White	PDB12LF A: 5.31" (134.87) B: 1.29" (32.77)
Boxes	1-Gang Standard Box For standard switches and receptacles. See page T-63 for recommended plate options. If using dual services, the PDB1DIV must be ordered.	PDB12S A: 4.90" (124.46) B: 3.25" (82.55) C: 1.78" (45.21)	2-Gang Deep Undivided Box For low voltage applications only. Use with 2-gang "IFP" or "IMF" plates only. See page T-63 for details.	Office White	PDB12TGLV A: 4.90" (124.46) B: 5.06" (128.52) C: 2.44" (61.98)
Device	1-Gang Deep Box For deep devices or applications where additional room is beneficial. See page T-63 for recommended plate options. If using dual services, the PDB1DIV must be ordered.	PDB12D A: 4.90" (124.46) B: 3.25" (82.55) C: 2.44" (61.98)	2-Gang Deep Divided Box For deep devices or applications where additional room is beneficial. See page T-63 for single gang "KP" plate options. Comes with removable divider. If using dual services, in a perpendicular run the PDB2DIV must be ordered.	Office White	PDB12TGD A: 4.90" (124.46) B: 5.06" (128.52) C: 2.44" (61.98)
	1-Gang Divider For use with PDB12S and PDB12D 1-gang boxes. Required when two services are passing through box.	PDB1DIV A: 2.79" (70.86) B: 1.40" (35.56) C: 0.94" (23.88)	2-Gang Divider For use with PDB12TGD 2-gang box only. Required when two services are passing through box and mounting devices perpendicular to raceway.	Office White	PDB2DIV A: 4.62" (117.35) B: 2.76" (70.10) C: 0.94" (23.88)
	Internal Elbow Full capacity 1¼ in. bend radius internal elbow.  Office White	PW2IE* PW2IEBC** A: 2.83" (71.88) B: 2.32" (58.93) C: 2.83" (71.88)	External Elbow Full capacity 11/4 in. bend radius external elbow.	Office White	<b>PW2EE* PW2EEBC**</b> A: 5.00" (127.00) B: 2.32" (58.93) C: 5.00" (127.00)
	Flat Elbow  Full capacity 11/4 in. bend radius flat elbow.  Office  White	PW2FE* PW2FEBC** A: 3.94" (100.08) B: 3.94" (100.08) C: 1.11" (28.19)	Tee Full capacity 1¼ in. bend radius tee.	Office White	PW2TC* PW2TCBC** A: 5.42" (137.67) B: 3.91" (99.31) C: 1.90" (48.26)
Fittings	Splice Cover For covering potential openings where two lengths of raceway come together.  Office White	PW2SC A: 1.11" (28.19) B: 2.30" (58.42) C: 1.11" (28.19)	Safety Strap For preventing potential tampering with PW2 WallTrak Cover. Can also be used as a splice cover.	Office White	<b>PW2SS</b> A: 0.62" (15.75) B: 3.43" (87.12) C: 1.12" (28.45)
	Conduit Adapter/Ceiling Fitting For connecting conduit to raceway. Also use for ceiling feeds. Has combination ½ in., ¾ in. and 1 in. trade size KOs.	PW2CACF A: 4.18" (106.17) B: 3.32" (84.33) C: 4.20" (106.68)	Reducer Reduces from PW2 WallTrak Raceway to one or two PP1 PremiseTrak Raceway(s).	Office White	PW2RED A: 1.62" (41.15) B: 2.40" (60.96) C: 1.15" (29.21)
	End Cap For closing end of PW2 WallTrak Raceway.  Office White	<b>PW2EC</b> A: 1.00" (25.40) B: 2.14" (54.36) C: 1.04" (26.42)			

Note: \*Cover only. \*\*Base and Cover.





#### PB2 BaseTrak®

	Description	Color	Length	Catalog Number	Description	Color	Length	Catalog Number
ak®	Base Two channel raceway. Available in 5 ft. (1.5m) and 10 ft. (3m) lengths.	Office White	5 ft. 10 ft.	<b>PB2B5 PB2B10</b> A: 1.42" (36.07) B: 4.50" (114.30)	Cover Cover allows access to multiple channels. Available in 5 ft. (1.5m) and 10 ft. (3m) lengths.	Office White	5 ft. 10 ft.	<b>PB2C5 PB2C10</b> B: 4.50" (114.30)
PB2 BaseTrak <sup>®</sup>	Assembled cover and base dimensions. W: 4.50" (114.30) H: 1.63" (41.40)				Split Cover Cover allows separation of channels and access to a single channel. Available in 5 ft. (1.5m) and 10 ft. (3m) lengths. Two split covers are required for each raceway section.	Office White	5 ft. 10 ft.	PB2SPL5 PB2SPL10 B: 2.22" (56.39)

xes	Description
Device Box	2-Gang In-Li For switches, r Provides flush single gang "K

receptacles and communication devices. look. See page T-63 for recommended (P" plate options.





PB2IND2G Office A: 7.66" (194.56) B: 4.74" (120.40) White C: 1.84" (46.74)

Color

Catalog Number

	Description	Color	Catalog Number	Description	Color	Catalog Number
F	Internal Elbow, Base and Cover Full capacity 1¼ in. bend radius nternal elbow.	Office White	PB3IEBCA A: 4.36" (110.74) B: 4.72" (119.89) C: 4.36" (110.74)	External Elbow, Base and Cover Full capacity 11/4 in. bend radius external elbow.	Office White	PB3EEBCA A: 6.48" (164.59) B: 4.72" (119.89) C: 6.48" (164.59)
F	Flat Elbow, Base and Cover Full capacity 1¼ in. bend radius flat elbow.	Office White	PB3FEBCA A: 7.64" (194.66) B: 7.64" (194.66) C: 1.71" (43.43)	Tee, Base and Cover Full capacity 11/4 in. bend radius tee.	Office White	PB3TCBCA A: 7.37" (187.20) B: 7.08" (179.83) C: 2.72" (69.09)
F t	Splice Cover For covering potential openings where two lengths of raceway come together.	Office White	PB3SC A: 1.56" (39.62) B: 4.74" (120.40) C: 1.69" (42.93)	Safety Strap For preventing potential tampering with PB2 BaseTrak cover. Can also be used as a splice cover.	Office White	PB3SS A: 1.50" (38.10) B: 6.01" (152.65) C: 1.74" (44.20)
) 1	Conduit Adapter/Ceiling Fitting For connecting conduit to raceway. Also use for ceiling feeds. Has combination ½ in., ¾ in., 1 in., 1½ in. and 1½ in. trade size KOs.	Office White	PB2CACF A: 4.72" (119.89) B: 5.22" (132.70) C: 6.30" (160.02)	Reducer Reduces from PB2 BaseTrak Raceway to PW2 WallTrak Raceway.	Office White	<b>PB3REDA</b> A: 3.50" (88.90) B: 4.72" (119.89) C: 1.73" (43.94)
t F	Transition Fitting Transitions horizontal PB2 BaseTrak to vertical PW2 WallTrak, PL1 LANTrak or PP1 PremiseTrak.	Office White	PB3TRBC A: 3.22" (81.79) B: 7.28" (184.91) C: 2.42" (61.47)	Surface Panel Connector For connecting PB2 Raceway with surface type panel boxes.	Office White	PB3SPCA A: 2.22" (56.39) B: 5.66" (143.76) C: 1.60" (40.64)
F	<b>Wire Clip</b> For holding conductors n place.	Office White	<b>PB2WC</b> A: 1.29" (50.20) B: 1.00" (25.40)	End Cap For closing end of PB2 BaseTrak Raceway.	Office White	PB3ECA A: 2.02" (51.31) B: 4.68" (118.97) C: 1.72" (43.69)



#### PB3 BaseTrak®

Description

Description

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**Base and Cover** 

Three channel raceway. Available in 5 ft. (1.5m) and 10 ft. (3m) lengths.



Catalog Number PB3BC5 **PB3BC10** A: 1.63" (41.40)

Boxes Device **Full Capacity Boxes** 

1-, 2- and 3-Gang boxes that allows full capacity from PB3 Raceway to box for either power or datacom applications. See page T-63 for recommended single gang "KP" plate options.



Office

White

Color

Office

**PB3FCIB** 

(1-Gang) A: 4.38" (111.25) B: 4.80" (121.92) C: 3.17" (80.52)

Catalog Number



Catalog Number PB3FCIB2G

Color

Office White

(2-Gang) A: 7.20" (182.88) B: 4.80" (121.92) C: 3.17" (80.52)



Office

Length

5 ft.

10 ft.

Catalog Number PB3FCIB3G

B: 4.50" (114.30)

(3-Gang) A: 9.96" (252.98) B: 4.80" (121.92) C: 3.17" (80.52)

1-Gang In-Line Box

For switches, receptacles and communication devices. Provides flush look. See page T-63 for recommended plate options.



**PB3IND** 

A: 4.90" (124.46) B: 3.25" (82.55) C: 1.25" (31.75)

2-Gang In-Line Box For switches, receptacles and communi-

cation devices. Barriers allow separation of power and datacom. Removal of barriers allows for expanded capacity. See page T-63 for recommended single gang "KP" plate options.



PB3IND2G A: 4.90" (124.46)

B: 3.25" (82.55) C: 2.44" (61.98)

Internal Elbow

Full capacity 11/4 in. bend radius internal elbow.



Office

PB3IE\* PB3IEBCA\*\*

A: 4.36" (110.74) B: 4.72" (119.89) C: 4.36" (110.74) **External Elbow** 

Full capacity 11/4 in. bend radi external elbow.



PB3EE\* PB3EEBCA\*\*

A: 6.48" (164.59) B: 4.72" (119.89) C: 6.48" (164.59)

Flat Elbow

Full capacity 11/4 in. bend radius flat elbow.



Office PB3FE\* PB3FEBCA\*\* White

A: 7.64" (194.66) B: 7.64" (194.66) C: 1.71" (43.43)

Tee

Full capacity 11/4 in. bend radius tee.



Office White PB3TCBCA\*\* A: 7.37" (187.20)

B: 7.08" (179.83) C: 2.72" (69.09)

Splice Cover

For covering potential openings where two lengths of raceway come together.



Office

White

PB3SC\*

A: 1.56" (39.62) B: 4.74" (120.40) C: 1.69" (42.93)

Safety Strap

Prevents potential tampering with PB3 BaseTrak cover. Can also be used as a splice cover.



PB3SS\*

A: 1.50" (38.10) B: 6.01" (152.65) C: 1.74" (44.20)

Conduit Adapter/Ceiling Fitting

For connecting conduit to raceway. Also use for ceiling feeds. Has combination ½ in., ¾ in., 1 in., 1¼ in. and 1½ in. trade size KOs.



PB3CACF\*\*

A: 4.72" (119.89) B: 5.22" (132.70) C: 6.30" (160.02)

Reducer

Reduces from PB3 BaseTrak Raceway to PW2 WallTrak Raceway.

Office White

PB3REDA\*\* A: 3.50" (88.90)

B: 4.72" (119.89) C: 1.73" (43.94)

Transition Fitting

Transitions horizontal PB3 BaseTrak to vertical PW2 WallTrak, PL1 LANTrak or PP1 PremiseTrak.



PB3TRBC\*\*

A: 3.22" (81.79) B: 7.28" (184.91) C: 2.42" (61.47)

**Transition Fitting** 

Transitions from BT3 (old style) BaseTrak Raceway to PB3 (new style) BaseTrak Raceway.

Office White

BTPB3TF\*

A: 2.22" (56.39) B: 5.66" (143.76) C: 1.35" (34.29)

**Surface Panel Connector** 

For connecting PB3 Raceway with surface type panel boxes.



PB3SPCA\*

A: 2.22" (56.39) B: 5.66" (143.76) C: 1.60" (40.64)

**End Cap** For closing end of PB3 BaseTrak Raceway.

White

PB3ECA\* A: 2.02" (51.31)

B: 4.68" (118.97) C: 1.72" (43.69)

Wire Clip

For holding conductors in place.



Office White

PB3WC A: 1.34" (34.10) B: 1.00" (25.40)

Note: \*Cover only. \*\*Base and Cover. Dimensions in Inches (mm)





### PS3 Super BaseTrak®

Description	Color	Length	Catalog Number
Base and Cover Three channel raceway. Available in 5 ft. (1.5m) and 10 ft. (3m) lengths.	Office W	/hite 5 ft. 10 ft.	<b>PS3BC5 PS3BC10</b> A: 1.97" (50.04) B: 6.70" (170.18)

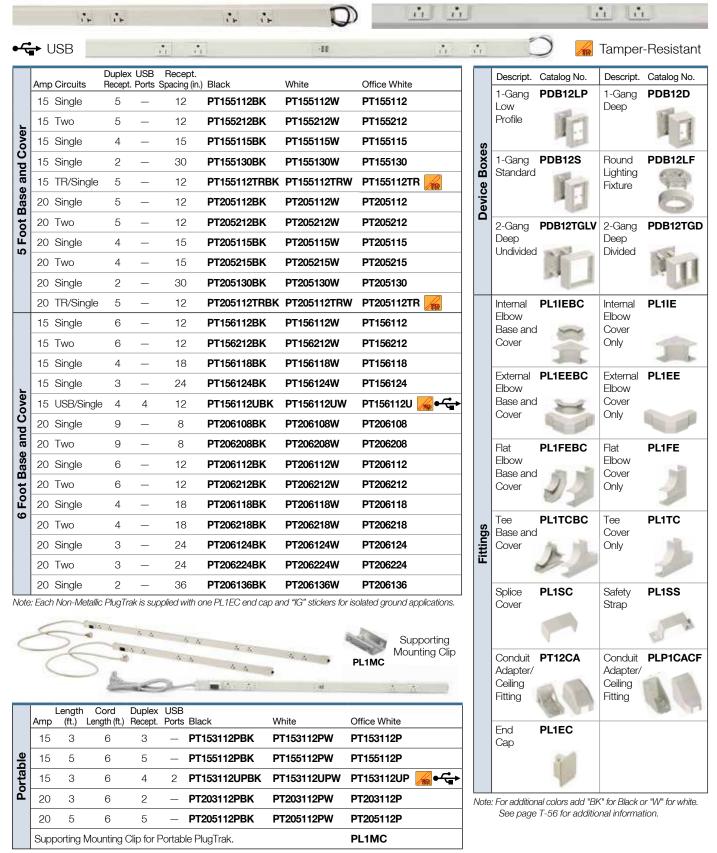
PS3				B: 6.70" (170.18)
	Description Color	Catalog Number	Catalog Number	Catalog Number
Device Boxes	Full Capacity Boxes  1-, 2- and 3-Gang boxes that allows full capacity from PS3 Raceway to box for either power or datacom applications. See page T-63 for recommended single gang "KP" plate options.	PS3FCIB (1-Gang) A: 4.38" (111.25) B: 6.95" (176.53) C: 3.46" (87.88)	PS3FCIB2G (2-Gang) A: 7.20" (182.88) B: 6.95" (176.53) C: 3.46" (87.88)	PS3FCIB3G (3-Gang) A: 9.96" (252.98) B: 6.95" (176.53) C: 3.46" (87.88)
	<b>3-Gang In-Line Box</b> For any combination of power and datacom application Provides flush look. See page T-63 for recommended single gang "KP" plate options.		Office White	
	Internal Elbow Office Full capacity 11/4 in. bend radius internal elbow.  Office White	PS3IE* PS3IEBC** A: 4.36" (110.74) B: 6.93" (176.02) C: 4.36" (110.74)	External Elbow Office Full capacity 1¼ in. bend radius external elbow.	
	Flat Elbow Office Full capacity 11/4 in. bend White radius flat elbow.	PS3FE* PS3FEBC** A: 9.85" (250.19) B: 9.85" (250.19) C: 2.08" (52.83)	Tee Office Full capacity 11/4 in. White bend radius tee.	
Fittings	Splice Cover For covering potential openings where two lengths of raceway come together.  Office White	PS3SC* A: 1.56" (39.62) B: 6.95" (176.53) C: 2.03" (51.62)	Safety Strap Prevents potential tampering with PS3 Super BaseTrak cover. Can also be used as a splice cover.	
_	Conduit Adapter/Ceiling Fitting For connecting conduit to raceway.  Also use for ceiling feeds. Has combination ½ in., ¾ in., 1 in., 1¼ in. and 1½ in. trade size KOs.	PS3CACF** A; 6.93" (176.02) B: 4.32" (109.73) C: 6.29" (159.77)	Reducer Reduces from PS3 Super BaseTrak Raceway to PB3 BaseTrak Raceway.	
	Surface Panel Connector To connect PS3 Raceway with surface type panel boxes.  Office White	PS3SPC* A: 1.00" (25.40) B: 7.87" (199.90) C: 2.54" (64.52)	End Cap For closing end of PS3 Super BaseTrak Raceway.  Office White	
	Wire Clip Office For holding conductors in place.	<b>PS3WC</b> A: 1.62" (41.15) B: 1.00" (25.40)		

Note: \*Cover only. \*\*Base and Cover.



#### Non-Metallic PlugTrak®

Available in Standard, Isolated Ground (IG), Tamper-Resistant (TR) and USB (U) versions.



Note: Includes ON/OFF switch and circuit breaker.



#### Plates, Frames and Modular Connector Fittings

	Color	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Plates	Black White Off. White	KP8BK KP8W KP8 Duplex	KP26BK KP26W KP26 Style Line®	KP1BK KP1W KP1 Toggle	KP7BK KP7W KP7 Recept. (1.41 ID)	KP720BK KP720W KP720 Recept. (1.60 ID)
Gang "KP"	Black White Off. White	KP14BK KP14W KP14 Blank	KP212BK KP212W KP212 Coax (2)	KP2140BK KP2140W KP2140 Jack/Coax	KP2162BK KP2162W KP2162 Modular Jacks (2)	KP2163BK KP2163W KP2163 Modular Jacks (3)
ang and 2-	Black White Off. White	KPORTBK KPORTW KPORTOW Ortronics Series II® Data Module	KPPANBK KPPANW KPPANOW Panduit Mini- Data Module	Com <sup>®</sup>		Accepts all Hubbell iSTATION  Network Wiring section Y)
4	Black White Off. White	KP82BK KP82W KP82 2-Gang Duplex	KP262BK KP262W KP262 2-Gang Style	Line <sup>®</sup>	KP2BK KP2W KP2 2-Gang Toggle	KP24BK KP24W KP24 2-Gang Blank

Note: 2-Gang "KP" plates, for use with PT12TGB and PW1TGB only.

S	Color	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
l le	Office	IFP126OW	ISF2OW	ISF3OW	ISF4OW	ISF6OW
F	White	Style Line®	Style Line® 2-Port	Style Line® 3-Port	Style Line® 4-Port	Style Line® 6-Port
<u>~</u>		CHARLES OF THE PARTY OF THE PAR	21010	OTOIL	4101	U OI OIL
les			060	:0990	(990)	000
Pat	Office White	JEP18OW Duplex	BR106C Duplex	Q1060 Duplex	IFP12OW Flush	IFP13OW Flush
å	VVIIILE	Duplex	2-Port	4-Port	2-Port	3-Port
ļ Ļ			8	*	100	men.
Ę	Office	IFP14OW	IFP16OW	IFP26OW	IFP29OW	IFP212OW
Ē	White	Flush	Flush	2-Gang	2-Gang	2-Gang
ပိ		4-Port	6-Port	6-Port	9-Port	12-Port
			B. St. Cont.	The second secon	and the second second	

≪്ഗ	Description	Color	1-Gang	2-Gang
Frames	Front loading plate will accept any modules in three unit combinations. Angled fixtures to be used in bottom opening only. See section Y for additional information on Hubbell iSTATION modules. Each gang accepts 3 module units.	Office White	IMF10W	IMF2OW

Modular connectors to be used with any plate with a standard modular opening. Not recommended for use with KP plates. For KP applications use KPIMBZOW bezel and appropriate Hubbell iSTATION modules located in section Y. Use appropriate Hubbell iSTATION modules for SC fiber adapters. See section Y for additional information on modular connectors.

ţō	Color	Catalog Number	Catalog Number	Catalog Number	Catalog Number
Connectitings	Office White	SFFX F-Connector	SFSTSOW ST Fiber Connector	SFBOW BNC Connector	SFB10 Blank (10 Pack)
Modular	Black housing only	SFRC110R RCA 110 Punchdown	SFSV110BK Super S-Video	FASCDMS6B SC Duplex Adapter	FASTSCDSC6 SC to ST Duplex Adapter

cks	Color	Catalog Number	Catalog Number	Catalog Number
Xcelerator Modular Jac	Office White	<b>HXJ5EOW</b> Cat. 5e, T568A, T568B, RJ45	<b>HXJ60W</b> Cat. 6, T568A, T568B, RJ45	HXJUOW 6 Position USOC, RJ25

Jack Color Options (Replace OW suffix with additional colors below)

AL=Almond BK=Black B=Blue EI=Elec. Ivory GY=Gray GN=Green LA=Lt. Almond OR=Orange OW=Off. White R=Red W=White Y=Yellow

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T-63



### Wire Fill Capacity Chart and Technical Information

	Non-Metallic Raceway Wire Fill Capacities															
			(ТНН	Power N/T90 N	ylon)	Voice		Data (Copper Cables)					Data (Multimode Fiber Optic Cables)			
			14 AWG	12 AWG	10 AWG	4-Pair	25-Pair	Type RG59U	Cat. 5e	Cat. 6	Cat. 6A	Cat. 6 STP	(2) or (4) Fiber Round Cable	Fiber Optic Jumpers	Fiber Optic Zip Cord	
		Wire O.D. (in.):	0.111	0.13	0.164	0.19	0.41	0.242	0.21	0.25	0.35	0.29	0.19	0.118	.12 X .24	
		Wire Area (sq. in.):	0.0097	0.0133	0.0211	0.0283	0.1320	0.0460	0.0346	0.0491	0.0962	0.0660	0.0283	0.0109	0.0288	
Series	Channel	Channel Area (sq. in.)	Wire	Fill Cap	acity	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	
PT1	Α	0.29	5	8	5	4	1	3	3	2	1	2	4	11	4	
PP1	Α	0.38	12	11	8	5	1	3	4	3	2	2	5	14	5	
PL1	Α	1.03	42	34	22	15	3	9	12	8	4	6	15	38	14	
PW1	Α	0.30	6	10	4	4	0	2	3	2	1	2	4	11	4	
PW2	A+B	1.60	41	36	22	23	5	14	18	13	7	10	23	59	22	
A B	Α	0.81	12	22	12	11	2	7	9	7	3	5	11	30	11	
	В	0.79	12	22	10	11	2	7	9	6	3	5	11	29	11	
PB2	A+B	5.72	60	36	45	81	17	50	66	47	24	35	81	210	79	
A B	A or B	2.86	42	30	28	40	9	25	33	23	12	17	40	105	40	
PB3	A+B+C	5.57	60	36	45	79	17	48	64	45	23	34	79	204	77	
ABC	A or C	1.80	42	30	28	25	5	16	21	15	7	11	25	66	25	
ADIO	В	1.97	42	30	28	28	6	17	23	16	8	12	28	72	27	
PS3	A+B+C	10.58	72	66	78	150	32	92	122	86	44	64	150	388	147	
ABC	A or C	3.41	42	36	42	48	10	30	39	28	14	21	48	125	47	
[A]D]O	В	3.76	42	36	42	53	11	33	43	31	16	23	53	138	52	

Note: Pathway (Raceway) fill shall be 40% maximum. Raceway fittings and outlets/receptacles reduce the cross section of the raceway system, thus reducing overall cable fill capacity.

	R	econ	nmen	ded P	late to	Вох	Com	patib	ility S	electi	on Ch	art				
Non-Metallic Box Se			PS3 S	Series			PE	33 Seri	es		PB2 Series		312 Se	eries	PT12 & PV Series	
Plate Style	Sample Catalog Number	IND	FCIB	FCIB2G	FCIB3G	IND	IND2G	FCIB	FCIB2G	FCIB3G	IND2G	LP, S, D	TGD	TGLV	LP(B), S(BA), D(BA)	TGB
1-Gang KP Series Plate	KP8	Х	х	х	х	Х	Х	х	х	Х	Х	х	Х		Х	
1-Gang KP Series Bezel	KPIMBZ	Х	х	Х	Х	Х	Х	х	Х	Х	Х	Х	Х		Х	
1-Gang Standard Data Plate	IFP12OW		х	х	Х	х		х	х	Х		Х			Х	
1-Gang iSTATION Plate Frame	IMF10W		х	х	Х	х		х	х	Х		Х			Х	
Style Line® Data Plate	IFP126OW		х	Х	Х	Х		х	Х	Х		Х			Х	
Duplex Data Plate	IFP18OW		Х	Х	Х	Х		х	Х	Х		Х			Х	
2-Gang iSTATION Plate Frame	IMF2OW													х		х
2-Gang Standard Data Plate	IFP29OW													X		Х
2-Gang KP Series Plate	KP82															х

Note: Hubbell Office White plates and devices color match all non-metallic raceway systems.

### Physical Properties

(When tested in accordance with UL 5A)
Impact Resistance 5 ft. lbs.

Crush Resistance Temperature Range Flame Rating Material 5 ft. lbs. 300 lbs. -25.6° to 158° F UL94V-0 UV Stabilized PVC

#### Codes/Standards

 EIA/TIA
 569A

 UL Standard
 UL 5A

 Listings
 E118895 / E119190

 CSA Standard
 C22.2 no. 62

 Certified
 LR87514

#### PlugTrak Specifications

Receptacle Rating Wire Receptacle Face NEMA 5-15R & 5-20R #12 AWG Stranded Copper Thermoplastic

### **Pre-Wired Raceway Systems**

Hubbell has been setting the standard in the electrical industry since 1888, through innovations such as Twist-Lock®, Hospital Grade, and AUTOGUARD™ Self Test GFCI receptacles. Again, Hubbell has listened to our customers for new innovation, capacity requirements, and flexibility. We have taken raceway systems to the next level with *Pre-Wired Raceway Systems* that are manufactured to your specifications.

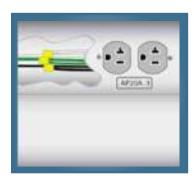
#### Our Pre-Wired Raceway Systems will accommodate your

power and data requirements as your facility changes over time. Pre-Wired Raceways provide you with the benefit of keeping your fast track projects on schedule, and helping complete the job on time! Our Pre-Wired Raceway solutions will save up to 45% of the installation time needed for field installing component raceway parts.

#### Pre-Wired Raceways are available in:

- ✓ Steel (Ivory and Gray)
- ✓ Aluminum
- ✓ Non-Metallic (Office White)





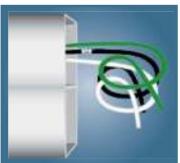
#### Quality by Design

All Hubbell Pre-Wired Raceways are UL Listed and CSA Certified. Each raceway receives a 100% quality inspection and testing prior to shipment. Pre-Wired Raceway is now available with the high quality and workmanship you have come to expect from Hubbell.



#### Labeling and Engraving

Optional labeling is available to identify branch panels and circuits at receptacle locations. Choose from adhesive labels or engraved aluminum plates.



#### Wire Identification

Wire leads are clearly labeled with corresponding circuit numbers. This aids the installer when terminating to building wiring or connecting from duct to duct. Ample wire is provided at feed locations.

## Metal, Aluminum and Non-Metallic Raceway



#### **Pre-Wired Raceway Systems**

#### Save Time and Money, Completing the Job Quicker and On Schedule, with Hubbell...

#### With Standard Raceway...



Unpack, identify and sort component parts.

Deliver components to work area for assembly and installation.



Measure and cut.
Clean and de-burr sharp edges.
Secure to the wall and fasten.



Pull wire. Label and bundle each raceway circuit. Install receptacles and test.

#### With Hubbell Pre-Wired Raceway...



Pallet delivered to your worksite, labeled by room, floor area and/or building.



Unpack and install!



Installed in half the time!





#### **Project Support and Documentation**

- A local and factory support team is there to assist in defining bills of material and project quotes, so costs can be budgeted accordingly.
- ✓ A project engineer, located at the factory, is assigned to your project as a direct point of contact.

#### Manufacturing and Testing

- Precisely measured, cleanly cut, wired and assembled to your specifications.
- The wiring harness is then bundled and labeled for circuit identification for ease of installation.
- Assembly is tested for assured continuity and 100% quality inspected before kitting.



#### Installs In A Snap

- Raceway ducts are kitted, labeled, and shipped by room, area or floor locations.
- Just remove raceway from the packaging and secure to the wall.
- Make power connections, snap on covers, test and you are done!



#### **Options:**



# Circuit Identification and Labeling:

- ✓ Adhesive Labeling
- Engraving



#### Wiring Circuits Options:

- ✓ Insulation Displacement Connectors
- ✓ Wire Nuts
- ✓ Wiring Devices



Kit raceway for delivery by:

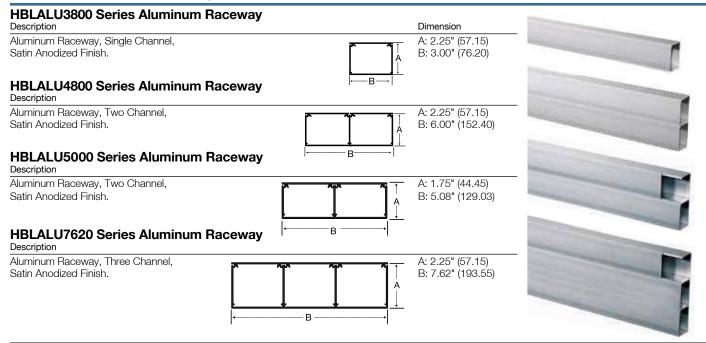
- ✓ Room
- ✓ Floor
- Area
- ✓ Building

# Metal, Aluminum and Non-Metallic Raceway

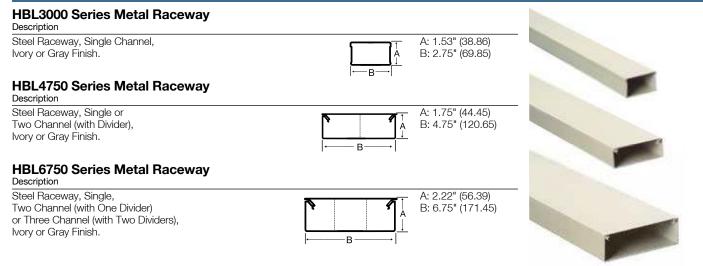


#### **Features and Benefits**

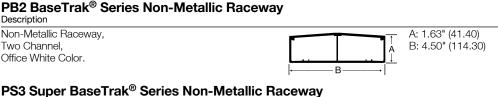
#### Aluminum Pre-Wired Raceway (LINKOSITY® devices may be utilized with this Raceway Series)



#### Steel Pre-Wired Raceway (LINKOSITY® devices may be utilized with this Raceway Series)



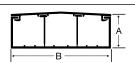
#### Non-Metallic Pre-Wired Raceway



Description Description

Description ...

Non-Metallic Raceway, Three Channel, Office White Color.



A: 1.97" (50.04) B: 6.70" (170.18)



# Metal, Aluminum and Non-Metallic Raceway



#### **Features and Benefits**



### UL Listed Modular Pre-Wired Raceway Systems Featuring the Flexibility of LINKOSITY® Connections

Hubbell Pre-Wired Metal Raceway with LINKOSITY® connections is a Hubbell innovation providing a flexible, modular UL Listed System that allows users to relocate furniture and equipment without the need to access the internal wiring of the raceway. The inherent flexibility of this system greatly reduces the cost of installation and future end-user costs associated with re-configuring space.

The Hubbell Metal Raceway/LINKOSITY combination can be provided as a factory assembled system or by having a licensed electrician purchase and field install the required LINKOSITY components into the metal raceway.

Features	Benefits
UL Listed, NEC Compliant assemblies	Complete code compliance minimizes design time, startup costs and building inspector acceptance.
Flexible, modular terminations	Simplifies moves, adds and changes. Reduces long term total cost of ownership.
Pre-configured, factory wired	Minimizes field wiring. Devices are custom configured to the application, tested and ready to install.
Cable rated TC-ER, MTW, STOOW	One cable suitable for use in all commercial applications
In-line 106 data/communications frame	Data/Communications may be field installed anywhere along the raceway eliminating large boxes.



Device Type	Ratings	Wires	Conductor Colors**	Length (FT)
PH = Double Ended Cable with Male/Female Straight PM = Male Single Ended Straight PN = Male Single Ended 90°	<b>20</b> = 20A up to 600V	02 03 04 05	PA = Green/Yellow Black (all others) PB = Green/Yellow	001 = 1' 005 = 5' 010 = 10' 015 = 15'
PF = Female Single Ended Straight PG = Female Single Ended 90° PQ = Double Ended Cable with Female 90° PR = Double Ended Cable with Male 90° PS = Double Ended Cable with (2) 90° Connectors RF = Female Receptacle*	23 = 20A up to 600V Specialty construction (Includes isolated ground on 6 wire and 10AWG super neutral conductor on 5 and 6 wire devices)	03 04 05 06	White Black (all others)  PE = All Blue***  **other color codes	020 = 20' 025 = 25' 030 = 30' 035 = 35' 040 = 40' 045 = 45' 050 = 50'
RM = Male Receptacle (Inlet)*  * ½ inch NPT rear thread	<b>30</b> = 30A up to 600V	04	available upon request.  ***Two wire only.	

Example: PH 23 06 PB 005



The LINKOSITY® cable assemblies are code compliant with the NEC and NFPA 79, and suitable for use in virtually any environment as either a permanent or temporary installation.

#### Receptacles

The UL Listed LINKOSITY® male inlets or female receptacles provide the capability of interfacing directly with facility wiring by simply mounting into established fixed enclosures.



Protects unused devices from the harmful effects of harsh environments.



#### Tees

**Cable Assemblies** 

Description	Catalog Number
LINKOSITY® M/F/F Tee, 20A, 2P	TX2002002002T00
LINKOSITY® M/F/F Tee, 20A, 3P	TX2003002003T00
LINKOSITY® M/F/F Tee, 20A, 4P	TX2004002004T00
LINKOSITY® M/F/F Tee, 20A, 5P	TX2005002005T00
LINKOSITY® M/F/F Tee, 20A SNIG, 4P	TX2304002304T00
LINKOSITY® M/F/F Tee, 20A SNIG, 6P	TX2306002306T00
LINKOSITY® M/F/F Tee, 20A SNIG, A Phase Tap	TX2306002304A00
LINKOSITY® M/F/F Tee, 20A SNIG, B Phase Tap	TX2306002304B00
LINKOSITY® M/F/F Tee, 20A SNIG, C Phase Tap	TX2306002304C00
LINKOSITY® M/F/F Tee, 30A, 4P	TX3004003004T00

#### **Specifications**

Material	
Raceway LINKOSITY Cables	Steel, Anodized Aluminum UL 600V Type TC-ER, MTW, STOOW, polyurethatne overmolded terminations
Codes/Standards	
Raceway	UL5, surface metal raceway and fittings C22.2 no. 62, surface metal raceway and fittings TIA/EIA 569B, commercial building standard for telecom pathways and spaces
LINKOSITY	UL2238, UL50

# SECTION U

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#### Products at a Glance



#### **Hubbell Trench Duct Series**

The Hubbell Trench system is an in-floor wire management system that meets today's high capacity wiring needs that require multiple circuit separation. Trench duct is commonly used as a feeder system for medical wall duct when installing radiology equipment such as X-Ray and MRI machines.



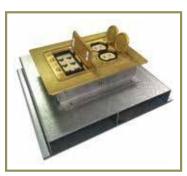
#### **Hubbell Wall Duct Series**

The Hubbell Wall Duct is available in either flush or surface mount and a combination will usually be required on any job. Vertical runs in the walls are usually flush mounted with horizontal runs on walls and all duct in ceiling plenum are typically surface type.



#### **Hubbell Underfloor Duct Series**

The Hubbell Underfloor Duct system is an in-slab wire management product for delivering power, voice and data services for applications that include retail facilities, open office workstations, fitness centers, casinos, medical facilities and libraries.



#### **Underfloor Duct Raceway Activation Kits**

- Available in brass and brushed aluminum to meet aesthetic requirements
- Available in one, two and three-gang options
- ScrubShield<sup>®</sup> Complies with UL514A scrub water requirements
- Flanged design may be used in tile, wood, carpet, terrazzo and bare concrete applications
- Uniform look when used in same areas where Hubbell floor boxes are installed

#### **Features and Benefits**

#### A high capacity trench system for in-floor wire management.

The Hubbell Trench system is an in-floor wire management system that meets today's high capacity wiring needs that require multiple circuit separation. Trench duct is commonly used as a feeder system for medical wall duct when installing radiology equipment such as X-Ray and MRI machines. Trench duct is also used as a stand alone system for commercial and retail applications where ease of access and high capacity are crucial variables.



#### Multiple compartments provide more capacity than conventional ducts.

The Hubbell Trench system provides more capacity than conventional conduits and ducts. It features a single, high-capacity duct with multi-compartments for easy placement of additional wiring.

It's open top design allows wiring to be laid in the duct instead of being pulled, eliminating the need for junction boxes.

Removable covers are 1/4" thick and lock into the track of the trench. Internal dividers and/or support strips increase load capacity of heavy-duty cover. These removable covers allow free access to wiring and can be placed anywhere along the duct for easy wire exit relocation.

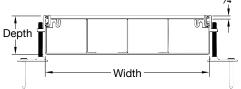
- High capacity design supports large wiring for single and multiple service requirements
- Open top design allows wire to be easily laid in duct
- Cover plates are removable and adjust horizontally to any point along the duct. Custom lengths of trench and fittings are available. Provided in either galvanized G90 steel or nonferrous aluminum.
- Multiple compartment options allows for multiple circuit and low voltage separation
- Innovative duct support assembly allows for pre-pour leveling
- Packaging and labeling by project floor and room is available



#### Trench Duct Range of Offering

	Trench Product	1/2" Increments	Width	Compartments	Cover Plate
1/4" Width	OKA = Trench OKB = Pull Box OKC = Exit Cover OKE = End Cap OKL = Horizontal L OKR = Vertical Riser OKT = T Junction Box OKX = X Junction Box	A = 2" B = 2½" C = 3" D = 3½" E = 4" J = 6" N = 8" (Other Depths Available)	9 12 18 24 (Other Widths Avail.)	1C = 1 Compartment 2C = 2 Compartment 3C = 3 Compartment 4C = 4 Compartment	<b>1/4</b> = 1/4" thick

Note: For Alumimum Trench Duct or Fittings, add "AL" suffix to catalog number.



### **Hubbell Trench Duct Series and Fittings**

#### **Ordering Information Notes:**

- 1. Common use sizes are listed below. Contact factory for other configurations or see page U-3 for Range of Offering table.
- 2. Trench Duct part numbers are for reference only. All Trench Duct orders are lot billed with a generic TW prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

	Description	Trench Depth	Cover Width	No. of Compartments	Catalog Number
	Straight Section	21/2"	9"	1	OKA/B9-1C-1/4
せ	Manufactured in standard 6' lengths	3"	9"	2	OKA/C9-2C-1/4
3	with factory installed dividers.	21/2"	12"	2	OKA/B12-2C-1/4
□	Provided with (3) leveling feet/couplers	3"	12"	3	OKA/C12-3C-1/4
등	on each side, (3) 24" long cover plates	21/2"	18"	3	OKA/B18-3C-1/4
5	and (3) cover plate joint protectors.	3"	18"	4	OKA/C18-4C-1/4
Tren		21/2"	24"	3	OKA/B24-3C-1/4
		3"	24"	4	OKA/C24-4C-1/4

Note: For Alumimum Trench Duct or Fittings, add "AL" suffix to catalog number.

	Description	Outside Cover	No. of Compartments	Catalog Number
	Horizontal "L" Fitting	12" x 12"	1	OKL/B9-1C
	Manufactured with a single cover and matching	12" x 12"	2	OKL/C9-2C
	internal partitions to form a 90° horizontal "L".	15" x 15"	2	OKL/B12-2C
	Includes cover plate joint protectors and	15" x 15"	3	OKL/C12-3C
	leveling feet.	21" x 21"	3	OKL/B18-3C
		21" x 21"	4	OKL/C18-4C
		27" x 27"	3	OKL/B24-3C
		27" x 27"	4	OKL/C24-4C
	Horizontal 45° Elbow Fitting	45°	1	OKL/B9-1Cx45
	Manufactured with a split cover plate and matching	45°	2	OKL/C9-2Cx45
	internal partitions to form a 45° Mitered "L".	45°	2	OKL/B12-2Cx45
	Other angles available. Includes cover plate joint	45°	3	OKL/C12-3Cx45
	protectors and leveling feet.	45°	3	OKL/B18-3Cx45
ဟ		45°	4	OKL/C18-4Cx45
<u> </u>		45°	3	OKL/B24-3Cx45
Fittings		45°	4	OKL/C24-4Cx45
证	Single Level "T" Junction Fitting	15" x 12"	1	OKT/B9-1C
	Manufactured with matching internal partitions and	15" x 12"	2	OKT/C9-2C
	crossovers to isolate power and communications.	18" x 15"	2	OKT/B12-2C
	Includes cover plate joint protectors and	18" x 15"	3	OKT/C12-3C
	leveling feet.	24" x 21"	3	OKT/B18-3C
		24" x 21"	4	OKT/C18-4C
		30" x 27"	3	OKT/B24-3C
		30" x 27"	4	OKT/C24-4C
	Pull Box	9" x 12"	1	OKB/B9-1C
	Manufactured to attach to trench section replacing	9" x 12"	2	OKB/C9-2C
	end cap. Divided into compartments as shown.	12" x 12"	2	OKB/B12-2C
	Additional depth permits attachment of large	12" x 12"	3	OKB/C12-3C
	conduits. Box is field punched for conduits.	18" x 12"	3	OKB/B18-3C
	Standard depth is 6".	18" x 12"	4	OKB/C18-4C
	•	24" x 12"	3	OKB/B24-3C
		24" x 12"	4	OKB/C24-4C

	Description	Trench Width	Max Size Conduit	Catalog Number	
3s	Exit Cover Designed to provide exit and feed for Trench Duct.	9" 12"	3/4" 3/4"	OKC/9-3/4A OKC/12-3/4A	6
ittings	Conduit openings are provided for power and communication exit or feed using conventional	18" 24"	3/4" 3/4"	OKC/18-3/4A OKC/24-3/4A	
er F	fittings or service fittings. Cable Exit Cap (OKSK) is for communication cable only. Exit fittings cover may	9" 12"	3/4" 3/4"	OKC/9-3/4C OKC/12-3/4C	Type "C"
CoV	be spaced anywhere along the length of the trench. All exit fitting covers are 6" long.	18" 24"	3/4" 3/4"	OKC/18-3/4C OKC/24-3/4C	Type "A"
Exit	Cable Exit Cap Fits opening in Type "A" Exit Cover. Provides outlet for communication cable. Debris barrier included. Cable Exit Cap constructed from die cast aluminum. For use with Type "A" exit covers only.	All	_	oksk	

#### **Hubbell Trench Duct Fittings**

#### **Ordering Information Notes:**

- 1. Common use sizes are listed below. Contact factory for other configurations or see page U-3 for Range of Offering table.
- 2. Trench Duct part numbers are for reference only. All Trench Duct orders are lot billed with a generic TW prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

		No. of		
Description	Outside Cover	Compartments	Catalog Number	
Single Level "X" Junction Fitting	15" x 15"	1	OKX/B9-1C	
Manufactured with matching internal partitions and	15" x 15"	2	OKX/C9-2C	
crossovers to isolate power and communications.	18" x 18"	2	OKX/B12-2C	
Includes cover plate joint protectors and leveling feet.	18" x 18"	3	OKX/C12-3C	
	24" x 24"	3	OKX/B18-3C	🖂
	24" x 24"	4	OKX/C18-4C	
	30" x 30"	3	OKX/B24-3C	
	30" x 30"	4	OKX/C24-4C	
Description	Fits Trench Dim. (Width x Depth)	Max Trade Size Conduit	Catalog Number	
End Cap	9" x 2½"	3/4"	OKE/B9	
Fits over end of trench run to close trench and prevent	9" x 3"	1"	OKE/C9	
foreign material from entering. End cap may be drilled to	12" x 2½"	3/4"	OKE/B12	
accept conduit.	12" x 3"	1"	OKE/C12	
	18" x 2½"	3/4"	OKE/B18	
	18" x 3"	1"	OKE/C18	\ \
	24" x 2½"	3/4"	OKE/B24	
	24" x 3"	1"	OKE/C24	
		No. of		
Description	Fits Trench Width	Compartments	Catalog Number	
Vertical Riser Fitting (Straight)	9"	1	OKR/D9-1C	
Manufactured to transition from trench duct to a panel,	9"	2	OKR/D9-2C	
pull box or to conduit. Mounts on trench in place of cover.	12"	2	OKR/D12-2C	
Partitioned to separate cells and flanged to attach to a	12"	3	OKR/D12-3C	
pull box or panel. Removable front cover and top cover.	18"	3	OKR/D18-3C	// //
Includes OWV trench-to-wall duct adapter. Standard	18"	4	OKR/D18-4C	
height above finish floor $-12$ ". Standard depth $-3\frac{1}{2}$ ".	24"	3	OKR/D24-3C	
Available in a sweep version (replace OKR with OKSWR)	24"	4	OKR/D24-4C	•

	S	Description	Trench Width #1	Trench Width #2	Catalog Number		
i	nai Fittings	Reducer Fitting Manufactured to transition from a wide trench duct width to a narrower trench duct width.	9" 12" 18" 24"	6" 9" 12" 18"	OKARED/B9-6-2C OKARED/B12-9-3C OKARED/B18-12-3C OKARED/B24-18-4C		
	Additio	Fastening Angles Accessories to join trench sections for field fabrication of horizontal and vertical assemblies.	Horizontal Angle Vertical Angle		OK/VWI OK/VVW	8	

es	Description	Accessory Type	Catalog Number
ssori	Permits 1" of pre-pour vertical adjustment and couples sections together. "x" represents screw height (max. 6") and height of trench. Additional vertical adjustment is available by increasing the length of screw "x".	Single Leveling Foot Assembly	OK/F-x
uct Acce	Provides a 11/2" wide surface (with gasket) for cover plate joints. "x" represents trench width.	Single Cover Plate Joint Protector	OK/DSD-x
ch Du	Separates trench duct compartments. "x" represents trench depth (see catalog number system).	Divider	OKP/x
Trend	Provided with 5/16 x 18 bolts on 6" or 12" centers for increased cover plate weight loading capability.	Support Stud Strip	Consult Factory

ဟ	Description	No. of Compartments	"T" Unit Fitting Type	"X" Unit Fitting Type
Tunnel Fittings	Tunnels Factory installed inside of multi-compartment "T" and "X" units to maintain separation of services. May be ordered separately and field installed.	2, 3, or 4	Consult Factory	Consult Factory

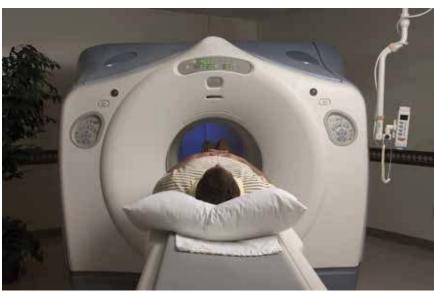
#### **Features and Benefits**

The Hubbell Wall Duct is a UL Listed metal raceway system designed for the enclosure of wiring of MRI or X-Ray equipment in medical applications.

The system provides complete lay-in wiring capability in order to accommodate the large cables and connectors used in today's installations.

Hubbell Wall Duct is available in either flush or surface mount and a combination will usually be required on any job. Vertical runs in the walls are usually flush mounted with horizontal runs on walls and all duct in ceiling plenum are typically surface type.

Wall Duct is available in ferrous steel and non-ferrous aluminum versions.



- Lay in wiring accommodates large cables and connectors to connect equipment
- Corrosion resistant galvannealed A60 steel or non ferrous aluminum versions
- Flush (primarily wall) and Surface (primarily ceiling)
  mount provides flexibility to address specific equipment
  placement and unique room design requirements
- Hubbell Wall Duct is utilized with Hubbell Trench Duct
- Packaging and labeling by project floor and room is available



#### Wall Duct Range of Offering

Wall Duct Product		Depth ½" Increments	Width	Cover Style
OWA = Wall Duct OWB = Adapter OWC = Coupling OWD = Reducer Coupling OWE = End Closure OWF = Cabinet Connector OWH = Horizontal Elbow	OWI = Internal Elbow OWL = External Elbow OWP = Partition OWR = Vertical Riser OWT = T Unit OWV = Trench to Wall Duct Adapter OWX = X Unit	A = 2" B = 2½" C = 3" D = 3½" E = 4" J = 6" N = 8" (Other Depths Available)	6 10 12 18 (Other Widths Available)	<b>S</b> = Surface <b>F</b> = Flush

Note: For Alumimum Wall Duct or Fittings, add "AL" suffix to catalog number.

#### **Hubbell Wall Duct Series and Fittings**

#### **Ordering Information Notes:**

- 1. Common use sizes are listed below. Contact factory for other configurations or see page U-6 for Range of Offering table.
- 2. Wall Duct part numbers are for reference only. All Wall Duct orders are lot billed with a generic TW prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

	Description	Overall Depth	Body Width	Cover Width	Flush Catalog Number	Cover Width	Surface Catalog Number
Wall Duct	Wall and Ceiling Duct Manufactured in standard 60" lengths with two 30" long cover plates. Provided with one coupling and necessary screws.	3½" 3½" 3½" 3½"	913/16" 1113/16" 1713/16"	12" 14" 20"	OWA/D10F OWA/D12F OWA/D18F	10" 12" 18"	OWA/D10S OWA/D12S OWA/D18S

Note: For Alumimum Wall Duct or Fittings, add "AL" suffix to catalog number.

С	Description	Overall Depth	Body Width	Cover Width	Flush Catalog Number	Cover Width	Surface Catalog Number	
F	nternal Elbow Forms a sharp 90° Internal "L". Provided with one cover plate, one coupling and necessary screws.	3½" 3½" 3½"	9 <sup>13</sup> / <sub>16</sub> " 11 <sup>13</sup> / <sub>16</sub> " 17 <sup>13</sup> / <sub>16</sub> "	12" 14" 20"	OWI/D10F OWI/D12F OWI/D18F	10" 12" 18"	OWI/D10S OWI/D12S OWI/D18S	
F fo	nternal Elbow, Sweep Forms a chamfered 90° Internal "L" or increased cable bend radius. Provided with one cover plate, one coupling and necessary screws.	3½" 3½" 3½"	9 <sup>13</sup> / <sub>16</sub> " 11 <sup>13</sup> / <sub>16</sub> " 17 <sup>13</sup> / <sub>16</sub> "	12" 14" 20"	OWSWI/D10F OWSWI/D12F OWSWI/D18F	10" 12" 18"	OWSWI/D10S OWSWI/D12S OWSWI/D18S	
F	nternal 45° Elbow Forms a 45° Vertical "L". Provided with one cover plate, one coupling and necessary screws.	3½" 3½" 3½"	913/16" 1113/16" 1713/16"	12" 14" 20"	OWI45/D10F OWI45/D12F OWI45/D18F	10" 12" 18"	OWI45/D10S OWI45/D12S OWI45/D18S	
F	Horizontal Elbow Forms a 90° Horizontal "L". Provided with one cover plate, one coupling and necessary screws. Corner divider "OWCP" ordered separately.	3½" 3½" 3½"	9 <sup>13</sup> / <sub>16</sub> " 11 <sup>13</sup> / <sub>16</sub> " 17 <sup>13</sup> / <sub>16</sub> "	12" 14" 20"	OWH/D10F OWH/D12F OWH/D18F	10" 12" 18"	OWH/D10S OWH/D12S OWH/D18S	
F	Horizontal 45° Elbow  Torms a 45° Horizontal "L".  Provided with one cover plate, one coupling and necessary screws.	3½" 3½" 3½"	9 <sup>13</sup> / <sub>16</sub> " 11 <sup>13</sup> / <sub>16</sub> " 17 <sup>13</sup> / <sub>16</sub> "	12" 14" 20"	OWH45/D10F OWH45/D12F OWH45/D18F	10" 12" 18"	OWH45/D10S OWH45/D12S OWH45/D18S	
F	External Elbow Forms a sharp 90° External "L". Provided with two cover plates, one coupling and necessary screws.	3½" 3½" 3½"	9 <sup>13</sup> /16" 11 <sup>13</sup> /16" 17 <sup>13</sup> /16"	12" 14" 20"	OWL/D10F OWL/D12F OWL/D18F	10" 12" 18"	OWL/D10S OWL/D12S OWL/D18S	

Note: Images shown are surface mount.

#### **Hubbell Wall Duct Fittings**

#### **Ordering Information Notes:**

- 1. Common use sizes are listed below. Contact factory for other configurations or see page U-6 for Range of Offering table.
- 2. Wall Duct part numbers are for reference only. All Wall Duct orders are lot billed with a generic TW prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

	Description	Overall Depth	Body Width	Cover Width	Flush Catalog Number	Cover Width	Surface Catalog Number	
Internal / External Elbows	Internal / External Elbow Transitions from surface wall duct to surface style ceiling duct. Flush wall duct to surface style ceiling duct available upon request. Provided with two cover plates, one coupling and necessary screws.	3½" 3½" 3½"	913/16" 1113/16" 1713/16"	12" 14" 20"	_ _ _	10" 12" 18"	SPOWI/D10S SPOWI/D12S SPOWI/D18S	
Internal / E	Internal / External Elbow, Sweep Transitions from surface wall duct to surface style ceiling duct. Flush wall duct to surface style ceiling duct available upon request. Provided with two cover plates, one coupling and necessary screws.	3½" 3½" 3½"	913/16" 1113/16" 1713/16"	12" 14" 20"	_ _ _	10" 12" 18"	SPOWSWI/D10S SPOWSWI/D12S SPOWSWI/D18S	
Units	Vertical "T" Unit Forms a 90° Vertical "T". Provided with three cover plates, two couplings and necessary screws.	3½" 3½" 3½"	9 <sup>13</sup> /16" 11 <sup>13</sup> /16" 17 <sup>13</sup> /16"	12" 14" 20"	OWVT/D10F OWVT/D12F OWVT/D18F	10" 12" 18"	OWVT/D10S OWVT/D12S OWVT/D18S	
"T" Ur	Horizontal "T" Unit Forms a 90° Horizontal "T". Provided with one cover plate, one coupling and necessary screws. Tunnels are ordered separately.	3½" 3½" 3½"	9 <sup>13</sup> /16" 11 <sup>13</sup> /16" 17 <sup>13</sup> /16"	12" 14" 20"	OWT/D10F OWT/D12F OWT/D18F	10" 12" 18"	OWT/D10S OWT/D12S OWT/D18S	
"X" Unit	"X" Unit Forms intersection of four perpendicular ducts. Provided with one cover plate, two coupling and necessary screws. Tunnels are ordered separately.	3½" 3½" 3½"	9 <sup>13</sup> / <sub>16</sub> " 11 <sup>13</sup> / <sub>16</sub> " 17 <sup>13</sup> / <sub>16</sub> "	12" 14" 20"	OWX/D10F OWX/D12F OWX/D18F	10" 12" 18"	OWX/D10S OWX/D12S OWX/D18S	

	Description	For Trench Width	For Wall Duct (Width x Depth)	Flush Catalog Number	Surface Catalog Number	
Riser Fittings	Vertical Riser Fitting, Straight Transitions from trench duct to a vertical run of wall duct. Mounts on trench in place of cover. Removable front cover. Standard height above finish floor —12" (7" for OWR/ D12x10). Standard depth — 3½". Provided with one coupling and necessary screws.	10" 12" 18" 12"	10" x 3½" 12" x 3½" 18" x 3½" 10" x 3½"	OWR/D10F OWR/D12F OWR/D18F OWR/D12-10F	OWR/D10S OWR/D12S OWR/D18S OWR/D12-10S	
Vertical	Vertical Riser Fitting, Sweep Transitions from trench duct to a vertical run of wall duct. Mounts on trench in place of cover. Removable front cover. Standard height above finish floor —12". Standard depth —3½". Provided with one coupling and necessary screws.	10" 12" 18" 12"	10" x 3½" 12" x 3½" 18" x 3½" 10" x 3½"	OWSWR/D10F OWSWR/D12F OWSWR/D18F OWSWR/D12-10F	OWSWR/D10S OWSWR/D12S OWSWR/D18S OWSWR/D12-10S	

ng	Description	Overall Depth	Flush Wall Duct Body Width	Surface Cover Width	Catalog Number	
Adapter Fitti	Flush to Surface Adapter Transitions from flush wall duct to perpendicular surface wall duct. Provided with one cover plate, two couplings and necessary screws.	3½" 3½" 3½" 3½"	913/16" 1113/16" 1713/16" 1713/16"	10" 18" 12" 18"	OWB/D10-10 OWB/D12-18 OWB/D18-12 OWB/D18-18	

#### **Hubbell Wall Duct Fittings**

#### **Ordering Information Notes:**

- 1. Common use sizes are listed below. Contact factory for other configurations or see page U-6 for Range of Offering table.
- 2. Wall Duct part numbers are for reference only. All Wall Duct orders are lot billed with a generic TW prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

	Description	Overall Depth	Cover Width	Flush Catalog Number	Cover Width	Surface Catalog Number	
	Split Cover Plate Provides wire egress from raceway. Provided with assembly screws and grommet material.		12" 14" 20"	OWSC/10F OWSC/12F OWSC/18F	10" 12" 18"	OWSC/10S OWSC/12S OWSC/18S	
	End Cap Closes off end of wall duct. Screws provided.	3½" 3½" 3½"	12" 14" 20"	OWE/D10F OWE/D12F OWE/D18F	10" 12" 18"	OWE/D10S OWE/D12S OWE/D18S	
Additional Fittings	Cabinet Connector Connects wall duct to enclosures. Designed to be positioned around outside surface of duct and secured with screws from inside of duct. Screws provided.	3½" 3½" 3½" 3½"	12" 14" 20"	OWF/D10 OWF/D12 OWF/D18	10" 12" 18"	OWF/D10 OWF/D12 OWF/D18	
Addit	Coupling Joins surface or flush wall duct sections together. Designed to be positioned around outside surface of duct and secured with screws from inside of duct. Screws provided.	3½" 3½" 3½"	12" 14" 20"	OWC/D10 OWC/D12 OWC/D18	10" 12" 18"	OWC/D10 OWC/D12 OWC/D18	
	Trench to Wall Duct Adapter Transitions from trench duct to a vertical run of wall duct when not using the OWR series Vertical Riser. Mounts on trench in place of cover. Provided with necessary screws.	3½" 3½" 3½"	12" 14" 20"	OWV/D10 OWV/D12 OWV/D18	10" 12" 18"	OWV/D10 OWV/D12 OWV/D18	
	Reducer Coupling Joins two sizes of surface or flush wall duct sections together. Designed to be positioned around outside surface of duct and secured with screws from inside of duct. Screws provided.	3½" 3½"	20" to 12" 20" to 14"	OWD/D (18-10) OWD/D (18-12)	18" to 10" 18" to 12"	OWD/D (18-10) OWD/D (18-12)	

Note: Grommet material is available to cover field cut openings in Wall Duct. Outside dimensions of grommet is 1/4" x 5/16" and is made from SBR rubber. Catalog number GROM-xx ("xx" represents length in feet).

S		For Overall		For Fitting Style	
ings	Description	Raceway Depth	Straight (Length 60")	Horizontal "L"	Internal Sweep Elbow
Partitions Fitti	Internal Duct Partitions Divides raceway and fittings into compartments. Screws provided.	3½"	OWP/D	OWCP/D	OWSWP/D

ဟ	Description	No. of Compartments	"T" Unit Fitting Type	"X" Unit Fitting Type
g	Tunnels Field installed inside of multi-compartment	2, 3, or 4	Consult Factory	Consult Factory
nel Fitti	"T" and "X" units to maintain separation of services. May be factory installed.			
Tunn				

#### **Features and Benefits**



# Multi-Compartment Underfloor Duct Saves Time and Money in Your In-Slab Wire Management System

The Hubbell Underfloor Duct system is an in-slab wire management product for delivering power, voice and data services for applications that include retail facilities, open office workstations, fitness centers, casinos, medical facilities and libraries. This system is uniquely designed with multiple compartments, allowing unlimited design options and cost savings in labor and materials from other single-compartment systems. Matched with our strong national distribution and complete technical/application support, the Hubbell Underfloor Duct System is the perfect solution for your underfloor wire management needs.



#### Key Features and Benefits

- Eight duct profiles available to accommodate numerous in-slab wire management for power and communications.
- One-piece design multi-compartment duct, drastically reducing installation and material costs.
- Standard insert heights ranging from 1 to 3 inches (other heights available).
- Inclusive tile trim in square-top junction boxes, providing the installer the on-site option of using the trim or leaving it recessed.
- Combination duct coupler/support, reducing material and labor costs using the same part to join raceway sections together and to support/level the duct.
- Activation inserts are pre-assembled to the duct, or the inserts can be purchased separately for field installation only where you need them.
- Heavy duty junction boxes are available for areas requiring high-concentrated floor loads.
- Meets or exceeds UL 884 specifications, assuring a fully UL Listed system from one manufacturer.



#### Flush Insert Duct Benefits

- Provides an aesthetic wire management solution for delivering power and communications services.
- Unique multi-gang flush inserts with removable voltage dividers provide the flexibility of installing multiple gangs of the same service at each insert location.
- Individual gangs can be activated as needed keeps costs down.
- Activation trims accept standard Hubbell floor box covers for power and data, available in aluminum and brass.



#### **Ordering Information Note:**

Floor Duct part numbers are for reference only. All Floor Duct orders are lot billed with a generic FD prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.



#### Conventional, Flush and Blank Underfloor Duct Profiles

#### **Ordering Information Note:**

Floor Duct part numbers are for reference only. All Floor Duct orders are lot billed with a generic FD prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

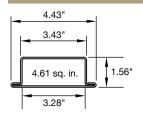
- All duct comes in standard 10 ft. lengths
- 14 gauge, G90 galvanized steel
- 2 Inch IPS (Iron Pipe Size) round inserts are die-cast zinc
- Rectangular inserts are 14 gauge, G90 galvanized steel

#### **Catalog Number System**

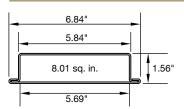
	SP202F -	. 2	- 12	
	Profile	Insert Height	Insert Spacing	
Round Insert Duct and Blank Duct	201 201W 202 SP202 202W 203 204	B = Blank 1 = 1" (201 only) 15 = 1 ½" 2 = 2" 25 = 1 ½" 3 = 3"*	12 = 12" 24 = 24" (consult factory for special preset spacing) n/a for Blank Duct	
Flush Insert Duct	201F 201WF 202F SP202F 202WF 203F	1 = 1" (201F only) 15 = 1 ½"** 2 = 2" 25 = 2 ½" 3 = 3"*	12 = 12" 24 = 24" (consult factory for special preset spacing)	

Note: \*Consult factory for heights greater than 3".

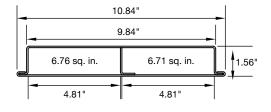
# Dimensions 201 & 201F



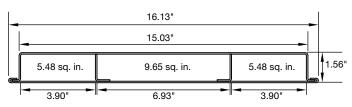
#### 201W & 201WF



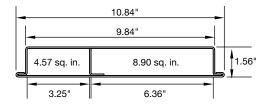
#### 202 & 202F



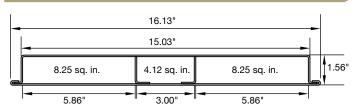
#### 203



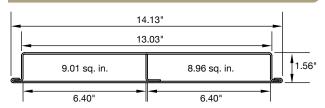
#### SP202 & SP202F



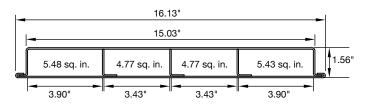
#### 203F



#### 202W & 202WF



#### 204



<sup>\*\* 1</sup> ½" min. required for duplex receptacles.



#### **Technical Information and Wire Fill Capacity Chart**

#### **Ordering Information Note:**

Floor Duct part numbers are for reference only. All Floor Duct orders are lot billed with a generic FD prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

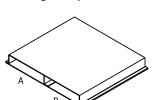
Duct Profile	201 201F	201W 201WF		)2 2F	SP2		202W 202WF		203				203F		204					
Channel Cross Sectional Area (sq. in.)	4.61	8.01	6.76	6.71	4.57	8.9	9.01	8.96	5.48	9.65	5.48	8.25	4.12	8.25	5.48	4.77	4.77	5.43		
Channel	Α	Α	Α	В	Α	В	Α	В	Α	В	C	Α	В	С	Α	В	С	D		

							_				_					_	_		_		_
Cable Type	Size	Approx. Dia. (in.)	Approx. Area (sq in.)																		
	14 AWG	0.111	0.0097	190	331	279	277	188	367	372	370	226	398	226	341	170	341	226	197	197	224
Power	12 AWG	0.130	0.0133	138	241	203	202	137	268	271	270	165	290	165	248	124	248	165	143	143	163
(THHN)	10 AWG	0.164	0.0211	87	151	128	127	86	168	170	169	103	182	103	156	78	156	103	90	90	102
	8 AWG	0.216	0.0366	50	87	73	73	49	97	98	97	59	105	59	90	44	90	59	52	52	59
Coax	RG-6/U	0.270	0.0573	32	55	47	46	31	62	62	62	38	67	38	57	28	57	38	33	33	37
Cables	RG-6/UQ	0.298	0.0697	26	45	38	38	26	51	51	51	31	55	31	47	23	47	31	27	27	31
	Cat 5e	0.210	0.0346	53	92	78	77	52	102	104	103	63	111	63	95	47	95	63	55	55	62
LAN Cables	Cat 6	0.250	0.0491	37	65	55	54	37	72	73	73	44	78	44	67	33	67	44	38	38	44
	Cat 6A	0.350	0.0962	19	33	28	27	18	37	37	37	22	40	22	34	17	34	22	19	19	22
Fiber Optio	2-6 Strand	0.190	0.0284	65	113	95	94	64	125	127	126	77	136	77	116	58	116	77	67	67	76
Fiber Optic Distribution	8-12 Strand	0.230	0.0415	44	77	65	64	43	85	86	86	52	92	52	79	39	79	52	45	45	52
Cables	16-24 Strand	0.350	0.0962	19	33	28	27	18	37	37	37	22	40	22	34	17	34	22	19	19	22

Note: Cable quantities shown in this chart are based on a 40% wire fill capacity. Sizes of COAX, LAN and Fiber Optic cables are provided for example only. Consult cable manufacturer's specification for exact cable sizes.



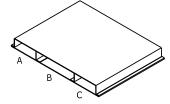
201 and 201F Series Single Compartment



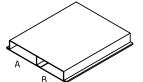
202W and 202WF Series Two Equal Compartments



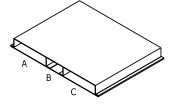
201W and 201WF Series Single Wide Compartment



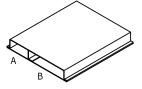
203 Series Three Compartments



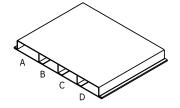
202 and 202F Series Two Equal Compartments



203F Series Three Compartments



SP202 and SP202F Series Modified Two Compartments



204 Series Four Compartments

#### **Applicable Codes & Standards**

- TIA/EIA 569-C "Commercial Building Standard for Telecommunications Pathways and Spaces"
- NEC Article 390 "Underfloor Raceways"
- Ampacity derating rules of NEC Article 310.15 (B)(3) applies to conductors installed in Underfloor Raceways and Trench Duct
- UL Standard UL 884 "Underfloor Raceways and Fittings"
- UL Listed E75939 (Underfloor Raceway) & E304554 (Underfloor raceway Fittings)



#### **Underfloor Duct Raceway Fittings**

**Ordering Information Note:** 

Floor Duct part numbers are for reference only. All Floor Duct orders are lot billed with a generic FD prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

				F	lusł	n Ins	sert	Due	ct		Cor	ven	tior	nal C	Ouct	t
				201F	201WF	202F	SP202F	202WF	203F	201	201W	202	SP202	202W	203	204
			201-DCS	•	İ					•						
PE		Couples duct sections together and	201W-DCS		•						•					
Coupler		supports the duct. To be used every	202-DCS		İ	•	•				İ	•	•			
Su		5 feet of duct run.	202W-DCS					•						•		
			203-DCS						•						•	•
	^		201-ECS	•	İ					•						
ap T			201W-ECS		•						•					
End Cap Support		Supports and closes unused duct ends.	202-ECS			•	•					•	•			
Enc		ullused duct ellus.	202W-ECS		İ			•			İ			•		
			203-ECS		İ				•						•	•
			201-VEL	•						•						
	_		201W-VEL		•						•					
ser		Transitions from duct embedded	202-VEL			•						•				
Ë		in concrete floor to vertical duct or may be used for direct connection	SP202-VEL				•						•			
cal		to a Universal Conduit Adapter	202W-VEL					•						•		
Vertical Riser		(UCA). Coupler / Supports (DCS) are required to attach to duct and UCA.	203-VEL												•	
>		required to attach to duct and OCA.	203F-VEL		İ				•		Ħ					
			204-VEL		İ						l					•
			201-UCA	•						•						
Ħ		Transitions from duct to conduit.	201W-UCA		•						•					
l nd .		A blank 14 gauge steel plate is	202-UCA			•						•				
ersal Col Adapter		provided for field punched conduit openings. For use with up to 2 ½"	SP202-UCA				•						•			
sal		trade size conduits. Consult factory	202W-UCA					•						•		
Universal Conduit Adapter		for larger conduit accommodations. (may also be inserted directly into	203-UCA												•	
Uni		Junction Boxes)	203F-UCA						•							
			204-UCA													•
			201-HB90	•						•						
		Provides a horizontal 90 degree	201W-HB90		•						•					
NO.		turn in floor duct. No hand access provided. Consult factory for other	202-HB90			•						•				
Horizontal 90 Degree Elbov		angles.	SP202-HB90-NIR				•						•			
zor	SP202-HB90-NIR	CDOOL IDOOL	SP202-HB90-NOR				•						•			
lori		SP202-HB90's must be specified either with the Narrow Compartment	202W-HB90		İ			•			l			•		
0 -		located at the inside radius (-NIR)	203-HB90		İ						l				•	
6	annea Junea June	or at the outside radius (-NOR) as shown in illustration.	203F-HB90						•							
	SP202-HB90-NOR	S. 13 WIT IIT IIIGGU QUOTI.	204-HB90													•
			201-DCC	•						•	Т					
et tor			201W-DCC		•						•					
Cabinet		Provides a means for connecting	202-DCC			•	•					•	•			
Cabinet Connector		duct to an electrical cabinet	202W-DCC					•						•		
O			203-DCC		$\vdash$				•		$\vdash$				•	•
	l		-30 500													



#### **Underfloor Duct Raceway Junction Boxes and Accessories**

For providing square opening access at intersections of Feeder Duct and Distribution

For providing round opening

Feeder Duct and Distribution Duct. Provided with Brass or Stainless Steel Carpet Ring \*Available in Stainless Steel. To order replace B with SS

Same as above except cover

Corner Cap -

plates are 3/8" thick and after-pour height adjustable. Carpet Rings and Closure Caps must be ordered separately. Duct Entrance Cap - HDJBDC

1/8" thick Carpet Trim for Heavy Duty Junction Boxes. \*Available in Stainless Steel. To order replace BRASS with SS

access at intersections of

#### **Ordering Information Note:**

Square Access **Junction Box** 

**Report Access** 

Round Access

for Heavy Duty Junction Boxes Carpet Ring

Junction Box **Heavy Duty** 

**Junction Box** 

Floor Duct part numbers are for reference only. All Floor Duct orders are lot billed with a generic FD prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.

#### x = Preset Insert Height

**1** = **1**" (201 & 201F only)

**15** = 1

2 = 2"

25 = 2

3 = 3"gr

	/2" (min. required for duplex recept.)	F	lusi	ı Ins	sert	Duc	t		Cor	iven	tion	nal C	Duct	
"	1/2" (consult factory for heights eater than 3")	201F	201WF	202F	SP202F	202WF	203F	201	201W	202	SP202	202W	203	204
	201-JB-x	•						•						
	201W-JB-x		•						•					
	202-JB-x			•						•				
	SP202-JB-x				•						•			
	202W-JB-x					•						•		
	203-JB-x												•	
	203F-JB-x						•							
	204-JB-x													•
	201-JB-x-RCB*	•						•						
	201W-JB-x-RCB*		•						•					
	202-JB-x-RCB*			•						•				
	SP202-JB-x-RCB*				•						•			
	202W-JB-x-RCB*					•						•		
	203-JB-x-RCB*												•	
	203F-JB-x-RCB*						•							
	204-JB-x-RCB*													•
r	202-JB-x-HD-ADJ			•						•				
	SP202-JB-x-HD-ADJ				•						•			
	202W-JB-x-HD-ADJ					•						•		
	RD-BRASS*-202-ADJ			•						•				
	RD-BRASS*-SP202-ADJ				•						•			
	RD-BRASS*-202W-ADJ					•						•		

# Corner Conduit Junction Box

Provides attachment point for conduit to each corner of all junction boxes. JB-CCA is provided with 14 gauge steel plate for field punched conduit opening. All other adapters are factory punched.

**HDJBCC** 

JB-CCA JB-CCA-1/2 JB-CCA-3/4 JB-CCA-1

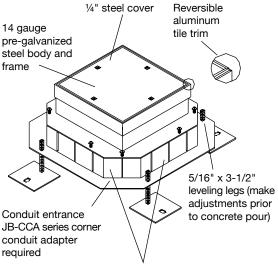
JB-CCA-1-1/2 JB-CCA-2

**Hubbell Trench Duct is commonly used as a feeder** system for Underfloor Duct Raceway systems.



Factory assembled Trench/Underfloor duct intersect units allow unrestricted capacity by the elimination of tunnels. Side mounted Underfloor duct is available for shallow concrete pours. Consult factory for details.

- High capacity design supports large cables for single and multiple service requirements.
- Open top design allows cables to be easily
- Cover plates are removable and adjust horizontally to any point along the duct.
- · Custom lengths of trench and fittings are
- Multiple compartments allow complete separation of services.
- Innovative duct support assembly allows for pre-pour leveling and acts as a splice for duct sections.



Removable pry-out sections for corner conduit adapters and duct entrances. Additional blanking plates not required for unused junction box entrances. Blanking plates must be ordered separately for heavy duty junction boxes.

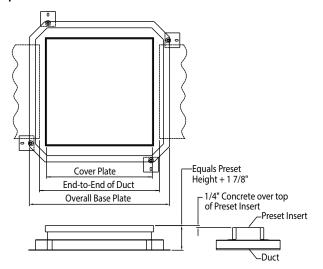
## **Underfloor Duct Products**



#### **Underfloor Duct Junction Box Dimensions**

#### **Ordering Information Note:**

Floor Duct part numbers are for reference only. All Floor Duct orders are lot billed with a generic FD prefix project specific part numbers. Please contact your local Hubbell Territory Manager for all Hubbell Duct quotations.



Junction Box Catalog Number	Cover Plate	End-To-End Of Duct	Overall Base Plate		
201-JB-x 201-JB-x-RCx	<b>6</b> <sup>5</sup> /16"	8"	10 ½"		
201W-JB-x 201W-JB-x-RCx					
202-JB-x 202-JB-x-RCx	<b>12</b> <sup>9</sup> /16"	<b>14</b> ½"	<b>17</b> <sup>13</sup> /16"		
SP202-JB-x SP202-JB-x-RCx					
202W-JB-x 202W-JB-x-RCx					
203-JB-x 203-JB-x-RCx	17"	19 <sup>5</sup> /8"	<b>22</b> <sup>11</sup> / <sub>16</sub> "		
203F-JB-x 203F-JB-x-RCx		19 /8			
204-JB-x 204-JB-x-RCx					
202-JB-x-HD-ADJ SP202-JB-x-HD-ADJ 202W-JB-x-HD-ADJ	Consult Factory For Dimensions				

Description

Catalog Number

## **Underfloor Duct Raceway Aftersets and Marker Caps**

**Flush Insert Duct** 

	Tidon moort Buot			Description	Catalog Number
				1 1/2" Insert Height	DAIFA-1G-15
		1	1-Gang	2" Insert Height	DAIFA-1G-2
				3" Insert Height	DAIFA-1G-3
r t				1 1/2" Insert Height	DAIFA-2G-15
Afterset Insert		Provides means to add activation inserts in the field where needed prior to concrete pour. 14 gauge steel.	2-Gang	2" Insert Height	DAIFA-2G-2
A		Whole Hooded pherite controls pour. 11 gadge closs.		3" Insert Height	DAIFA-2G-3
				1 1/2" Insert Height	DAIFA-3G-15
			3-Gang	2" Insert Height	DAIFA-3G-2
				3" Insert Height	DAIFA-3G-3
er	~*	   Marker caps are used in place of standard insert caps in (a	a) each	Insert Marker Cap:	
Marker Cap	$\langle 1 \rangle$	insert adjacent to junction box, (b) inserts on each side of a	a perma-	Zinc Screw	FA-DMC-Z
Σ	<u> </u>	nent wall, and (c) the last insert in each run of duct.	Brass Screw	FA-DMC-B	
Compart- ment Cover	1	Used for abandoning preset opening (one per gang). 18 gauge steel,		Blank Cover	FA-MC
	Round Insert Duct			Description	Catalog Number
	Hourid Insert Duct			1 " Insert Height	DAI-1
Afterset Insert	3	Provides means to add activation inserts in the field where		2 " Insert Height	DAI-2
fter		needed prior to or after concrete pour. Zinc die cast.		3 " Insert Height	DAI-3
<b>4</b> –			4 " Insert Height	DAI-4	
7		Marker caps are used in place of standard insert caps in (a	a) each	Insert Marker Cap:	
Marker Cap		ianter super and used in place of standard intert superin (a) such		Zinc Screw	DMC-Z
Ž		nent wall, and (c) the last insert in each run of duct.		Brass Screw	DMC-B
Reducing Bushing		Reduces threaded 2" IPS insert opening to either 3/4" NPT NPT threaded opening for attachment of conduit fitting or		2" to 3/4"	RB-162
Redi Bus		fitting chase nipple.	•	2" to 1"	RB-163

## **Underfloor Duct Products**



### **Underfloor Duct Raceway Activation Kits**



- Available in brass and brushed aluminum to meet aesthetic requirements
- Available in one, two and three-gang options
- ScrubShield® Complies with UL514A scrub water requirements
- Flanged design may be used in tile, wood, carpet, terrazzo and bare concrete applications
- Uniform look when used in same areas where Hubbell floor boxes are installed

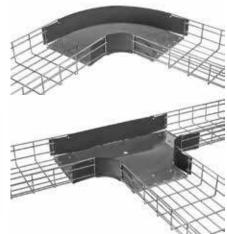
	Flush Insert Underfloor Duct	Finish	1-Gang 6" x 4.85"	2-Gang 6" x 8.13"	3-Gang 6" x 11.34"	
	Flanges are provided	Brass	SB3083W-UFD	SB3084W-UFD	SB3085W-UFD	
es	with adapter plates and accessories required for	Aluminum	SA3083W-UFD	SA3084W-UFD	SA3085W-UFD	
Flanges	installing to rectangular Underfloor Duct preset inserts and aftersets.		[3]		UBX	
			C - []	D 1 0	Style Line Decorator	Combination
			Duplex Flap	Duplex Screw	Opening	2½" x ¾4"
		Brass	S3825	S3625	S3826	S2425
		Aluminum	SA3825	SA3625	SA3826	SA2425
Covers	All Covers		S			
ဝိ	4.15" x 2.99"		Combination 21/8" x 1"	2 <sup>1</sup> /8" Single Receptacle	2 <sup>3</sup> / <sub>8</sub> " Single Receptacle	Blank
		Brass	S2625	S2825	S3425	S3813
		Aluminum	SA2625	_	_	SA3813
			0			e e

	Round Insert Underfloor Duct								
sing	frame,	st aluminum brushed aluminum g, chase nipple,	1" Chase Nipple	SC3099A					
Housing		t plates	34" Chase Nipple	SC3098A					
S		Duplex Receptacle	Single Receptacle 1.39" (35.3 mm) opening	Style Line Decorator	Blank	Telephone bushing 1 in. I.D. and (2) <sup>3</sup> /s" KO for coax	Furniture Feed aluminum plate with <sup>3</sup> /4" trade size KO	Furniture Feed aluminum plate, blank	
Plates		SS309D	SS309S	SS309DS	SS309B	SS309T	SS309SF	SS309BF	
Δ.			3 3	•	5 5				

# SECTION V

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## Innovative, Flexible, Field-Configurable Wire Basket Solutions

#### **Support Broad Range of Applications**

Hubbell Wiring Systems offers a comprehensive Wire Basket Tray System to handle every application. From pre-galvanized solutions for commercial controlled interior environments to stainless steel versions for industrial applications such as food processing, marine and highly corrosive environments. Hubbell also features labor savings options including No-Splice supports which also reduce material cost and preformed fittings which offer tremendous productivity enhancement to the installer by eliminating field cuts that are required when fittings are configured in the field. Hubbell also offers painted trays in virtually any color needed. The painted trav is masked to reduce on-site paint removal saving time and money. Hubbell Wire Basket Tray Systems are available in overhead and raised floor designs. Complete shipments, job site location palletization and markings, and product customization make Hubbell the choice for every wire basket tray installation.

#### **Customer Support and Technical Assistance**

Hubbell's knowledgeable sales team is just a call away for assistance in selecting the proper type basket tray for any application or providing design assistance including developing a bill of material.

#### **Pre-Galvanized Finish is Environmentally Friendly**

The standard finish for Hubbell Basket Tray is pre-galvanized which is a significantly more environmentally friendly manufacturing process as compared to galvanizing dip. Pre-galvanizing applies a zinc galvanization to the wire PRIOR to fabrication. The galvanized wire(s) then welded and formed into the appropriate basket tray size. Hubbell's pre-galvanized finish performs the same as post-zinc plated production finish while avoiding secondary chemical processing.

### **Sustainable Approach**

Hubbell utilizes a sustainable approach to assist in maintaining the environment. Our wire basket tray systems utilize 100% recycled steel content in the manufacturing of our tray, and are packaged in kraft unbleached packaging. Packaging and strapping materials are recyclable. MillCerts are available upon request to assist in documenting recycled content for possible LEED credits.



#### Pre-Galvanized

- Wire is galvanized prior to fabrication
- Applications
  - Commercial
  - Controlled Interiors
- Specification, ASTM A641



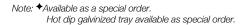
### Stainless Steel ◆

- Type 304L and 316S
- Applications
  - Industrial
  - Marine
  - Food Processing
  - Outdoor
- Specification, ASTM A580



#### **Painted Finishes**

- Powder coat: Black is available as standard, other colors available as special order
- **Applications** 
  - Data Center
  - Controlled Interiors
- Specification, N/A





### Electroplated Zinc ◆

- Tray is galvanized after fabrication
- Applications
  - Commercial
  - Controlled Interiors
- Specification, ASTM B633

### **Round Cross-Wire Basket Tray**



#### **Features**

- T-weld construction prevents snags
- 5mm round wire minimum
- High load rating
- Easy to cut and fabricate fittings in the field
- 100% recycled steel
- 2" x 4" mesh opening

- Use factory support hardware or fabricate supports at the job site
- Painted tray includes factory installed masking to ensure proper grounding at splices; no need to remove paint during installation

10 Feet per Length		1	T Maint	Splice Q	uantity*	I	Finish
118.3" (3m)		Load	Tray Weight per Length	90° Sweep	Straight		THISH
10 pc. min. order qty.	Tray Width	(Lb/ft)	(Lb)	Elbow	Splice	Pre-Galvanized	Black Powder Coat
2" Deep Tray	4" (102)	45	7	2	2	HBT0204	HBT0204BK
	6" (152) •	50	9	3	4	HBT0206	HBT0206BK
	8" (203) •	52	10.5	4	4	HBT0208	HBT0208BK
	12" (305) •	58	12	6	4	HBT0212	HBT0212BK
	16" (406) •	70	15	7	4	HBT0216	HBT0216BK
2.38" (60)	18" (457) •	70	23	9	4	HBT0218	HBT0218BK
	20" (508) •	73	25	9	5	HBT0220	HBT0220BK
W	22" (559)	73	27	12	5	HBT0222	HBT0222BK
	24" (610) •	75	31	12	5	HBT0224	HBT0224BK
	26" (660)	73	33	13	6	HBT0226	HBT0226BK
	28" (711)	73	35	14	6	HBT0228	HBT0228BK
	30" (762)	70	38	15	6	HBT0230	HBT0230BK
	32" (813)	70	39	16	6	HBT0232	HBT0232BK
4" Deep Tray	4" (102)	49	12	2	4	HBT0404	НВТ0404ВК
	6" (152) •	49	13	3	5	HBT0406	HBT0406BK
	8" (203) •	78	15	4	6	HBT0408	НВТ0408ВК
	12" (305) •	78	23	6	6	HBT0412	HBT0412BK
4"	16" (406) •	108	27	7	7	HBT0416	HBT0416BK
(102)	18" (457) •	116	29	9	7	HBT0418	HBT0418BK
<b> </b>	20" (508) •	116	31	9	7	HBT0420	HBT0420BK
VV	22" (559)	116	33	12	8	HBT0422	HBT0422BK
	24" (610) •	116	35	12	8	HBT0424	НВТ0424ВК
	28" (711)	108	39	14	9	HBT0428	HBT0428BK
6" Deep Tray	8" (203) •	116	23	4	6	HBT0608	НВТ0608ВК
	12" (305) •	123	27	6	6	HBT0612	HBT0612BK
	16" (406) •	123	31	7	7	HBT0616	HBT0616BK
6"	18" (457) •	127	33	9	7	HBT0618	HBT0618BK
(152)	20" (508) •	127	35	9	7	HBT0620	HBT0620BK
——————————————————————————————————————	22" (559) •	127	37	12	8	HBT0622	HBT0622BK
W	24" (610) •	150	39	12	8	HBT0624	HBT0624BK
8" Deep Tray	8" (203) •	116	27	4	8	HBT0808	HBT0808BK
	12" (305)	116	31	6	8	HBT0812	HBT0812BK
8"	16" (406) •	116	35	7	9	HBT0816	HBT0816BK
(208)	18" (457)	116	37	9	9	HBT0818	HBT0818BK
	, ,	116	39	9	9	HBT0820	HBT0820BK
W	20" (508) •	1110	109	] 9	ا ا	11010020	11D 1 00ZUDK

Note: •UL Classified as equipment ground conductor (painted tray cUL Classified only). All dimensions are +/- 0.25". Custom paint colors available in addition to Black Powder Coat (Contact Hubbell). \*See page V-13 for details and page  $\dot{V}$ -14 for wire fill and maximum load chart. HBT0202 (2x2 tray) available as special order. MOQ 40 pcs. Top wire utilizes side weld.



#### Wire Diameter



"Round" Wire Design

## **Electroplated Zinc Round Cross-Wire Basket Tray**



#### **Features**

- T-weld construction prevents snags
- 5mm round wire minimum
- High load rating
- Easy to cut and fabricate fittings in the field
- 2" x 4" mesh opening

- Use factory support hardware or fabricate supports at the job site
- Electroplated zinc galvanized (post plated) made from cabon steel and plated to ASTM B 633, Type III, SC-1

## Field Configurable Fittings



#### 90° Sweep Elbow

Use appropriate quantity of splice kits



#### Tee Fitting

Use one HBTCS corner splice per each

## Supports and Hardware

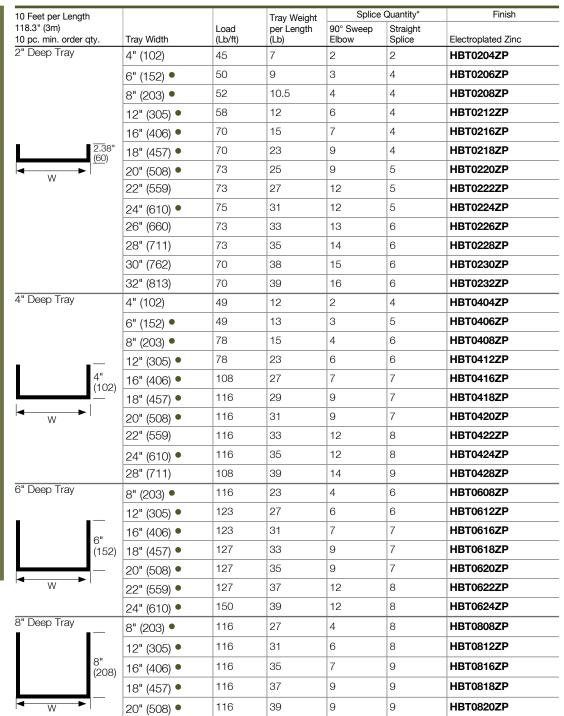


See page V-12

#### Wire Diameter



.1969" Dia. "Round" Wire Design



Note: •UL Classified/cUL Classified as equipment ground conductor.

\*See page V-13 for details and page V-14 for wire fill and maximum load chart.

## Flat Style Cross-Wire Basket Tray



#### **Features**

- Flat shaped cross-wires provide significantly more surface area to support weight of cables - Ideal for Cat 6 and 6A applications
- Flat ribs provide 400% more surface area and reduce stress on cables by 60%
- 100% recycled steel

- 2" x 4" mesh opening
- Reduction in stress helps maintain Cat 6 and Cat 6A performance
- Cuts and configures the same as round wire tray
- Uses the same splicing and mounting hardware as round wire tray

10 Feet per Length			Tray Weight	Splice Q			Finish
118.3" (3m) 10 pc. min. order qty.	Tray Width	Load (Lb/ft)	per Length (Lb)	90° Sweep Elbow	Straight Splice	Pre-Galvanized	Black Powder Coat
2" Deep Tray	4" (102)	45	7	2	2	HBT0204S	HBT0204SBK
	6" (152) •	50	9	3	4	HBT0206S	HBT0206SBK
	8" (203)	52	10.5	4	4	HBT0208S	HBT0208SBK
	12" (305)	58	12	6	4	HBT0212S	HBT0212SBK
	16" (406) •	70	15	7	4	HBT0216S	HBT0216SBK
2.38" (60)	18" (457) •	70	23	9	4	HBT0218S	HBT0218SBK
<b>→</b>	20" (508) •	73	25	9	5	HBT0220S	HBT0220SBK
VV	22" (559)	73	27	12	5	HBT0222S	HBT0222SBK
	24" (610) •	75	31	12	5	HBT0224S	HBT0224SBK
	26" (660)	73	33	13	6	HBT0226S	HBT0226SBK
	28" (711)	73	35	14	6	HBT0228S	HBT0228SBK
	30" (762)	70	38	15	6	HBT0230S	HBT0230SBK
	32" (813)	70	39	16	6	HBT0232S	HBT0232SBK
1" Deep Tray	4" (102)	49	12	2	4	HBT0404S	HBT0404SBK
	6" (152) •	49	13	3	5	HBT0406S	HBT0406SBK
	8" (203) •	78	15	4	6	HBT0408S	HBT0408SBK
	12" (305) •	78	23	6	6	HBT0412S	HBT0412SBK
4"	16" (406) •	108	27	7	7	HBT0416S	HBT0416SBK
(102)	18" (457) •	116	29	9	7	HBT0418S	HBT0418SBK
<b>←</b>	20" (508) •	116	31	9	7	HBT0420S	HBT0420SBK
	22" (559)	116	33	12	8	HBT0422S	HBT0422SBK
	24" (610) •	116	35	12	8	HBT0424S	HBT0424SBK
	28" (711)	108	39	14	9	HBT0428S	HBT0428SBK
5" Deep Tray	8" (203) •	116	23	4	6	HBT0608S	HBT0608SBK
	12" (305) •	123	27	6	6	HBT0612S	HBT0612SBK
6"	16" (406) •	123	31	7	7	HBT0616S	HBT0616SBK
(152)	18" (457) •	127	33	9	7	HBT0618S	HBT0618SBK
	20" (508) •	127	35	9	7	HBT0620S	HBT0620SBK
W	22" (559) •	127	37	12	8	HBT0622S	HBT0622SBK
	24" (610) •	150	39	12	8	HBT0624S	HBT0624SBK
B" Deep Tray	8" (203) •	116	27	4	8	HBT0808S	HBT0808SBK
	12" (305) •	116	31	6	8	HBT0812S	HBT0812SBK
8" (208)	16" (406)	116	35	7	9	HBT0816S	HBT0816SBK
(200)	18" (457) •	116	37	9	9	HBT0818S	HBT0818SBK
<u></u>	20" (508)	116	39	9	9	HBT0820S	HBT0820SBK

Note: •UL Classified as equipment ground conductor (painted tray cUL Classified only).

All dimensions are +/- 0.25". Custom paint colors available in addition to Black Powder Coat (Contact Hubbell).

\*See page V-13 for details and page V-14 for wire fill and maximum load chart.

# **Field** Configurable **Fittings** 90° Sweep Elbow Use appropriate quantity of splice kits Tee Fitting Use one HBTCS corner splice per each Supports and Hardware **Ordering Information** See page V-12

#### **Cable Support Area**



.03125 sq. inch "Flat" Wire Design (based on .125" dia. cable)

## **Stainless Steel Round Cross-Wire Basket Tray**



#### **Features**

- Type 304L and 316S stainless steel
- Meets ASTM A580 specifications
- 4.5mm round wire minimum
- Stainless splice kits and ceiling supports are available

#### **Applications**

- Food processing
- Wash down areas
- Corrosive environments
- Outdoor installations
- Marine

## **Stainless Steel** Accessories **Available**



**HBTSKSS** Splice Kits



**HBTCSSS Corner Splice** 



**HBTWSSS** Washer Support



**HBTNBSS** 1/4" x 20 Nuts and Bolts

**Ordering Information** See page V-12

#### **Wire Diameter**



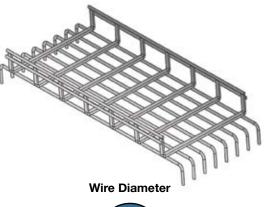
4.5mm	
.1772" Dia.	
"Round" Wire Desig	ın

10 5				Splice Quantity*		Round	
10 Feet per Length 118.3" (3m) 10 pc. min. order qty.	Tray Width	Load (Lb/ft)	Tray Weight per Length (Lb)	90° Sweep Elbow	Straight Splice	Type 304L	Type 316S
2" Deep Tray	4" (102)	45	7	2	2	HBT0204S04	HBT0204S16
	6" (152)	50	9	3	4	HBT0206S04	HBT0206S16
	8" (203)	52	10.5	4	4	HBT0208S04	HBT0208S16
	12" (305)	58	12	6	4	HBT0212S04	HBT0212S16
	16" (406)	70	15	7	4	HBT0216S04	HBT0216S16
2.38" (60)	18" (457)	70	23	9	4	HBT0218S04	HBT0218S16
<b> </b>	20" (508)	73	25	9	5	HBT0220S04	HBT0220S16
	22" (559)	73	27	12	5	HBT0222S04	HBT0222S16
	24" (610)	75	31	12	5	HBT0224S04	HBT0224S16
	26" (660)	73	33	13	6	HBT0226S04	HBT0226S16
	28" (711)	73	35	14	6	HBT0228S04	HBT0228S16
	30" (762)	70	38	15	6	HBT0230S04	HBT0230S16
	32" (813)	70	39	16	6	HBT0232S04	HBT0232S16
4" Deep Tray	4" (102)	49	12	2	4	HBT0404S04	HBT0404S16
	6" (152)	49	13	3	5	HBT0406S04	HBT0406S16
	8" (203)	78	15	4	6	HBT0408S04	HBT0408S16
I I	12" (305)	78	23	6	6	HBT0412S04	HBT0412S16
4" (102)	16" (406)	108	27	7	7	HBT0416S04	HBT0416S16
	18" (457)	116	29	9	7	HBT0418S04	HBT0418S16
W	20" (508)	116	31	9	7	HBT0420S04	HBT0420S16
	22" (559)	116	33	12	8	HBT0422S04	HBT0422S16
	24" (610)	116	35	12	8	HBT0424S04	HBT0424S16
	28" (711)	108	39	14	9	HBT0428S04	HBT0428S16
6" Deep Tray	8" (203)	116	23	4	6	HBT0608S04	HBT0608S16
<u> </u>	12" (305)	123	27	6	6	HBT0612S04	HBT0612S16
6"	16" (406)	123	31	7	7	HBT0616S04	HBT0616S16
(152)	18" (457)	127	33	9	7	HBT0618S04	HBT0618S16
	20" (508)	127	35	9	7	HBT0620S04	HBT0620S16
W	22" (559)	127	37	12	8	HBT0622S04	HBT0622S16
	24" (610)	150	39	12	8	HBT0624S04	HBT0624S16
8" Deep Tray	8" (203)	116	27	4	8	HBT0808S04	HBT0808S16
	12" (305)	116	31	6	8	HBT0812S04	HBT0812S16
8" (208)	16" (406)	116	35	7	9	HBT0816S04	HBT0816S16
(200)	18" (457)	116	37	9	9	HBT0818S04	HBT0818S16
<b>W</b> ►	20" (508)	116	39	9	9	HBT0820S04	HBT0820S16

Note: All dimensions are +/- 0.25".

\*See page V-13 for details and page V-14 for wire fill and maximum load chart.

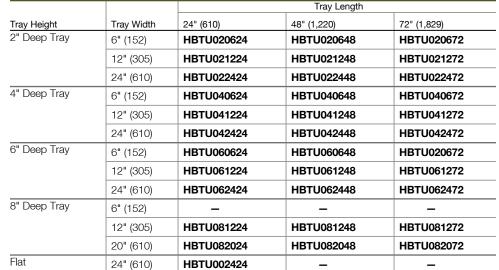
#### **Under Floor Round Cross-Wire Basket Tray**



#### **Features**

- T-weld construction prevents snags
- 5mm round wire on smaller sizes
- 100% recycled steel

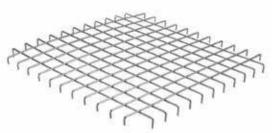
- Use factory support hardware or fabricate supports on the job site
- 2" x 4" mesh opening



Note: Tray UL Classified as equipment ground conductor.



.1969" Dia. "Round" Wire Design



HBTU002424

### **Splice Hardware**

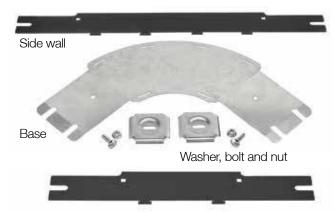
Splice Hardware		
Description	Finish	Catalog Number
Kit, Pedestal (2) HBTUPC and (1) Cross bar	Pre-Galvanized	НВТИРК
C-Bracket 6" Tier 12" Tier	Pre-Galvanized Pre-Galvanized	HBTUCB6 HBTUCB12
U-Clamp, Pedestal (1) Clamp	Pre-Galvanized	HBTUPC
Tray Grounding Fasteners Washer supports HBTWS and ½" - 20 self threading screws; 50 per box. Required when installing under floor wire basket tray.	Zinc Plated	HBTUGS
Intersection Supports For use with HBTUSUPP series support	Pre-Galvanized	HBTUFIT
Vertical Up	Pre-Galvanized	НВТИУИ

Note: See page 10 for L-brackets and C-brackets.
See page 14 for wire fill and maximum load chart.

**Saw Horse Supports** 

Support Height	Support Width	Finish	Catalog Number
4" (102)	22" (559)	Pre-Galvanized	HBTUSUPP4
6" (152)	22" (559)	Pre-Galvanized	HBTUSUPP6
8" (203)	22" (559)	Pre-Galvanized	HBTUSUPP8
10" (254)	22" (559)	Pre-Galvanized	HBTUSUPP10
12" (305)	22" (559)	Pre-Galvanized	HBTUSUPP12
14" (356)	22" (559)	Pre-Galvanized	HBTUSUPP14
16" (406)	22" (559)	Pre-Galvanized	HBTUSUPP16
18" (457)	22" (559)	Pre-Galvanized	HBTUSUPP18
20" (508)	22" (559)	Pre-Galvanized	HBTUSUPP20
22" (559)	22" (559)	Pre-Galvanized	HBTUSUPP22
24" (610)	22" (559)	Pre-Galvanized	HBTUSUPP24
26" (660)	22" (559)	Pre-Galvanized	HBTUSUPP26
28" (711)	22" (559)	Pre-Galvanized	HBTUSUPP28
30" (762)	22" (559)	Pre-Galvanized	HBTUSUPP30

### **Accessories for Wire Basket Tray, Preformed Fittings**



#### 1. Splicing hardware included



2. Attach first tray with washer support and 1/4"-20 nut and bolt



#### **Installation Efficiency**

Hubbell preformed fittings are time and cost effective solutions to installing 90 Degree Radius, Tees and Intersections, no cutting and no configuring. Hubbell offers Pre-galvanized or Black powder painted finishes. The fittings simply attach at the Intersections Tees or junctions when you want a radius bend. The fittings are manufactured precisely to the basket tray being utilized providing a clean engineered solution.

Installation of Hubbell preformed fittings can reduce installation configurations from hours to a few minutes. Labor and time savings can exceed 90% versus traditional cutting and splicing. Preformed fittings ensure a consistent installation every time and also avoids the sharp wire edges caused during the cutting process. Standard Hubbell preformed fittings consist of a pregalvanized base with black polymer sides\* and splicing hardware.

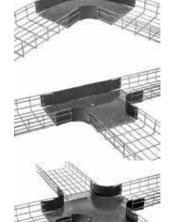
\*Steel wall preform fittings are available.



4. Attach second tray



5. Install side walls



#### 90 Degree Radius

Tray Width	Traditional Configuration	Hubbell Preformed Fittings	Time Savings
2 x 8	7 Minutes	1 Minute	85%
4 x 12	20 Minutes	2 Minutes	90%

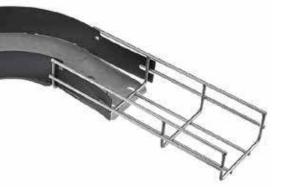
#### Tee

Tray Width	Traditional Configuration	Hubbell Preformed Fittings	Time Savings
4 x 12	8 Minutes, 45 seconds	2 Minutes, 30 seconds	70%
4 x 18	10 Minutes	2 Minutes, 30 seconds	74%

#### Intersection

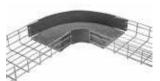
Tray Width	Traditional Configuration	Hubbell Preformed Fittings	Time Savings
6 x 24	29 Minutes	4 Minutes, 45 seconds	83%

## **Accessories for Wire Basket Tray, Preformed Fittings**

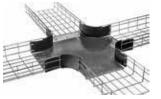


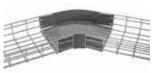
#### **Features**

- Labor and time savings
- Consistent installations
- For round and flat tray
- Steel pre-galvanized bases
- Interlocking polymer side walls
- Splicing hardware included
- Available with steel side walls









Γray Size	Tray Width	90 Degree	Tee	Intersection	45 Degree	30 Degree
2" (51) Deep	4"(102)	HBTR0204	HBTT0204	HBTI0204	HBT450204	HBT300204
	6"(152)	HBTR0206	HBTT0206	HBTI0206	HBT450206	HBT300206
	8"(203)	HBTR0208	HBTT0208	HBTI0208	HBT450208	HBT300208
	12"(305)	HBTR0212	HBTT0212	HBTI0212	HBT450212	HBT300212
	16"(406)	HBTR0216	HBTT0216	HBTI0216	HBT450216	HBT300216
	18"(457)	HBTR0218	HBTT0218	HBTI0218	HBT450218	HBT300218
	20"(508)	HBTR0220	HBTT0220	HBTI0220	HBT450220	HBT300220
	24"(610)	HBTR0224	HBTT0224	HBTI0224	HBT450224	HBT300224
4" (102) Deep	4"(102)	HBTR0404	HBTT0404	HBTI0404	HBT450404	HBT300404
	6"(152)	HBTR0406	HBTT0406	HBTI0406	HBT450406	HBT300406
	8"(203)	HBTR0408	HBTT0408	HBTI0408	HBT450408	HBT300408
	12"(305)	HBTR0412	HBTT0412	HBTI0412	HBT450412	HBT300412
	16"(406)	HBTR0416	HBTT0416	HBTI0416	HBT450416	HBT300416
	18"(457)	HBTR0418	HBTT0418	HBTI0418	HBT450418	HBT300418
	20"(508)	HBTR0420	HBTT0420	HBTI0420	HBT450420	HBT300420
	24"(610)	HBTR0424	HBTT0424	HBTI0424	HBT450424	HBT300424
6" (152) Deep	8"(203)	HBTR0608	HBTT0608	HBTI0608	HBT450608	HBT300608
	12"(305)	HBTR0612	HBTT0612	HBTI0612	HBT450612	HBT300612
	16"(406)	HBTR0616	HBTT0616	HBTI0616	HBT450616	HBT300616
	18"(457)	HBTR0618	HBTT0618	HBTI0618	HBT450618	HBT300618
	20"(508)	HBTR0620	HBTT0620	HBTI0620	HBT450620	HBT300620
	24"(610)	HBTR0624	HBTT0624	HBTI0624	HBT450624	HBT300624

Note: Add **BK** suffix for black base. Add **SW** suffix for steel side walls.

## **Accessories for Wire Basket Tray - Supports and Brackets**

No Splice supports reduces the number of splice kits required for tray installations.







### No Splice Support\*

		Center Support			Ceiling Support			
Tray Width	Qty. per Box	Pre-Galvanized	Black Powder Coat	Qty. per Box	Pre-Galvanized	Black Powder Coat		
6" (152)	1	HBTNSCTRS6	HBTNSCTRS6BK	-	_	_		
8" (203)	1	HBTNSCTRS8	HBTNSCTRS8BK	-	-	-		
12" (305)	1	HBTNSCTRS12	HBTNSCTRS12BK	1	HBTNSCLGS12	HBTNSCLGS12BK		
16" (406)	1	HBTNSCTRS16	HBTNSCTRS16BK	1	HBTNSCLGS16	HBTNSCLGS16BK		
18" (457)	1	HBTNSCTRS18	HBTNSCTRS18BK	1	HBTNSCLGS18	HBTNSCLGS18BK		
20" (508)	1	HBTNSCTRS20	HBTNSCTRS20BK	1	HBTNSCLGS20	HBTNSCLGS20BK		
24" (610)	1	HBTNSCTRS24	HBTNSCTRS24BK	1	HBTNSCLGS24	HBTNSCLGS24BK		



Center Support



Ceiling Support

Note: \*Install every 5 feet. Splice hardware included.







## Supports\*\*

·		Center Support		Ceilir	Ceiling Support		Trapeze Support	
Tray Width	Qty. per Box	Pre-Galvanized	Black Powder Coat	Pre-Galvanized	Black Powder Coat	Qty. per Box	Zinc Plated	Black Powder Coat
4" (102)	1	HBTCTRS4	HBTCTRS4BK	_	-	50	HBTTS	HBTTSBK
6" (152)	1	HBTCTRS6	HBTCTRS6BK	_	_	1	Attaches to the side of the tray; for tray sizes 16" wide and smaller; use in pairs every 6 feet for 4" and 6 trays; can be staggered every 5 feet	
8" (203)	1	HBTCTRS8	HBTCTRS8BK	_	_	1		
12" (305)	1	HBTCTRS12	HBTCTRS12BK	HBTCLGS12	HBTCLGS12BK	1		
16" (406)	1	HBTCTRS16	HBTCTRS16BK	HBTCLGS16	HBTCLGS16BK	1		
18" (457)	1	HBTCTRS18	HBTCTRS18BK	HBTCLGS18	HBTCLGS18BK	1		
20" (508)	1	HBTCTRS20	HBTCTRS20BK	HBTCLGS20	HBTCLGS20BK	1		
24" (610)	1	HBTCTRS24	HBTCTRS24BK	HBTCLGS24	HBTCLGS24BK	1		







#### **Brackets\*\***

	L-Bracket		C-	C-Bracket		nelf Support	
Tray Width	Qty. per Box	Pre-Galvanized	Black Powder Coat	Pre-Galvanized	Black Powder Coat	Pre-Galvanized	Black Powder Coat
4" (102)	1	HBTLB4	HBTLB4BK	НВТСВ4	НВТСВ4ВК	HBTSS4	HBTSS4BK
6" (152)	1	HBTLB6	HBTLB6BK	-	-	HBTSS6	HBTSS6BK
8" (203)	1	HBTLB8	HBTLB8BK	НВТСВ8	НВТСВ8ВК	HBTSS8	HBTSS8BK
12" (305)	1	HBTLB12	HBTLB12BK	HBTCB12	HBTCB12BK	HBTSS12	HBTSS12BK
16" (406)	1	HBTLB16	HBTLB16BK	-	-	HBTSS16	HBTSS16BK
18" (457)	1	HBTLB18	HBTLB18BK	HBTCB18	HBTCB18BK	HBTSS18	HBTSS18BK
20" (508)	1	HBTLB20	HBTLB20BK	-	-	HBTSS20	HBTSS20BK
24" (610)	1	HBTLB24	HBTLB24BK	_	_	HBTSS24	HBTSS24BK

Note: \*\*Install every 6 feet.

## Accessories for Wire Basket Tray - Covers and Inserts

#### Black Polymer Inserts with Sides\*

Provides a solid bottom and sides for tray - order in 10 foot increments

Tray Width	2" (51) Deep	4" (102) Deep	6" (152) Deep
4" (102)	HBTFRMINS0204BK	HBTFRMINS0404BK	-
6" (152)	HBTFRMINS0206BK	HBTFRMINS0406BK	-
8" (203)	HBTFRMINS0208BK	HBTFRMINS0408BK	HBTFRMINS0608BK
12" (305)	HBTFRMINS0212BK	HBTFRMINS0412BK	HBTFRMINS0612BK
16" (406)	HBTFRMINS0216BK	HBTFRMINS0416BK	HBTFRMINS0616BK
18" (457)	HBTFRMINS0218BK	HBTFRMINS0418BK	HBTFRMINS0618BK
20" (508)	HBTFRMINS0220BK	HBTFRMINS0420BK	HBTFRMINS0620BK
24" (610)	HBTFRMINS0224BK	HBTFRMINS0424BK	HBTFRMINS0624BK



Note: \*For white insert, replace **BK** with **WHT**.

#### **Polymer Inserts**

Provides a solid bottom for tray - order in 10 foot increments

Tray Width	Length	White	Black
4" (102)	118" (3000)	HBTINSNM04WHT	HBTINSNM04
6" (152)	118" (3000)	HBTINSNM06WHT	HBTINSNM06
8" (203)	118" (3000)	HBTINSNM08WHT	HBTINSNM08
12" (305)	118" (3000)	HBTINSNM12WHT	HBTINSNM12
16" (406)	118" (3000)	HBTINSNM16WHT	HBTINSNM16
18" (457)	118" (3000)	HBTINSNM18WHT	HBTINSNM18
20" (508)	118" (3000)	HBTINSNM20WHT	HBTINSNM20
24" (610)	118" (3000)	HBTINSNM24WHT	HBTINSNM24

#### **Galvanized Steel Inserts**

Provides a solid bottom for tray - 5 feet length per piece; 1 piece per box



Tray Width	Length	Pre-Galvanized	Black Powder Coat
4" (102)	59" (1500)	HBTINSM04	HBTINSM04BK
6" (152)	59" (1500)	HBTINSM06	HBTINSM06BK
8" (203)	59" (1500)	HBTINSM08	HBTINSM08BK
12" (305)	59" (1500)	HBTINSM12	HBTINSM12BK
16" (406)	59" (1500)	HBTINSM16	HBTINSM16BK
18" (457)	59" (1500)	HBTINSM18	HBTINSM18BK
20" (508)	59" (1500)	HBTINSM20	HBTINSM20BK
24" (610)	59" (1500)	HBTINSM24	HBTINSM24BK

#### **Galvanized Steel Covers**

Top cable and wire protector - 5 feet length per piece; 1 piece per box



Tray Width	Length	Pre-Galvanized	Black Powder Coat
4" (102)	59" (1500)	HBTCVR4	HBTCVR4BK
6" (152)	59" (1500)	HBTCVR6	HBTCVR6BK
8" (203)	59" (1500)	HBTCVR8	HBTCVR8BK
12" (305)	59" (1500)	HBTCVR12	HBTCVR12BK
16" (406)	59" (1500)	HBTCVR16	HBTCVR16BK
18" (457)	59" (1500)	HBTCVR18	HBTCVR18BK
20" (508)	59" (1500)	HBTCVR20	HBTCVR20BK
24" (610)	59" (1500)	HBTCVR24	HBTCVR24BK

#### **Galvanized Termination Support**

Secures end of tray to wall and can serve as blank end fitting; 1 piece per box

Tray Width	Length	Pre-Galvanized	Black Powder Coat
6" (152)	6.4" (163)	HBTTS6	HBTTS6BK
8" (203)	8" (203)	HBTTS8	HBTTS8BK
12" (305)	11.2" (284)	HBTTS12	HBTTS12BK
16" (406)	16" (406)	HBTTS16	HBTTS16BK
18" (457)	17.6" (447)	HBTTS18	HBTTS18BK
20" (508)	19.2" (488)	HBTTS20	HBTTS20BK
24" (610)	24" (610)	HBTTS24	HBTTS24BK



Dimensions in Inches (mm)

## **Galvanized Steel Dividers**

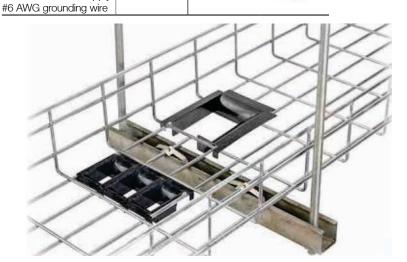
Mounting hardware to secure to tray (not included); 2 mounting holes per piece; 5 feet length per piece; 1 niece ner hov

1 piece pei box						
For use with Tray	Length	Pre-Galvanized	Black Powder Coat			
2" (51) Deep	60" (1524)	HBTDIV2	HBTDIV2BK			
4" (102) Deep	60" (1524)	HBTDIV4	HBTDIV4BK			
6" (152) Deep	60" (1524)	HBTDIV6	HBTDIV6BK			
8" (203) Deep	60" (1524)	HBTDIV8	HBTDIV8BK			

## **Accessories for Wire Basket Tray, Supports and Fittings**

D	T ME III	E	0.1. N. 1	_
Description	Tray Width	Finish	Catalog Number	_
Radius Down Increases cable protection and cable bend control; 1 per box	4" (102) 6" (152) 12" (305)	Black Black Black	HBTRD4BK HBTRD6BK HBTRD12BK	
Exit Radius Down* Top tray attachment, increases cable protection and cable bend control; 1 per box	4X4 Minimum Tray Size	Black	HBTEXTRDBK	į
Vertical Down Protects cables when dropping from the end or side of tray; 1 per box	7%" (102)	Zinc Plated Black	HBTVD HBTVDBK	F
<b>Label Clip</b> Attachment for all sizent 1 per box	es of tray;	White	HBTLC	i i
Cable Guide* Maintains cable ber and acts as a divide straight sections and 1 per box	er for	Black	НВТСС	•
Electrical Box Bra Attaches electrical buside of tray; 1 per busides	oox to	Pre-Galvanized Black	HBTEB HBTEBBL	
Sidecar Attaches to outside provides additional support, 2" deep; 1	cable	Pre-Galvanized Black	HBTSC HBTSCBK	
Splice Kit 3 piece staked bolt/w nut combination; splic sections and field form 50 pieces per box	ces straight	Zinc Plated Black Stainless Steel	HBTSK HBTSKBK HBTSKSS	3
Bar Splice Slotted bar 11½6" I Splices straight sec fittings; bend to forr reducers; adds rigic splices; 50 pieces p	tions and n tray lity to tray	Zinc Plated Black Stainless Steel	HBTBS HBTBSBK HBTBSSS	
Corner Splice (2) 90° splice bars ar (8) sets of the splice Splice Fittings Re	kit	Zinc Plated Black Stainless Steel	HBTCS HBTCSBK HBTCSSS	
Use one per each Te Use two per each Cr	ee Fitting;	Zina Dlat	LIDTMC	
Washer Supports Splices straight sectifitings and can also as a hold down meteray to strut (nut and provided separately). 50 pieces per box	be used thod for d bolt	Zinc Plated Black Stainless Steel	HBTWS HBTWSBK HBTWSSS	
Self Tapping Screwith Supports 1/4" - 20 self tapping HBTWS; 50 pieces	screw and	Zinc Plated	HBTUGS	À

Description	Finish	Catalog Number
Fitting Attachment Fills the gap in tray when creating fittings in 2" tray or 4"/6" tray	Pre-Galvanized Black Pre-Galvanized	HBTFA2BK HBTFA46
	Black	HBTFA46BK
Rack Attachment Attaches tray directly to the top of a standard rack	Zinc Plated Black	HBTRA HBTRABK
Conduit Attachment Connects conduit to tray (¾", 1" and 1¼" conduit)	Pre-Galvanized Black	НВТСАЗ НВТСАЗВК
Nut and Bolt Sets 1/4" - 20 nut and bolt sets; 50 pieces per box	Zinc Plated Stainless Steel	HBTNB HBTNBSS
Cable Drop Outs Black polymer inserts; Installed into the bottom of the basket tray to reduce pinch points and maintain a radius bend on the exiting cables	Black	нвтсовк
Large Cable Drop Outs Black polymer inserts; Installed into the bottom of the basket tray to reduce pinch points and maintain a radius bend on the exiting cables (tray requires cutting to install)	Black	HBTCD4X4BK
Strut Clips Used to hold down basket tray when used with any standard industry strut supports;	Pre-Galvanized	HBTSTRUTCLIP
50 pieces per box	• 16" - 18" trays	naller use 2 clips per strut support s use 3 clips per strut support dd one clip per strut support for y width
Grounding Split Bolts	Copper Alloy	HBTSPLITBOLTPK10
These are sold in packs of 10. Bolts are used for supplemental grounding. One bolt is installed per section of basket tray. The installer must supply 156, AWC grounding uping		



Note: \*Mounting hardware included.

### **Technical Support - Cutting and Forming Fittings**

### **Cutting Wire Basket Tray**

- Always make field cuts with the side action angle cutting tool.
- Cuts can be made on any finish, width or depth basket tray.
- Cut as many segments required for sweep elbows (see Splice Quantity column on product pages).
- Remove any sharp edges to eliminate possible damage to cables.





(Side action cutter)

## **Cutting Tool**

Description	Weight (Lb/each)	Qty. per Box	Catalog Number
Manual offset angled cutting tool, 24" leveraged handle	6.0	1	HBTCUTTOOL



### How to Form a 90 Degree Flat Sweep Elbow

- Determine which wires must be cut for the type of fitting or redirection required. This will usually be the side and bottom wires of every other mesh section.
- Turn the tray over and cut the bottom wires.
- Cut the top side wire.
- Cut the remaining side wires.
- This creates open gaps in the side wall and bottom of the tray.
- Bend the tray to form the desired elbow radius curve by closing the gaps.
- Install splice kits and hardware where the wedge-shaped sections come together.
- Splice kits provide the mechanical connection as well as electrical grounding continuity.





See page V-12 for ordering information.

#### How to Form a Tee Fitting

- Determine the location of the horizontal "tee" fitting along the length of basket tray.
- Cut the side wires from the tray which shall be the horizontal tray section, to the same width as the perpendicular tray section.
- Do not cut the bottom wires.
- Align the perpendicular tray to the opening in the side of the horizontal tray.
- Position one angle bracket from the HBTCS corner splice kit on each side of the opening.
- Secure the angle brackets to the horizontal and perpendicular tray sections with splice kits (nut, bolt and washer) provided in the HBTCS corner splice kit.
- Support the tee fitting on all three sides of the "tee" using appropriate support method.





See page V-12 for ordering information.

### **Wire Fill and Maximum Load Chart**

Depth	Width	Area	Cat 5e (0.18" dia.) 50% Wire Fill	Cat 6 (0.23" dia.) 50% Wire Fill	Cat 6a (0.30" dia.) 50% Wire Fill	Max. Load (Lb/ft) (Supported at 6ft spacing)
2	4	8	157	96	57	45
2	6	12	236	144	85	50
2	8	16	315	193	113	52
2	12	24	472	289	170	58
2	16	32	629	385	226	70
2	18	36	708	433	255	70
2	20	40	786	482	283	73
2	22	44	865	530	311	73
2	24	48	944	578	340	75
2	26	52	1022	626	368	73
	28	56	1101	674	396	73
2	30	60	1180	722	425	70
2	32	64	1258	771	453	70
4	4	16	315	193	113	49
4	6	24	472	289	170	49
4	8	32	629	385	226	78
4	12	48	944	578	340	78
4	16	64	1258	771	453	108
4	18	72	1415	867	510	116
4	20	80	1573	963	566	116
4	22	88	1730	1060	623	116
4	24	96	1887	1156	679	116
4	28	112	2202	1349	793	108
6	8	48	944	578	340	116
6	12	72	1415	867	510	123
6	16	96	1887	1156	679	123
6	18	108	2123	1300	764	127
6	20	120	2359	1445	849	127
6	22	132	2595	1589	934	127
6	24	144	2831	1734	1019	150
8	8	64	1258	771	453	116
8	12	96	1887	1156	679	116
8	16	128	2516	1541	906	116
8	18	144	2831	1734	1019	116
8	20	160	3145	1926	1132	116

## Sizes UL Classified or cUL Classified as equipment ground conductor

2" Depth	4" Depth	6" Depth	8" Depth
2 x 6	4 x 6	6 x 8	8 x 8
2 x 8	4 x 8	6 x 12	8 x 12
2 x 12	4 x 12	6 x 16	8 x 16
2 x 16	4 x 16	6 x 18	8 x 20
2 x 18	4 x 18	6 x 20	
2 x 20	4 x 20	6 x 22	
2 x 24	4 x 24	6 x 24	

Note: Applicable to pre-galvanized and powder coat painted when spliced as recommended. Other non-UL sizes require external grounding conductor. Stainless steel is not UL listed.

#### **Instructions to Achieve Ground**

- Use Hubbell splice kits **(HBTSK)** to achieve proper grounding at all splices, joints and fittings.
- Grounding lugs and external ground wire are not required when HBTSK splice kits are utilized with steel tray. (Stainless steel tray requires external grounding conductor.)

## Wire Basket Tray: Create a Bill of Material





- A Termination Support
- Cable Guide
- Center Support
- L-Bracket
- Splice Kit

Steel cover:

Label clip:

Steel bottom insert:

Polymer bottom insert:

Vertical Down

Job Name:							
Location:							
Date:							
I. Tray Size  Depth (inches):	Fill in info	II. Finish Pre-galvanized:	Check One	III. Fittings 90° sweep elbow:	Qty	IV. Splices Splice kits:	Qty*
Width (inches):  Total linear feet:  Total feet/10 = pieces:		Painted black: Stainless steel: Electro-zinc plated: Custom color paint:		Tee fitting: Cross-X fitting: 45° sweep elbow: Reducer:	<u></u>	Corner splice: Washer support: Bar splice:	
V. Supports (6ft spacing) Ceiling:	Qty	VI. Cable management Vertical down:	Qty	VII. Attachment hardware	e Qty	VIII. Tray accessories Steel divider:	Qty

Note: \*See product selection tables for quantities of splices. These are dependent upon tray size. Additional splices required for fittings.

Radius down:

Cable guide:

Side car:

Termination support or

Electrical box bracket:

Fitting attachment:

Rack attachment:

Conduit attachment:

blank end

Trapeze clips (use in pairs):

Termination support: Field fabricated from strut:

Center:

Wall bracket:

B Trapeze Clips C Label Clip

> Ceiling Support Shelf Support

## **Technical Specifications**

#### 2.01 ACCEPTABLE MANUFACTURES

 Manufacturer: Subject to compliance with these specifications wire basket tray systems to be installed shall be Hubbell "HBT" series.

#### 2.02 WIRE TRAY SECTIONS AND COMPONENTS

- Provide wire basket of types and sizes indicated with all required splicing and mounting hardware. Construct units with T-weld edges and smooth surfaces in compliance with applicable standards and with the following additional construction features.
  - A. All straight section longitudinal wires shall be constructed with a continuous top wire safety edge. Safety edge must be T-welded on all tray sizes.
  - B. Wire basket cross-wire to be constructed with either flat shaped wire design or with round wire design as directed by engineer.
    - Flat shaped cross wire design shall provide additional surface area for cable weight support and to avoid pressure points and strain on cables.
    - Round shaped cross wire design may be used in general purpose applications where cable weight and strain are not concerns.
- Materials and Finishes: Material and finish specifications for Carbon Steel Wire and Pre-Galvanized steel wire are as follows:
  - A. Pre-galvanized Zinc: Straight section shall be made from pre-galvanized steel meeting the minimum mechanical properties of ASTM A 641. Material must be cleaned after fabrication to remove any soot, manufacturing residue/oils or metallic particles.
  - B. Powder Coat: Straight sections shall be powder coated black with an average paint thickness of 1.2mils (30microns) to 3.0mils (75microns). Hubbell powder coat product is masked at splice points to allow conductive ground design; no field paint removal is required.
  - C. Stainless Steel: Straight sections and accessories shall be made from AISI Type 304L, 316L Stainless Steel (meeting the minimum mechanical properties of ASTM A 580).
  - D. Electro-Plated Zinc Galvanized (Post Plated) Made from Carbon Steel and plated to ASTM B 633, Type III, SC-1.
  - E. Hot Dip Galvanized: Plain steel (ASTM AS10) dip after fabricated and formed. ASTM A123.

- 3. Wire basket shall be made of high strength steel wires and formed into a standard 2-inch by 4-inch wire mesh pattern with intersecting wires welded together. All mesh sections must have at least one bottom longitudinal wire along entire length of straight section.
- Wire basket sizes shall conform to the following nominal criteria:
  - A. Straight sections shall be furnished in standard 118" (3m) lengths.
  - B. Wire diameter shall be 0.195" (5mm) minimum on all mesh sections. Wire diameter shall be minimum size of 4.5mm on stainless steel.
  - C. Wire basket shall have a 2-inch usable loading depth by (4), (6), (8), (10), (12), (14), (16), (18), (20), (22), (24), (26), (28), (30), (32) inches wide.
  - D. Wire basket shall have a 4-inch usable loading depth by (4), (6), (8), (10), (12), (14), (16), (18), (20), (22), (24), (26), (28) inches wide.
  - E. Wire basket shall have a 6-inch usable loading depth by (8), (10), (12), (14), (16), (18), (20), (22), (24) inches wide.
  - F. Wire basket shall have an 8-inch usable loading depth by (8), (10), (12), (14), (16), (18), (20) inches wide.
- 5. All fittings shall be field formed from straight sections in accordance with manufacturer's instructions.
- 6. All Tray sections and splicing assemblies shall be UL/C-UL Classified as an Equipment Ground Conductor (EGC).
- 7. Wire mesh basket tray supports shall be ceiling trapeze type, center support, trapeze clips, or wall brackets as manufactured by Hubbell.
- 8. Special accessories shall be furnished as required to protect, support and install a wire basket support system.

# SECTION W









Product	Page
Products at a Glance	W-2
Features and Benefits	W-3
TrukTrak® Systems	W-4
TredTrak® Systems	W-5

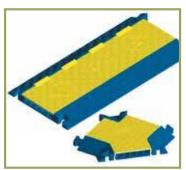
Product	Page
AccessTrak® Systems	W-6
ProTrak™ Systems	W-7
FloorTrak® Floor Cable Cover	W-8

## Products at a Glance



#### TrukTrak® Systems

- High density polyurethane construction supports heavy loads and is weather resistant
- Modular interlocking design for easy installation, breakdown and storage
- Safety surface pattern reduces slipping and skidding
- High visibility safety blue and yellow colors



#### TredTrak® Systems

- High density polyurethane construction supports heavy loads and is weather resistant
- Modular interlocking design for easy installation, breakdown and storage
- Safety surface pattern reduces slipping and skidding
- High visibility safety blue and yellow colors



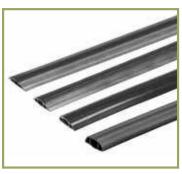
### AccessTrak® Systems

- This interlocking system provides a safe, flexible means of protecting cables and hoses in areas requiring ADA compliance
- High density polyurethane construction is weather resistant
- AccessTrak is an expandable five channel system that expands by length or width
- High visibility safety symbols on blue and gray colors



### ProTrak™ Systems

- High density polyurethane construction supports heavy loads and is weather resistant
- Modular interlocking design for easy installation, breakdown and storage
- Safety surface pattern reduces slipping and skidding
- High visibility safety yellow and black
- Anti-slip pad kits available



#### FloorTrak® Floor Cable Cover

- Flexible and rigid PVC material
- Protects and reduces trip hazards
- Available in four different sizes and five PVC colors to blend with the various decors
- Withstands temperatures of 0°F to +120°F (-18°C to +49°C)

#### **Features and Benefits**



**Hubbell TrukTrak®** non-metallic cable protectors are designed to safeguard electrical cables and cords from vehicle and pedestrian traffic. The TrukTrak interlocking system comes in two, three and five channel sizes and will protect cables up to 3.25 inches (82.6mm) in diameter. It is ideal for the industrial environment where it is necessary to support heavy trucks and fork lifts.

**TredTrak**® non-metallic cable protectors can also be interlocked to protect cables and cords of any length. The TredTrak system is a five channel modular cable protection system that will protect cable diameters up to 1.28 inches (32.5mm). It is designed to support pedestrian and light vehicle traffic in public, institutional and commercial applications. The Hubbell modular cable protection line also permits compliance with NEC® requirements (Article 525) for insulating electrical cables and cord at carnivals, amusement parks, convention centers and similar public areas.

The AccessTrak® ramping system is a modular cable protection product that enables users to be ADAAG (American Disabilities Act Accessibility Guidelines) compliant and limits the exposure of cables and hoses to people and light vehicles passing over those cables and hoses. AccessTrak is an expandable five channel system that will protect cable and hose diameters up to 1.31 inches (33.0mm). For applications requiring more than five channels, AccessTrak can be expanded by width. In addition, AccessTrak is interlocking expandable by length to protect cables and hoses of any length. The AccessTrak ramping system provides a safe, flexible means of protecting cables and hoses in areas requiring ADA compliance.

**ProTrak™** non-metallic single channel cable protectors are suitable for lightweight vehicle and pedestrian traffic. Available in both black and yellow. The drop over PROTRK115 series can accommodate up to 0.75 inches (19.0mm), while the PROTRK140 can handle up to 1.50 inches (38.1mm). The hinged covered PROTRK1225 series can accommodate up to 0.75 inches (19.0mm). A unique tread surface provides maximum traction. ProTrak™ cable protectors can be interlocked as a single color run or as a yellow and black run.

**FloorTrak**<sup>®</sup> is a flexible, non-metallic cover for cables that run over the floor when portable cords and cables cannot be concealed or routed away from traffic patterns. FloorTrak protects, organizes and reduces trip hazards. Four different sizes mean it will handle cables of up to 1.25 inches (31.8mm) in diameter. FT2, FT3 and FT4 are available in five PVC colors to blend with the various decors. FT10 is available in black and yellow colors only. The F10 Heavy Duty FloorTrak is ideal for applications such as industrial work areas, food processing plants and abusive areas where cable management is necessary.

 $\ensuremath{\mathsf{NEC}}^{\ensuremath{\$}}$  is a registered trademark of the The National Electrical Code.

## TrukTrak® Systems

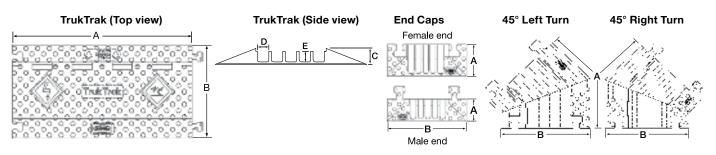
Ideal for Heavy Vehicle Traffic in Industrial, Commercial or Public Applications

- High density polyurethane construction supports heavy loads and is weather resistant
- Modular interlocking design for easy installation, breakdown and storage
- Safety surface pattern reduces slipping and skidding
- High visibility safety blue and yellow colors





TrukTrak® Systems	Α	В	С	D	E		
		Trak			Channel		
Description	Length in. (mm)	Width in. (mm)	Height in. (mm)	Width in. (mm)	Height in. (mm)	Weight lbs. (kg)	Catalog Number
5 Channel TrukTrak®, blue and yellow.	36.0" (914)	20" (508)	2.31" (58.7)	1.25" (31.8)	1.25" (31.8)	30.60 (13.9)	HBLTT5B
5 Channel TrukTrak® end caps (pair only), yellow.	7.50" (190) 5.25" (133)	20" (508) 20" (508)	2.31" (58.7) 2.31" (58.7)	1.25" (31.8) 1.25" (31.8)	1.25" (31.8) 1.25" (31.8)	8.55 (3.9) 8.55 (3.9)	HBLTT5ECB (Female end) (Male end)
5 Channel 45° right turn TrukTrak®, blue and yellow.	25.0" (635)	20" (508)	2.31" (58.7)	1.25" (31.8)	1.25" (31.8)	15.35 (7.0)	HBLTT545RB
5 Channel 45° left turn TrukTrak®, blue and yellow.	25.0" (635)	20" (508)	2.31" (58.7)	1.25" (31.8)	1.25" (31.8)	14.45 (6.6)	HBLTT545LB
3 Channel TrukTrak®, blue and yellow.	36.0" (914)	20" (508)	3.05" (77.5)	2.25" (57.2)	2.25" (57.2)	30.85 (14.0)	HBLTT3B
3 Channel TrukTrak® end caps (pair only), yellow.	8.25" (209) 6.38" (162)	20" (508) 20" (508)	3.05" (77.5) 3.05" (77.5)	2.25" (57.2) 2.25" (57.2)	2.25" (57.2) 2.25" (57.2)	10.25 (4.6) 10.25 (4.6)	HBLTT3ECB (Female end) (Male end)
2 Channel TrukTrak®, blue and yellow.	36.0" (914)	22" (559)	4.13" (104.9)	3.25" (82.6)	3.25" (82.6)	41.00 (18.6)	HBLTT2B



#### **Specifications**

Material	Polyurethane.
Operating Temperature	-40°F to +120°F (-40°C to +49°C).
Hinge Material	Reinforced fiberglass.
Safety Symbols	Per ANSI Z535.3.

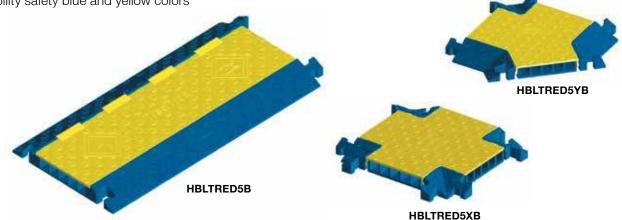
#### **Load Capacity**

No. of	Test Fixture Footprint	Tire Load I	bs. +/- 20%	Axle Load lbs. +/- 20%		
	ls Inches (mm)	70°F (21°C)	120°F (49°C)	70°F (21°C)	120°F (49°C)	
5	6.9" x 17.3" (175 X 439)	20,150	9,200	40,300	18,400	
3	6.9" x 17.3" (175 X 439)	14,210	4,653	18,420	9,306	
2	6.9" x 17.3" (175 X 439)	10,880	2,095	21,760	4,190	

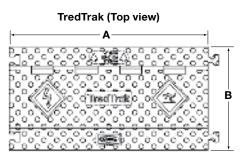
## TredTrak® Systems

Improves Pedestrian Safety by Decreasing Risk of Tripping

- High density polyurethane construction supports heavy loads and is weather resistant
- Modular interlocking design for easy installation, breakdown and storage
- Safety surface pattern reduces slipping and skidding
- High visibility safety blue and yellow colors

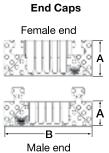


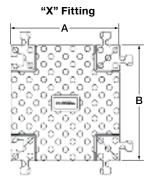
TredTrak <sup>®</sup> Systems	Α	В	С	D	E		
		Trak			Channel		
Description	Length in. (mm)	Width in. (mm)	Height in. (mm)	Width in. (mm)	Height in. (mm)	Weight lbs. (kg)	Catalog Number
5 Channel TredTrak®, blue and yellow.	36.0" (914)	17.5" (445)	1.95" (50)	1.30" (33)	1.30" (33)	21.15 (9.6)	HBLTRED5B
5 Channel TredTrak® end caps							HBLTRED5ECB
(pair only), yellow.	5.75" (146)	17.5" (445)	1.95" (50)	1.30" (33)	1.30" (33)	6.40 (2.9)	(Female end)
	5.75" (146)	17.5" (445)	1.95" (50)	1.30" (33)	1.30" (33)	6.40 (2.9)	(Male end)
5 Channel TredTrak® female end caps (2 females), yellow.	5.75" (146)	17.5" (445)	1.95" (50)	1.30" (33)	1.30" (33)	6.40 (2.9)	HBLTRED5ECFB
5 Channel "X" fitting, blue and yellow.	17.5" (445)	17.5" (445)	1.95" (50)	1.30" (33)	1.30" (33)	14.25 (6.5)	HBLTRED5XB
5 Channel "Y" fitting, blue and yellow.	17.5" (445)	17.5" (445)	1.95" (50)	1.30" (33)	1.30" (33)	13.95 (6.3)	HBLTRED5YB

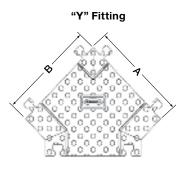


TredTrak (Side view)

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### **Specifications**

Material	Polyurethane.
Operating Temperature	-40°F to +120°F (-40°C to +49°C).
Hinge Material	Reinforced fiberglass.
Safety Symbols	Per ANSI Z535.3.

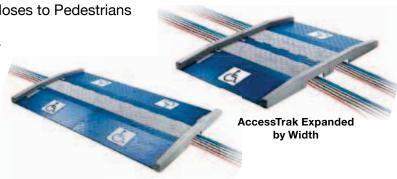
### **Load Capacity**

	Test Fixture Footprint	Tire Load II	bs. +/- 20%	Axle Load lbs. +/- 20%		
Product	Inches (mm)	70°F (21°C)	120°F (49°C)	70°F (21°C)	120°F (49°C)	
TredTrak	6.9" x 17.3" (175 X 439)	10,500	6,500	21,000	13,000	
"X" Fitting	6.9" x 17.3" (175 X 439)	2,900	2,300	5,800	5,600	
"Y" Fitting	6.9" x 17.3" (175 X 439)	2,900	2,300	5,800	5,600	

## AccessTrak® Systems

ADA Compliant Limits Exposure of Cables and Hoses to Pedestrians

- This interlocking system provides a safe, flexible means of protecting cables and hoses in areas requiring ADA compliance
- High density polyurethane construction is weather resistant
- AccessTrak is an expandable five channel system that expands by length or width
- High visibility safety symbols on blue and gray colors



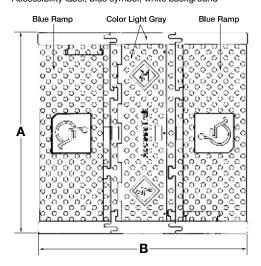
AccessTrak Expanded by Length

AccessTrak® System	Α	В	С	D	E		
		Trak			Channel		
Description	Length in. (mm)	Width in. (mm)	Height in. (mm)	Width in. (mm)	Height in. (mm)	Weight lbs. (kg)	Catalog Number
5 Channel AccessTrak® kit*, blue and gray.	41.06" (1043.0)	42.90" (1090.0)	4.00" (102.0)	1.34" (34.0)	1.31" (33.0)	73.65 (33.41)	HBLAT5KITA
5 Channel AccessTrak® trough, blue and gray.	36.00" (914.0)	13.34" (339.0)	1.94" (49.0)	1.34" (34.0)	1.31" (33.0)	22.35 (10.14)	HBLAT5A
AccessTrak® trough end rails (set), gray.	2.50" (63.0)	13.28" (337.0)	4.00" (102.0)	_	_	6.95 (3.15)	HBLAT5ERA
AccessTrak® ramps (set), blue.	36.00" (914.0)	14.50" (368.0)	1.94" (49.0)	_	_	29.90 (13.56)	HBLAT5RAMPA
AccessTrak® ramp end rails (set), gray.	2.50" (63.5)	14.75" (375.0)	4.00" (102.0)	_	_	8.05 (3.65)	HBLAT5RAMPERA

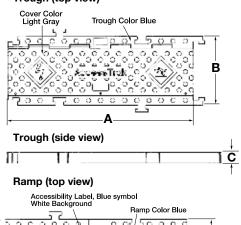
Note: \*Consists of (1) HBLAT5A; (1 set) HBLAT5ERA; (1 set) HBLAT5RAMPA; (2 sets) HBLAT5RAMPERA.

#### Assembled Kit

Accessibility label, blue symbol, white background

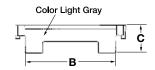


#### Trough (top view)

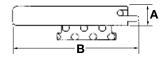


Ramp Color Blue

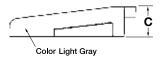
#### Trough End Rails (side view)



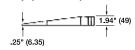
#### Ramp End Rails (top view)



#### Ramp End Rails (side view)



#### Ramp (side view)



#### **Specifications**

Material	Polyurethane.
Operating Temperature	-40°F to +120°F (-40°C to +49°C).
Hinge Material	Reinforced fiberglass.
Safety Symbols ADA Symbols	Per ANSI Z535.3-1991. Per ADAAG "Symbols of Accessibility"

#### **Load Capacity**

	Test Fixture Footprint	Measured Load Ibs. (N) +/- 20%			
Product	Inches (mm)	70°F (21°C)	120°F (49°C)		
AccessTrak	7" x 7" (178 x 178)	10,000 (44,480)	8,000 (35,584)		

## ProTrak™ Systems

For Pedestrian and Light Vehicle Traffic

 High density polyurethane construction supports heavy loads and is weather resistant

 Modular interlocking design for easy installation, breakdown and storage

 Safety surface pattern reduces slipping and skidding

High visibility safety yellow and black

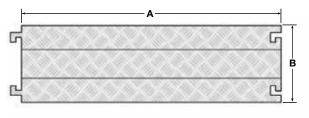
Anti-slip pad kits available



#### PROTRK1225Y

ProTrak™ Systems	Α	В	С	D	E		
		Trak			Channel		
	Length	Width	Height	Width	Height	Weight	<del></del>
Description	in. (mm)	in. (mm)	in. (mm)	<u>in. (mm)</u>	in. (mm)	lbs. (kg)	Catalog Number
1 Channel, drop over, yellow	36.0" (914)	5.25" (133)	.75" (19.0)	1.50" (38.1)	.50" (12.7)	3.00 (1.40)	PROTRK115Y
1 Channel, drop over, black	36.0" (914)	5.25" (133)	.75" (19.0)	1.50" (38.1)	.50" (12.7)	3.00 (1.40)	PROTRK115BK
1 Channel, drop over, yellow	36.0" (914)	10.75" (273)	1.50" (38.1)	4.00" (101.6)	1.00" (25.4)	8.00 (3.60)	PROTRK140Y
1 Channel, drop over, black	36.0" (914)	10.75" (273)	1.50" (38.1)	4.00" (101.6)	1.00" (25.4)	8.00 (3.60)	PROTRK140BK
1 Channel, hinged cover, yellow	36.0" (914)	10.81" (274)	1.25" (31.8)	2.25" (57.2)	.75" (19.0)	7.80 (3.54)	PROTRK1225Y
1 Channel, hinged cover, black	36.0" (914)	10.81" (274)	1.25" (31.8)	2.25" (57.2)	.75" (19.0)	7.80 (3.54)	PROTRK1225BK

### PROTRK115 & PROTRK140 Series (Top view)



### (Side view)



### PROTRK1225 Series (Top view)







ProTrak Series	Anti-Slip Pad Kits*
PROTRK115	PROTRK1ASPK
PROTRK140	PROTRK2ASPK
PROTRK1225	PROTRK3ASPK

<sup>\*</sup>One kit per section





## **Load Capacity**

	Test Fixture Footprint	Tire Load lbs. +/- 20%	Axle Load lbs. +/- 20%
Product	Inches (mm)	70°F (21°C)	70°F (21°C)
PROTRK115	6.9" x 17.3" (175 X 439)	10,500	21,000
PROTRK140	6.9" x 17.3" (175 X 439)	10,500	21,000
PROTRK1225	6.9" x 17.3" (175 X 439)	13,000	26,000

#### FloorTrak® Floor Cable Cover

For Pedestrian Traffic in Office and Public Areas

• Flexible and rigid PVC material

• Protects and reduces trip hazards

 Available in four different sizes and five PVC colors to blend with the various decors

 Withstands temperatures of 0°F to +120°F (-18°C to +49°C)



#### FloorTrak® 2\*

Color	Length Feet (meters)	Catalog Number
Black	10.0' (3.05)	FT2BK10
Brown	10.0' (3.05)	FT2BR10
Beige	10.0' (3.05)	FT2BG10
Gray	10.0' (3.05)	FT2GY10
Yellow	10.0' (3.05)	FT2Y10



## FloorTrak® 4

Length	Catalog
Feet (meters)	Number
5.0' (1.52)	FT4BK5
25.0' (7.62)	FT4BK25
25.0' (7.62)	FT4GY25
5.0' (1.52)	FT4Y5
25.0' (7.62)	FT4Y25
	Feet (meters) 5.0' (1.52) 25.0' (7.62) 25.0' (7.62) 5.0' (1.52)



#### FloorTrak® 3\*

	Length	Catalog
Color	Feet (meters)	Number
Black	5.0' (1.52)	FT3BK5
Black	25.0' (7.62)	FT3BK25
Brown	5.0' (1.52)	FT3BR5
Brown	25.0' (7.62)	FT3BR25
Beige	5.0' (1.52)	FT3BG5
Beige	25.0' (7.62)	FT3BG25
Gray	5.0' (1.52)	FT3GY5
Gray	25.0' (7.62)	FT3GY25
Yellow	5.0' (1.52)	FT3Y5
Yellow	25.0' (7.62)	FT3Y25



## FloorTrak® 10 (Heavy Duty)

Color	Length Feet (meters)	Catalog Number
Black	3.0' (.914)	FT10BK3
Black	5.0' (1.52)	FT10BK5
Yellow	3.0' (.914)	FT10Y3
Yellow	5.0' (1.52)	FT10Y5



## **Accessories**

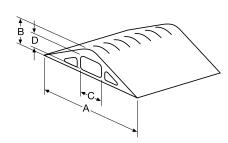
Description	Catalog Number
1" Wide, 75' Roll Double-Sided Adhesive Tape.	FTT1
2" Wide, 75' Roll Double-Sided Adhesive Tape.	FTT2



### Note: \*ADA Compliant Section 4.5.2.

#### **Dimensions**

FloorTrak <sup>®</sup>	FT2	FT3	FT4	FT10 (Heavy Duty)
	in. (mm)	in. (mm)	in. (mm)	in. (mm)
Width (A)	2.75" (69.9)	3.00" (76.2)	3.25" (82.6)	5.6" (142.24)
Height (B)	.53" (13.5)	.75" (19.1)	1.10" (27.9)	1.7" (43.18)
Center Hole (CxD)	.60" x .31"	.75" x .50"	1.21" x .75"	1.81" x 1.25"
	(15.2) x (7.9)	(19.1) x (12.7)	(30.7) x (19.1)	(45.98 x 31.75)



### **Specifications**

Material	Rigid PVC.
Operating Temperature	0°F to +120°F (-18°C to +49°C).

# SECTION X

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## Products at a Glance



#### **Pulling Grips**

- The galvanized steel mesh grip provides strength for secure pulling jobs
- Endless weave allows easy installation onto cable
- Flexible or rotating eyes will mate easily with line stringing swivels for attachment to pulling lines; they have great strength for trouble free pulling jobs
- Shoulder protectors contain the cable inside the grip



#### **Support Grips**

- Solid eye assemblies provide eye reinforcement at support hardware
- Four eye styles available: single, double, universal and offset
- Identification tag shows: catalog number, diameter range, agency approval and bar code
- Available in tin coated bronze, stainless steel and non-metallic aramid fiber



#### Fiber Optic Cable Grips

- Pulling Grips are used for outside plant cable; they are easy to install and remove, reusable and have a slim profile for small build up
- OPTISOK® Grip is a revolutionary tool to pull pre-terminated fiber optic cables. They will protect the connectors and guide the bundle through the pulling environment
- Will support the cable's weight as it hangs in vertical, sloping or horizontal position



#### Strain Relief Grips

- Stainless steel mesh is corrosion resistant. Can be used inside or outside
- Multiweave grip gives cable arc-of-bend control minimizing cable damage and extending cable life
- A liquidtight fitting is available with both cable and conduit fittings; prevents liquids from running through the fitting into the enclosure



#### **Cord Connectors**

- Machined threads provide a strong positive seal; the tapered interior dome easily drives the bushing into the connector bod
- Patented GOTCHA® ring incorporates a split hinge design to prevent friction and provide strain relief
- Lubricated neoprene bushing compresses easily for a liquidtight seal and added pull-out protection

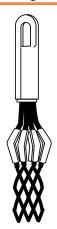


## PolyTuff® Non-Metallic Liquidtight Conduit and Fittings

- Nylon compression nut has a tapered dome to tighten ferrule onto conduit
- Tapered, machined threads fasten securely and provide additional liquidtight sealing
- Non-integral, reusable steel, ferrule is easily installed, to seal conduit
- PVC tubing handles twists, turns, bends, switchbacks and straightaways with ease
- UL listed/recognized and CSA certified

### **Quick Reference Selection Guide for Grip Applications**

### **Pulling Grips**



#### **Heavy-Duty Rotating Eye**

For underground wiring and overhead heavy-duty pulling of service lines and new construction cable. See pages X-8 and X-9.



#### **Heavy-Duty** Flexible Eye

For overhead transmission and distribution line stringing. See pages X-7, X-8, and X-10.



#### Slack Grips

For removina underground cable and pulling slack in existing cable and new installations and when end of cable is not available. See pages X-11 and X-12.



#### **Light-Duty** Flexible Eye

For light industrial pulling of electrical cable and for underground and industrial plant wiring and re-wiring. See page X-13.

#### **Support Grips**



#### Single Eye

For single hook attachment of permanent indoor/outdoor cable. Available on heavy-duty, standard duty. and service drop grips. See pages X-20, X-24, and X-26.



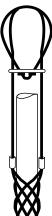
#### **Double Eye**

For double hook attachment of permanent indoor/ outdoor cable. Available on heavyduty and standard duty grips. See pages X-21 and X-25.



#### Single Offset Eye

For offset hook attachment of permanent indoor/ outdoor cable. Available on standard duty and light-duty support grips. See page X-22.



#### **Universal Eye**

Used to fasten around a structure or closed loop. Available on standard duty support and light or heavy duty service drop grips. See pages X-23 and X-27.

### **Support Grips**



#### Wide Range **Bus Drop**

Used indoors for cable support where flexible cable connects electrical equipment to bus duct. Support air hose and water hose. See page X-28.

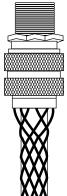


#### Strain Relief Grips



#### **Dust-Tight** Strain Relief

Indoor use only for wiring of electrical enclosures, machine tools, portable power tools, bus drop cable systems. See page X-55.



## **Deluxe Cord**

Indoor or outdoor use where subject to moisture, splash, or washdown. Examples are enclosures, crane hoist and pendant drop stations, hand tools, pumps, and processing equipment. Available in straight, 90°, or 45° configurations. See pages X-50 to X-54



#### Liquid-Tight, Flexible Metal Conduit

Wiring of machine tools, electrical enclosures, motors, and systems subjected to vibration, flexure, motion, or strain. Available in straight, 90°, or 45° configurations. See pages X-58 to X-60.

#### **Other Specialty Grips**

#### **Splicing Grips**

Used as temporary splice for cable and wire rope, or as reinforcement to protect cables and hoses. See pages X-14 and X-15.

#### **Conduit Riser Grips**

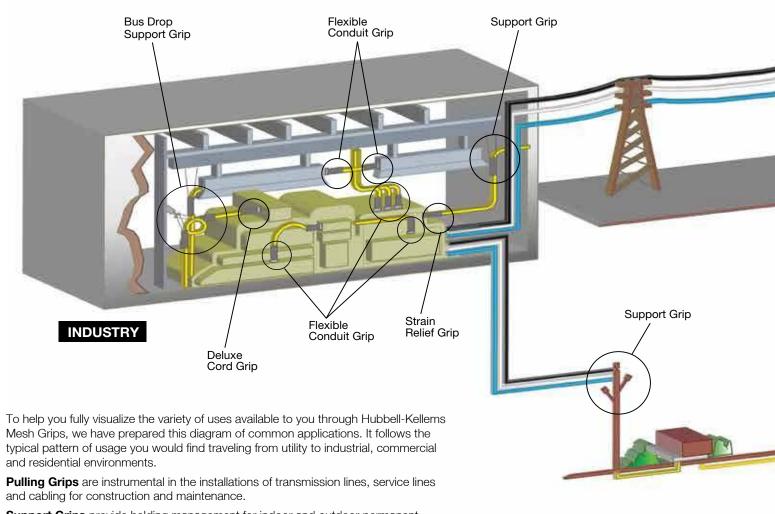
Ideal for supporting electrical wires inside rigid conduit via a supporting ring. See pages X-29 to X-31.

### **Hose Containment Grips**

Used on flexible hose lines to prevent violent whipping of hose in the event of failure at the fitting. See pages X-46 and X-47.

Specifications are subject to change without notice.

## Kellems® Wire Mesh Grips Diagram



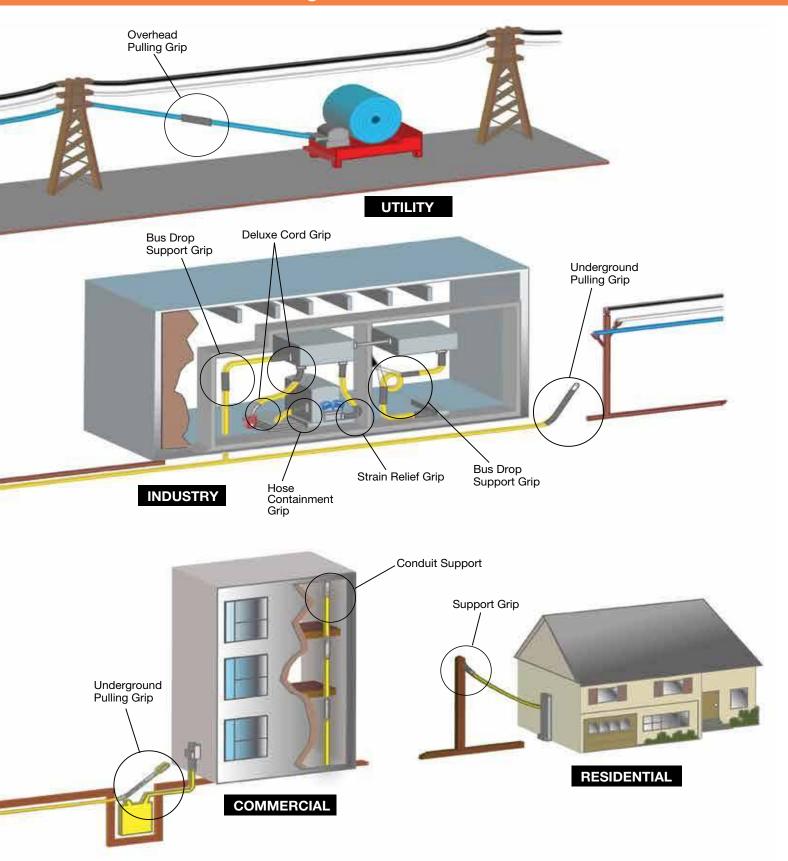
**Support Grips** provide holding management for indoor and outdoor permanent cable installations.

**Strain Relief Grips** are most often used to provide maximum reliability and minimum maintenance in areas where cords on machinery or equipment is impacted by motion or vibration or at risk of damage from cable pullout.

Beyond the electrical applications illustrated here, Hubbell-Kellems Mesh Grips can be used for wire management on radio and microwave communications towers, crane and hoist wire rope maintenance, elevator cable management and more.

Support Grip

UTILITY



#### **Features and Benefits**

## Kellems® Pulling Grips

Pulling grips are reusable tools for pulling electrical cable, bare conductor or rope. They are easy and fast to install, providing the user with a smooth, slim profile that allows for easy passage through ducts and conduit.

These grips are made of the highest quality galvanized steel strand which assures the user of a long lasting grip. There is a Kellems Pulling Grip for every pulling job.

- Made of high strength galvanized steel strand
- Mesh design offers the greatest holding power for all pulling applications
- Each grip size is color coded for fast and accurate identification and selection
- Will mate with swivels



03302016



#### Mesh Grip

- The galvanized steel mesh grip provides strength for secure pulling jobs and a slim profile with little build-up; it has flexibility to follow cable path
- The multiweave styles available add strength for big pulling jobs and provide positive gripping power



#### Eye Styles

- Heavy-duty rotating eye for underground wiring and overhead heavy-duty pulling of service lines and new construction cable
- Flexible or rotating eyes will mate easily with line stringing swivels for attachment to pulling lines; they have great strength for trouble free pulling jobs



#### Cable Protection

 Shoulder protectors contain the cable inside the grip and smooth the passage of the grip over line stringing blocks or conduit bends; they protect the leading edge of the grip from abrasion



#### Accessories

- Swivels are essential to the efficiency and safety of any high tension application
- Punch-Lok® Bands are applied over the tail of a grip to prevent the mesh from being tripped or pulled loose
- Banding tools

## DUA-PULL® Grips, Flexible Eye, Double Weave Mesh

DUA-PULL Pulling Grips are the highest strength pulling grips manufactured for overhead transmission line stringing applications. They have a dual function of working with both bare and insulated conductors and synthetic rope, not provided by any other grip. Kellems' patented two-over, two-under weave design gives exceptional strength and gripping ability by putting more steel mesh in contact with the cable or rope surfaces. **THIS IS THE ONLY PULLING GRIP RECOMMENDED FOR USE ON SYNTHETIC ROPE.** 

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

#### **Benefits**

- Made of high strength galvanized steel strand
- Recommended for pulling bare or insulated conductor, wire rope and synthetic rope
- DUA-PULL mesh design offers the greatest holding power for all pulling applications
- Each grip size is color coded for fast and accurate identification and selection
- Will mate with swivels, see page X-16



### **DUA-PULL®** Grips

Diameter Range		Approx.							
Conductor Inches (cm)	Rope* Inches (cm)	Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	A Eye Dia. Inches (cm)	Over Cable and Grip** Inches (cm)	Color Code	Catalog Number
.19"37" (.4894)	.25"65" (.63-1.65)	6,500	1,300	10" (25.40)	24" (60.96)	.220" (.56)	.200" (.51)	Black	033271037
.38"62" (.97-1.57)	.50"90" (1.27-2.29)	14,000	2,800	12" (30.48)	36" (91.44)	.375" (.95)	.280" (.71)	Dk Green	033271038
.63"87" (1.60-2.21)	.75"-1.10" (1.90-2.79)	20,000	4,000	13" (33.02)	48" (121.92)	.437" (1.11)	.360" (.91)	Red	033271039
.88"-1.12" (2.24-2.84)	1.00"-1.50" (2.54-3.81)	30,600	6,120	15" (38.10)	60" (152.40)	.500" (1.27)	.500" (1.27)	Dk Blue	033271040
1.13"-1.37" (2.87-3.48)	1.25"-1.70" (3.17-4.32)	46,800	9,360	18" (45.72)	76" (193.04)	.625" (1.59)	.625" (1.59)	Yellow	033271041
1.38"-1.90" (3.51-4.38)	1.50"-2.10" (3.81-5.33)	66,500	13,300	24" (60.96)	89" (226.06)	.750" (1.90)	.750" (1.90)	Aluminum	033271042

Note: E = Eye length. M = Mesh length at nominal diameter.

#### **Feed Tubes**

The Kellems Feed Tube is used when assembling synthetic rope into the DUA-PULL Grip. It is required on the largest two sizes of DUA-PULL Grips. Feed Tubes are available for use on all size DUA-PULL Grips.

#### **Benefits**

- Saves time, allowing fast, easy assembly
- · Can be reused if not damaged



## **DUA-PULL® Feed Tubes**

For Use with DUA-PULL Grips	Rope Diameter Inches (cm)	Feed Tube Length Inches (cm)	Catalog Number
033271037	.25"65" (.63-1.65)	28" (71.12)	091061043
033271038	.50"90" (1.27-2.29)	40" (101.60)	091061044
033271039	.75"-1.10" (1.90-2.79)	52" (132.08)	091061045
033271040	1.00"-1.50" (2.54-3.81)	67" (170.18)	091061046
033271041	1.25"-1.70" (3.17-4.32)	83" (210.82)	091061047
033271042	1.50"-2.10" (3.81-5.33)	96" (243.84)	091061048

Note: 1. Do not run grips or swivels over bullwheels while under tension.

- 2. Two bands should be firmly attached approximately 1" and 2" (2.54cm and 5.08cm) from the grip's tail. Banding is required to ensure maximum reliability and guard against accidental release, see page X-16.
- 3. Double braided rope, such as 2-in-1 type, should be back spliced for approximately 2/3 of the mesh length for best gripping results. Grip size should be selected by diameter of back splice.

<sup>\*</sup>For rope, select smallest size grip which meets required work load.

<sup>\*\*</sup>Add to cable or rope diameter.



## **Multiple Strength Style Grips**

Multiple Strength Pulling Grips are designed for pulling aluminum or copper bare conductor, ground wires, messenger strands, wire rope and insulated cables. They are made of high strength galvanized steel strand and feature a multi-weave mesh construction of single, double and triple weave for firm holding power.

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

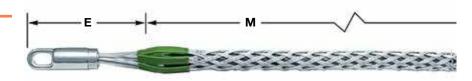
**IMPORTANT:** 

#### **Rotating Eye Feature**

Multiple Strength Grips are available with a forged steel rotating eye which can be attached to a swivel. The forged eye is durable, compact and streamlined and will thread through blocks and sheaves without binding. **The rotating eye is not a swivel and will not turn while under tension**; it can turn to relieve pulling torque when tension is relaxed. If constant swivel action is required, a swivel should be used. For swivel dimensions, see page X-16. For rotating eye dimensions, see page X-9.

#### **Benefits**

- Economical, high strength pulling tool
- Multi-weave construction provides greater strength and holding power
- Endless Weave Grip end lies flat on the cable and will not snag



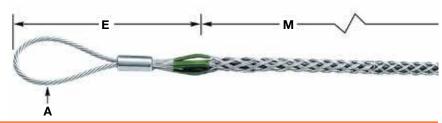
#### Multiple Strength Grip, Rotating Eye

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Rotating Eye Dia. Inches (cm)	Color Code	Catalog Number
.25"49" (.63-1.24)	6,800	1,360	5" (12.70)	26" (66.04)	7⁄8" (2.22)	Dark Green	03302016
.50"74" (1.27-1.88)	10,000	2,000	6" (15.24)	32" (81.28)	1" (2.54)	Brown	03302018
.75"99" (1.90-2.51)	14,400	2,880	6" (15.24)	41" (104.14)	1" (2.54)	Light Blue	03302020
1.00"-1.24" (2.54-3.15)	24,600	4,920	8" (20.32)	52" (132.08)	<b>1</b> %" (3.49)	Gold	03302022
1.25"-1.49" (3.17-3.78)	30,600	6,120	8" (20.32)	56" (142.24)	<b>1</b> %" (4.13)	Black	03302024
1.50"-1.74" (3.81-4.42)	30,600	6,120	9" (22.86)	60" (152.40)	1%" (4.76)	Red	03302026
1.75"-2.24" (4.44-5.69)	48,000	9,600	10" (25.40)	70" (177.80)	1%" (4.76)	Dark Blue	03302028
2.00"-2.49" (5.08-6.32)	48,000	9,600	10" (25.40)	50" (127.00)	1%" (4.76)	Yellow	03302066
2.50"-2.99" (6.35-7.59)	48,000	9,600	10" (25.40)	52" (132.08)	1%" (4.76)	Orange	03302097
3.00"-3.49" (7.62-8.86)	48,000	9,600	10" (25.40)	50" (127.00)	1%" (4.76)	Aluminum	033021030
3.50"-3.99" (8.89-10.13)	48,000	9,600	10" (25.40)	53" (134.62)	1%" (4.76)	Light Green	033021031

Note: E- Eye length M-Mesh length at nominal diameter.

#### Flexible Eye Feature

Multiple Strength Grips are also available with a flexible, patented wire rope eye. This compact eye will mate with a swivel, and pass through blocks and sheaves without binding.



#### Multiple Strength Grip, Flexible Eye

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	A Eye Dia. Inches (cm)	Color Code	Catalog Number
.25"49" (.63-1.24)	6,800	1,360	9" (22.86)	26" (66.04)	1/4" (.63)	Dark Green	03302044
.50"74" (1.27-1.88)	10,000	2,000	9" (22.86)	32" (81.28)	5/16" (.79)	Brown	03302046
.75"99" (1.90-2.51)	14,400	2,880	11" (27.94)	41" (104.14)	<b>%"</b> (.95)	Light Blue	03302048
1.00"-1.24" (2.54-3.15)	24,600	4,920	12" (30.48)	52" (132.08)	1⁄2" (1.27)	Gold	03302050
1.25"-1.49" (3.17-3.78)	30,600	6,120	12" (30.48)	56" (142.24)	1⁄2" (1.27)	Black	03302052
1.50"-1.74" (3.81-4.42)	30,600	6,120	12" (30.48)	60" (152.40)	1⁄2" (1.27)	Red	03302054
1.75"-2.24" (4.44-5.69)	48,000	9,600	18" (45.72)	70" (177.80)	%" (1.59)	Dark Blue	03302056
2.00"-2.49" (5.08-6.32)	48,000	9,600	18" (45.72)	50" (127.00)	%" (1.59)	Yellow	033021078
2.50"-2.99" (6.35-7.59)	48,000	9,600	18" (45.72)	52" (132.08)	%" (1.59)	Orange	033021079
3.00"-3.49" (7.62-8.86)	48,000	9,600	18" (45.72)	50" (127.00)	%" (1.59)	Aluminum	033021080
3.50"-3.99" (8.89-10.13)	48,000	9,600	18" (45.72)	53" (134.62)	%" (1.59)	Light Green	033021081

Note: E- Eye length. M-Mesh length at nominal diameter.

- 1. Do not run grips or swivels over bullwheels while under tension.
- 2. Two bands should be firmly attached approximately 1" and 2" (2.54cm and 5.08cm) from the grip's tail.

  Banding is required to ensure maximum reliability and guard against accidental release, see page X-16.



## K-Type Grips

Kellems<sup>®</sup> Rotating Eye, K-Type Pulling Grips are made of high strength galvanized steel strand. All Grips feature double weave mesh for greater strength and added mesh contact on the table, to handle longer or heavier pulling jobs. The forged eye mates easily with a swivel or shackle.

## **Rotating Eye Feature**

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

K-Type Grips come equipped with a forged steel rotating eye which can be attached to a swivel. The forged eye is durable, compact and streamlined, and will thread through blocks and sheaves without binding. **The rotating eye is not a swivel and will not turn while under tension**; it can turn to relieve pulling torque when the tension is relaxed. If constant swivel action is required, a swivel should be used. For swivel dimensions, see page X-16. For rotating eye dimensions, see below.

#### **Benefits**

- An economical tool for pulling cable
- Safe, rugged and dependable
- Equipped with a rotating eye for spin out of pulling torque after load release
- Easily installed and removed



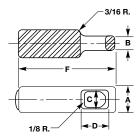
K-Type Grips

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Rotating Eye Dia. Inches (cm)	Catalog Number
Short						
.50"62" (1.27-1.57)	5,600	1,120	5" (12.70)	11" (27.94)	7 <sub>8</sub> " (2.22)	03301001
.63"74" (1.60-1.88)	6,800	1,360	5" (12.70)	11" (27.94)	7/8" (2.22)	03301002
.75"99" (1.90-2.51)	6,800	1,360	6" (15.24)	20" (50.80)	1" (2.54)	03301013
1.00"-1.24" (2.54-3.15)	12,800	2,560	7" (17.78)	20" (50.80)	1%" (3.49)	03301014
1.25"-1.49" (3.17-3.78)	12,800	2,560	7" (17.78)	21" (53.34)	1%" (3.49)	03301016
1.50"-1.99" (3.81-5.05)	16,400	3,280	7" (17.78)	25" (63.50)	1%" (3.49)	03301017
2.00"-2.49" (5.08-6.32)	27,200	5,440	8" (20.32)	26" (66.04)	1%" (4.13)	03301018
2.50"-2.99" (6.35-7.59)	33,000	6,600	10" (25.40)	28" (71.12)	1%" (4.76)	03301019
3.00"-3.49" (7.62-8.86)	41,000	8,200	10" (25.40)	30" (76.20)	1%" (4.76)	03301020
3.50"-3.99" (8.89-10.13)	48,000	9,600	10" (25.40)	32" (81.28)	1%" (4.76)	03301021
4.00"-4.49" (10.16-11.40)	48,000	9,600	10" (25.40)	33" (83.82)	1%" (4.76)	033011017
Standard						
50"62" (1.27-1.57)	5,600	1,120	5" (12.70)	16" (40.64)	7 <sub>8</sub> " (2.22)	03301011
63"74" (1.60-1.88)	6,800	1,360	5" (12.70)	16" (40.64)	7/8" (2.22)	03301012
75"99" (1.90-2.51)	9,600	1,920	6" (15.24)	32" (81.28)	1" (2.54)	03301024
1.00"-1.49" (2.54-3.78)	16,400	3,280	7" (17.78)	33" (83.82)	1%" (3.49)	03301025
1.50"-1.99" (3.81-5.05)	16,400	3,280	7" (17.78)	34" (86.36)	1%" (3.49)	03301026
2.00"-2.49" (5.08-6.32)	27,200	5,440	9" (22.86)	36" (91.44)	<b>1</b> 5⁄8" (4.13)	03301027
2.50"-2.99" (6.35-7.59)	33,000	6,600	10" (25.40)	38" (96.52)	1%" (4.76)	03301028
3.00"-3.49" (7.62-8.86)	41,000	8,200	10" (25.40)	39" (99.06)	1%" (4.76)	03301029
3.50"-3.99" (8.89-10.13)	48,000	9,600	10" (25.40)	41" (104.14)	1%" (4.76)	03301030
1.00"-4.49" (10.16-11.40)	48,000	9,600	10" (25.40)	42" (106.68)	1%" (4.76)	03301031
1.50"-4.99" (11.43-12.67)	48,000	9,600	10" (25.40)	58" (147.32)	1%" (4.76)	03301039
5.00"-5.99" (12.70-15.21)	40,000	8,000	10" (25.40)	60" (152.40)	1%" (4.76)	03301047
6.00"-6.99" (15.24-17.75)	48,000	9,600	10" (25.40)	66" (167.64)	1%" (4.76)	03301045

Note: E- Eye length. M-Mesh length at nominal diameter. See page X-18 for multiple cables in a single pulling grip.

### **Rotating Eye Dimensions**

Rotating Eye Dimensions Inches (cm)	A	В	С	D	F
7⁄8" (2.22)	7/8" (2.22)	%2" (.71)	1⁄2" (1.27)	78" (2.22)	2%" (6.67)
1" (2.54)	1" (2.54)	1/2" (1.27)	9/16" (1.43)	<sup>13</sup> / <sub>16</sub> " (2.06)	<b>3</b> ½" (8.89)
<b>1</b> %" (3.49)	<b>1</b> %" (3.49)	1/2" (1.27)	11/16" (1.75)	1" (2.54)	4½" (11.43)
<b>1</b> %" (4.13)	<b>1</b> %" (4.13)	%" (1.59)	78" (2.22)	13/16" (3.02)	<b>5</b> 5/16" (13.49)
<b>1</b> %" (4.76)	1%" (4.76)	<sup>21</sup> / <sub>32</sub> "(1.67)	1" (2.54)	<b>1</b> %" (3.49)	<b>6</b> 1⁄8" (15.56)





## **T-Type Grips**

Kellems® Flexible T-Type Pulling Grips are made of high strength galvanized steel strand. They feature double weave mesh for positive holding power in medium to heavy pulling jobs. The grip eye will easily attach to a swivel.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

#### **Application**

T-Type Pulling Grips are used for the installation of underground power cables, communication lines and service lines into factories, construction projects and for general underground electrical construction. Available in two mesh lengths, short for medium pulls and standard for general purpose pulling.

#### **Benefits**

- Will pull a single cable or cable bundles
- Patented flexible eye design provides flexibility to follow line of pull
- A dependable, reusable pulling tool
- · Easily installed and removed
- Mates easily with a swivel, see page X-16



**T-Type Grips** 

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
Short	<u> </u>		,		<u> </u>
.50"62" (1.27-1.57)	4,500	900	8" (20.32)	21" (53.34)	033041082
.63"74" (1.60-1.88)	5,600	1,120	8" (20.32)	24" (60.96)	033041083
.75"99" (1.90-2.51)	6,800	1,360	9" (22.86)	24" (60.96)	033041084
1.00"-1.49" (2.54-3.78)	9,600	1,920	9" (22.86)	24" (60.96)	033041085
1.50"-1.99" (3.81-5.05)	16,400	3,280	11" (27.94)	24" (60.96)	033041086
2.00"-2.49" (5.08-6.32)	18,500	3,700	12" (30.48)	24" (60.96)	033041087
2.50"-2.99" (6.35-7.59)	24,500	4,900	12" (30.48)	24" (60.96)	033041088
3.00"-3.49" (7.62-8.86)	24,500	4,900	14" (35.56)	24" (60.96)	033041089
3.50"-3.99" (8.89-10.13)	31,000	6,200	14" (35.56)	26" (66.04)	033041090
Standard					
75"99" (1.90-2.51)	6,800	1,360	9" (22.86)	36" (91.44)	033041091
1.00"-1.49" (2.54-3.78)	9,600	1,920	9" (22.86)	36" (91.44)	033041092
1.50"-1.99" (3.81-5.05)	16,400	3,280	11" (27.94)	36" (91.44)	033041093
2.00"-2.49" (5.08-6.32)	18,500	3,700	12" (30.48)	36" (91.44)	033041094
2.50"-2.99" (6.35-7.59)	24,500	4,900	12" (30.48)	36" (91.44)	033041095
3.00"-3.49" (7.62-8.86)	24,500	4,900	14" (35.56)	36" (91.44)	033041096
3.50"-3.99" (8.89-10.13)	31,000	6,200	14" (35.56)	40" (101.60)	033041097

Note: E- Eye length. M-Mesh length at nominal diameter. See page X-18 for multiple cables in a single pulling grip.



## **Non-Conductive Grips**

Kellems® Non-Conductive Pulling Grips, made of a high strength, non-conductive aramid fiber, are available for pulling single cable or cable bundles. Their braided double weave design adds strength and positive holding power.

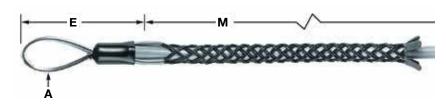
#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

#### **Benefits**

- Color coded for fast on-site selection
- Extra flexibility for easy installation
- Non-metallic mesh provides for safe pulls over "hot" areas
- Pellethane jacketed aramid fiber mesh resists abrasion
- Grips are corrosion resistant



## Non-Conductive Grips, Single Eye, Double Weave, Non-Metallic

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	A Inches (cm)	Color Code	Catalog Number
.50"62" (1.27-1.57)	1,000	200	5.5" (13.97)	24" (60.96)	.44" (1.12)	Green	03628001
.63"74" (1.60-1.88)	2,000	400	5.5" (13.97)	26" (66.04)	.44" (1.12)	Yellow	03628002
.75"99" (1.90-2.51)	2,000	400	6.0" (15.24)	31" (78.74)	.63" (1.60)	Red	03628003
1.00"-1.24" (2.54-3.15)	3,000	600	6.5" (16.51)	36" (91.44)	.63" (1.60)	Blue	03628004
1.25"-1.49" (3.17-3.78)	3,000	600	6.7" (17.02)	41.5" (105.41)	.63" (1.60)	White	03628005
1.50"-1.99" (3.81-5.05)	3,000	600	8.0" (20.32)	44.0" (121.76)	.63" (1.60)	Pink	03628006

Note: E- Eye length. M-Mesh length at nominal diameter.

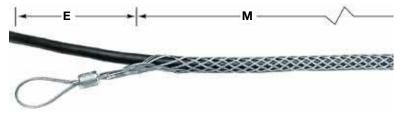
Taping is required to guard against accidental release and to insure maximum reliability. Apply vinyl plastic electrical tape starting 2" to 3" (5.08cm to 7.62cm) from the tail of the grip onto 2" to 3" (5.08cm to 7.62cm) of cable.

#### Slack Pulling Grips

Slack Pulling Grips are offered in three styles made of galvanized steel. The closed type is used when the cable end is accessible. When not accessible, there are split lace and split rod closing styles. All grips feature a single offset eye for easy attachment to a pulling line.

#### **Benefits**

- · Easy attachment to pulling lines
- Galvanized steel for strength



#### Slack Grip-Closed Mesh, Offset Eye, Double Weave, Galvanized Steel

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
Standard					
.75"99" (1.90-2.51)	2,600	520	7" (17.78)	12" (30.48)	03308003
1.00"-1.24" (2.54-3.15)	4,000	800	8" (20.32)	15" (38.10)	03308004
1.25"-1.49" (3.17-3.78)	5,400	1,080	8" (20.32)	16" (40.64)	03308005
1.50"-1.74" (3.81-4.42)	6,600	1,320	8" (20.32)	20" (50.80)	03308006
1.75"-1.99" (4.44-5.05)	10,000	2,000	10" (25.40)	18" (45.72)	03308007
2.00"-2.49" (5.08-6.32)	11,000	2,200	10" (25.40)	19" (48.26)	03308008
2.50"-2.99" (6.35-7.59)	11,000	2,200	10" (25.40)	20" (50.80)	03308009
3.00"-3.49" (7.62-8.86)	14,500	2,900	12" (30.48)	21" (53.34)	03308010
3.50"-3.99" (8.89-10.13)	14,500	2,900	12" (30.48)	22" (55.88)	03308011

Note: E- Eye length. M-Mesh length at nominal diameter. See page X-18 for multiple cables in a single pulling grip.



## **Slack Pulling Grips**

Slack Pulling Grips are offered in three styles made of galvanized steel. The closed type is used when the cable end is accessible. When not accessible, there are split lace and split rod closing styles. All grips feature a single offset eye for easy attachment to a pulling line.

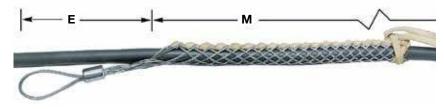
#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

#### **Benefits**

- Easy attachment to pulling lines
- Reusable rawhide lace for lace closure
- · Galvanized steel for strength

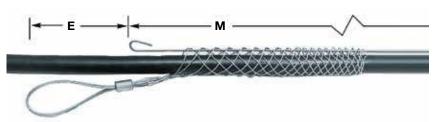


#### Slack Grip-Split Mesh, Rawhide Lace Closing, Offset Eye, Double Weave, Galvanized Steel

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
Standard					
.75"99" (1.90-2.51)	2,500	500	7" (17.78)	12" (30.48)	03309003
1.00"-1.24" (2.54-3.15)	3,500	700	8" (20.32)	15" (38.10)	03309004
1.25"-1.49" (3.17-3.78)	4,000	800	8" (20.32)	16" (40.64)	03309005
1.50"-1.74" (3.81-4.42)	4,000	800	9" (22.86)	17" (43.18)	03309006
1.75"-1.99" (4.44-5.05)	4,000	800	10" (25.40)	18" (45.72)	03309007
2.00"-2.49" (5.08-6.32)	4,000	800	10" (25.40)	19" (48.26)	03309008
2.50"-2.99" (6.35-7.59)	4,000	800	10" (25.40)	20" (50.80)	03309009
Long					
1.50"-1.99" (3.81-5.05)	4,000	800	9" (22.86)	25" (63.50)	03309015
2.00"-2.49" (5.08-6.32)	4,000	800	10" (25.40)	26" (66.04)	03309016
2.50"-2.99" (6.35-7.59)	4,000	800	10" (25.40)	29" (73.66)	03309017
3.00"-3.49" (7.62-8.86)	4,000	800	12" (30.48)	32" (81.28)	03309018
3.50"-3.99" (8.89-10.13)	4,000	800	12" (30.48)	35" (88.90)	03309019

#### **Benefits**

- Easy attachment to pulling lines
- · Galvanized steel for strength



### Slack Grip-Split Mesh, Rod Closing, Offset Eye, Single Weave, Galvanized Steel

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.50"61" (1.27-1.55)	1,500	300	7" (17.78)	6" (15.24)	03310001
.62"74" (1.57-1.88)	1,800	360	7" (17.78)	8" (20.32)	03310002
.75"99" (1.90-2.51)	2,200	440	7" (17.78)	10" (25.40)	03310003
1.00"-1.24" (2.54-3.15)	3,400	680	8" (20.32)	12" (30.48)	03310004
1.25"-1.49" (3.17-3.78)	4,500	900	8" (20.32)	14" (35.56)	03310005
1.50"-1.74" (3.81-4.42)	5,800	1,160	9" (22.86)	15" (38.10)	03310006
1.75" -1.99" (4.44-5.05)	7,600	1,520	10" (25.40)	16" (40.64)	03310007
2.00"-2.49" (5.08-6.32)	9,000	1,800	10" (25.40)	19" (48.26)	03310008
2.50"-2.99" (6.35-7.59)	11,000	2,200	10" (25.40)	20" (50.80)	03310009
3.00"-3.49" (7.62-8.86)	12,000	2,400	12" (30.48)	21" (53.34)	03310010
3.50"-3.99" (8.89-10.13)	12,000	2,400	12" (30.48)	24" (60.96)	03310011

Note: E- Eye length. M-Mesh length at nominal diameter.

- 1. Replacement rawhide lace. Catalog number 20920002.
- 2. See page X-35 for lace and rod closing instructions.

See page X-18 for multiple cables in a single pulling grip.



## **Light Duty Grips**

Light Duty Grips are made of galvanized steel in a single weave construction. They feature a flexible eye for easy attachment to a pulling line.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

#### **Benefits**

- Perfect tools for light pulling jobs
- Installs easily on cable
- Strong galvanized steel construction



**Light Duty Grips** 

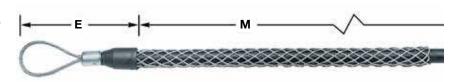
Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
Short				(- /	<b>3</b>
.50"62" (1.27-1.57)	2,800	560	5" (12.70)	11" (27.94)	03303001
.63"74" (1.60-1.88)	2,800	560	5" (12.70)	11" (27.94)	03303002
.75"99" (1.90-2.51)	4,000	800	6" (15.24)	12" (30.48)	03303003
1.00"-1.24" (2.54-3.15)	5,300	1,060	7" (17.78)	13" (33.02)	03303004
1.25"-1.49" (3.17-3.78)	5,300	1,060	7" (17.78)	14" (35.56)	03303005
1.50"-1.74" (3.81-4.42)	6,800	1,360	8" (20.32)	15" (38.10)	03303006
1.75"-1.99" (4.44-5.05)	8,500	1,700	9" (22.86)	17" (43.18)	03303007
2.00"-2.49" (5.08-6.32)	8,500	1,700	9" (22.86)	18" (45.72)	03303008
Standard					
.50"62" (1.27-1.57)	2,800	560	5" (12.70)	16" (40.64)	03303010
.63"74" (1.60-1.88)	2,800	560	5" (12.70)	16" (40.64)	03303011
.75"99" (1.90-2.51)	4,000	800	6" (15.24)	20" (50.80)	03303012
1.00"-1.24" (2.54-3.15)	6,800	1,360	7" (17.78)	20" (50.80)	03303013
1.25"-1.49" (3.17-3.78)	6,800	1,360	7" (17.78)	21" (53.34)	03303015
1.50"-1.99" (3.81-5.05)	6,800	1,360	8" (20.32)	23" (58.42)	03303016
2.00"-2.49" (5.08-6.32)	8,500	1,700	9" (22.86)	25" (63.50)	03303017
2.50"-2.99" (6.35-7.59)	10,600	2,120	9" (22.86)	27" (68.58)	03303018
3.00"-3.49" (7.62-8.86)	14,700	2,940	10" (25.40)	30" (76.20)	03303019
3.50"-3.99" (8.89-10.13)	14,700	2,940	10" (25.40)	32" (81.28)	03303029

#### Junior Pulling Grips

Junior Pulling Grips feature a strong galvanized steel, single weave mesh. A flexible eye easily attaches to a pulling line, snake or fish tape.

#### **Benefits**

- Installs easily over building wire
- •Strong secure grip
- Reusable
- Pulls single cable or cable bundles



#### **Junior Pulling Grips**

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Model	Catalog Number
.19"24" (.4861)	400	80	3¼" (8.25)	4¼" (10.79)	J19	03305011*
.25"37" (.6394)	450	90	31/4" (8.25)	4¼" (10.79)	J25	03305001
.38"49" (.97-1.24)	900	180	<b>3</b> ¾" (9.52)	<b>7</b> " (17.78)	J37	03305002
.50"62" (1.27-1.57)	1,300	260	4¼" (10.79)	8½" (21.59)	J50	03305003
.63"74" (1.60-1.88)	1,950	390	5" (12.70)	10" (25.40)	J62	03305004
.75"99" (1.90-2.51)	2,800	560	5¾" (14.60)	10" (25.40)	J75	03305005
1.00"-1.24" (2.54-3.15)	3,900	780	<b>6</b> ½" (16.51)	11½" (29.21)	J100	03305006
Junior Grip Kit contains 6 g	033051114					

Note: E- Eye length. M-Mesh length at nominal diameter.

\*Not included in Junior Grip Kit, 033051114.

See page X-18 for multiple cables in a single pulling grip.



#### Wire Rope Grips

Wire Rope Grips are made of high strength galvanized steel strand in a construction of triple, double and single weave for superior gripping ability. They are available with or without a rotating barrel which will help eliminate twist in the old rope from being transferred to the new rope.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

#### **Benefits**

- High strength for secure pulling
- Easy installation
- Flexible to pass through sheaves and blocks

#### **Application**

Wire Rope Grips are used for changing wire rope on oil derricks, large cranes, overhead cranes and drag lines. It provides a quick, safe, inexpensive temporary splice. By installing the used wire rope in one end and the new rope in the other, the new wire rope can be pulled in as the old one is pulled out.



#### **Regular Wire Rope Grips**

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	Approx. Strength of Grip Feet (m)	Catalog Number
%6"- %" (1.43-1.59)	7,500	1,500	5.75 (1.75)	03316001
34"- 78" (1.90-2.22)	12,500	2,500	6.75 (1.90)	03316002
1"-11%" (2.54-2.86)	16,000	3,200	7.00 (2.13)	03316003
11/4"- 13/8" (3.17-3.49)	20,000	4,000	8.00 (2.44)	03316004
1%"- 1½" (3.49-3.81)	20,000	4,000	8.00 (2.44)	03316006



#### **Rotating Wire Rope Grips**

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	Approx. Strength of Grip Feet (m)	Barrel Dimensions Length. x O.D. In. (cm)	Catalog Number
7/16"- ½" (1.11-1.27)	5,000	1,000	5.33 (1.63)	3.00" (7.62) x .87" (2.21)	03317001
9/16"- 5%" (1.43-1.59)	7,500	1,500	5.83 (1.78)	4.25" (10.79) x 1.00" (2.54)	03317002
34"- 78" (1.90-2.22)	12,500	2,500	6.50 (1.98)	4.25" (10.79) x 1.00" (2.54)	03317003
1"- 1%" (2.54-2.86)	16,000	3,200	8.67 (2.64)	5.50" (13.97) x 1.37" (3.48)	03317004
11/4"- 13/8" (3.17-3.49)	20,000	4,000	9.00 (2.74)	5.50" (13.97) x 1.37" (3.48)	03317005
1½"- 1¾" (3.81-4.44)	20,000	4,000	11.00 (3.35)	5.50" (13.97) x 1.37" (3.48)	03317006

Note: 1. During installation each end of the grip should be banded and taped down securely over the rope to insure smooth passage through sheaves and to guard against accidental release. See page X-16 for end bands.

<sup>2.</sup> The rotating barrel is not a swivel and will not turn while under tension. It can turn to relieve pulling torque when tension is relaxed.



## **Cable Splicing Grips**

Splicing Grips are made of galvanized steel in double weave mesh construction. They are available in various lengths and sizes to suit most applications.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-17 and X-18.

#### **Benefits**

- Easily installed or removed
- Galvanized steel construction for strength
- Flexible to follow cable path

#### **Application**

Splicing Grips are used as a temporary splice for rope, cable or wire rope. They can also be used as cable reinforcement and can act as a shield to protect cables and hoses from abrasion.



## **Double Weave Splicing Grips**

zeasie ireare epiie					
Cable Diameter Range Inches (cm)	.37"49" (.94-1.24)	.50"61" (1.27-1.55)	.62"74" (1.57-1.88)	.75"99" (1.90-2.51)	1.00"-1.49" (2.54-3.78)
Approx. Breaking Strength Lbs.	3,500	3,500	4,400	7,500	10,000
Mesh Length Inches (cm)	Catalog Number				
18" (45.72)	013041330	01304064	01304009	_	_
24" (60.96)	_	01304011	01304013	01304010	01304015
36" (91.44)	_	_	013041234	01304054	01304055
48" (121.92)	_	_	_	01304017	01304029
72" (182.88)	_	_	_	01304037	013041333

#### **Junior Splicing Grips, Single Weave**

Junior Splicing Grips are made of galvanized steel and are designed for use in very light duty and small splicing jobs.

#### **Benefits**

- Easily installed or removed
- Galvanized steel construction for strength
- Flexible to follow cable path



#### **Junior Tube**

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	Length @ Nom Diameter Inches (cm)	Catalog Number
.18"24" (.4661)	400	80	7" (17.78)	01301008
.25"36" (.6391)	400	80	8" (20.32)	01301013

Note: 1. During installation each end of the grip should be banded and taped down securely over the rope to insure smooth passage through sheaves and to guard against accidental release. See page X-16 for end bands.

## Punch-Lok® Bands

Punch-Lok Bands are applied over the tail of a grip to prevent the mesh from being tripped or pulled loose. Also, they assure full gripping action by locking the mesh of the tail in tight contact with the cable or rope.









When the tail of a grip is the leading end, the bands are particularly important to prevent accidental release caused by tripping on obstructions. A conductor-to-conductor (double-socking) pulling operation is a good example: where two grips connect two conductors to form a temporary splice. In all cases two Punch-Lok® Bands should be double wrapped approximately one inch to two inches (2.54cm to 5.08cm) from the grip's tail. Banding is required to ensure maximum reliability and guard against accidental release. It is also common practice to tape over the banded tail area to assure smooth passage through the sheaves. The conductor should be installed in the grip up to the elbows of the aluminum shoulders in order to assure full and complete gripping action as illustrated above.



#### Punch-Lok® Bands

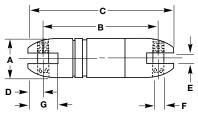
Grip Banding Range Inches (cm)	Band Width Inches (cm)	Band Inside Diame Inches (cm)	ter Model	Catalog Number
14"-11%" (.63-2.86)	3/8" (.95)	1%" (3.49)	0-311	20320050
11%"-15%" (2.86-4.13)	3/8" (.95)	2" (5.08)	0-316	20320051
1%"-21/4" (4.13-5.71)	%" (1.59)	2½" (6.35)	0-10	20320052
2¼"-3½" (5.71-8.89)	<b>%</b> " (1.59)	4" (10.16)	0-16	20320053
<b>3½"-5"</b> (8.89-12.70)	%" (1.59)	6" (15.24)	0-24	20320054

#### **Accessories**

Punch-Lok Tools	Catalog Number
P-1000 for use with %" width Banding tool.	20320048
P-38 for use with %" and %" width Banding tool for tight spaces.	20320047

### **Stainless Steel Swivels**

Swivels are essential to the efficiency and safety of any high tension application. They are particularly important where continuous pulls develop higher and higher torque levels. Torque is intensified by the pull-resistance of the cable itself and the resistance of the high tension controlling equipment regulating line sag. Ball bearing swivels release torque and prevent it from reaching dangerous levels that can damage the cable and obstruct the lines.





#### **Stainless Steel Swivels**

Maximum Safe	-		Di	mensions in	nches (cm)				
Working Load Lbs. (N)	Α	В	С	D	Е	F	G	Model	Catalog Number
2,250 (10,000)	7%" (2.22)	2½" (6.35)	<b>3</b> %" (8.57)	7⁄16" (1.11)	%" (0.95)	5/16" (0.79)	<sup>31</sup> / <sub>32</sub> " (2.46)	A-13L	20308001A
5,000 (22,240)	1¼" (3.17)	<b>3</b> <sup>1</sup> / <sub>16</sub> " (9.37)	4¾" (12.06)	13/32" (1.35)	<b>1</b> 7⁄32" (1.35)	13/32" (1.03)	<b>1</b> %2" (3.25)	BB-13L	20308002A
9,000 (40,030)	1½" (3.81)	4¼" (10.79)	5%" (14.29)	11/16" (1.75)	<b>1</b> %2" (1.51)	½" (1.27)	<b>1</b> %6" (3.97)	B-13L	20308003A
10,000 (44,480)	<b>1</b> %" (4.13)	4½" (11.43)	6" (15.24)	<sup>3</sup> ⁄ <sub>4</sub> " (1.90)	11/ <sub>16</sub> " (1.75)	%" (1.59)	1 <sup>23</sup> / <sub>32</sub> " (4.36)	C-13L	20308004A
30,000 (133,440)	<b>2</b> %" (6.03)	<b>7</b> %" (19.37)	10" (25.40)	<b>1</b> 3/16" (3.02)	11/ <sub>32</sub> " (2.62)	7%" (2.22)	2 <sup>25</sup> / <sub>32</sub> " (7.06)	D-13L	20308005A

Punch-Lok® is a registered trademark of Punch-Lok Inc.

Kellems Pulling Grips are reusable tools for pulling electrical cable, bare conductor or rope. They are easy and fast to install, providing the user with a smooth, slim profile that allows for easy passage through ducts and conduit. Kellems Pulling Grips are made of the highest quality galvanized steel strand which assures the user of a long lasting grip. There is a Kellems Pulling Grip for every pulling job.

WARNING: It is very important to read and understand all safety information before proceeding. Failure to use as directed may result in property damage, personal injury or death.

Grips are to be installed and utilized by a qualified technician in accordance with all applicable national and local safety and electrical codes. Consult a licensed project safety professional, if necessary.

Ensure that the correct grip is selected for your specific needs. Grips should only be used for their intended purpose and not for other applications.

Banding the tail end of the grip is required to prevent unintended release of the grip's hold from the cable and to achieve maximum gripping strength

The strength of a Kellems grips is based on laboratory testing and does not evaluate variable conditions such as cable type, gripping surfaces, cable movement or impact loads. Suitability for the application must be determined by the user.

Thoroughly examine the condition of the grip prior to each use. Grips that are worn, bent, corroded, or show other signs of damage, such as frayed or broken wires, should never be used and must be replaced.

Do not modify the grip in any way.

Ensure that the recommended work load of the grip is suitable for the application. Never use a grip beyond its safe working load, which is the approximate breaking strength divided by the factor of safety. The recommended factor of safety is five (5) for pulling grips and ten (10)

Pulling hardware should only be attached to the eye of the grip.

A swivel is recommended for attachment to the grip's eye in applications where torque release is necessary. Torque can build up in high tension pulling applications.

Do not run grips and swivels around sheaves or bull wheels while under tension. For synthetic rope, use Kellems Dua-Pull Grips only.

#### **IMPORTANT:**

Under normal conditions. Kellems' recommended factor of safety is five for catalog listed pulling grips. and ten for catalog listed support grips.

#### Select The Correct Pulling Grip

Each Kellems Grip is designed to work on a specific range of cable diameters.

- **Step 1** Refer to the chart below to determine the style of grip best suited for your application.
- **Step 2** Determine your cable outside diameter.
- **Step 3** Find the grip size that encompasses your cable diameter.
- Step 4 Estimate the tension to be put on the grip, establish the working load you require and compare this to the listed approximate breaking strength of the grip to insure that the grip will be strong enough. Refer to page X-34 for safety and working load factors.

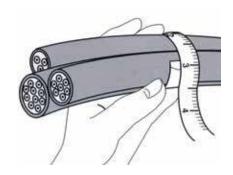
#### **Pulling Grip Selection Chart**

Grip Style	Application	Page Number
DUA-PULL®, flexible eye	Extra high strength overhead transmission line stringing for bare or insulated conductor and synthetic rope.	X-7
Multiple strength, flexible eye	Normal overhead transmission and distribution line stringing for bare or insulated conductor.	X-8
Multiple strength, rotating eye	Normal overhead transmission and distribution line stringing for bare or insulated conductor.	X-8
K-type grip, rotating eye	Underground power cables and communication lines. Service lines into factories.	X-9
T-type grip, flexible eye	Underground power cables and communication lines. Service lines into factories.	X-10
Non-conductive, flexible eye	Pull insulated distribution cable into place.	X-11
Slack pulling, closed mesh	Remove underground cable. For pulling slack in final placement of new cable when end of cable is available.	X-11
Slack pulling, split mesh,	Remove underground cable. For pulling slack in final placement of new cable rawhide lace closing when end of cable is not available.	X-12
Slack pulling, split mesh,	Remove underground cable. For pulling slack in final placement of new cable rod closing when end of cable is not available, with rod closing for quick installation.	X-12
Light duty, flexible eye	Light pulling, underground electrical construction. Industrial plant wiring and rewiring jobs.	X-13
Junior, flexible eye	Connect bundled insulated building wire to a pulling tape. Pull wire through conduit.	X-13
Regular and rotating wire rope	Restring wire rope in cranes and oil rigs.	X-14
Splicing	Temporary splice for cable or wire rope.	X-15
Pulling Grip Accessories	Tools, bands, swivels.	X-16
Fiber Optic Cable Pulling Grips	Pull fiber optic cable into place overhead, underground or through duct and conduit.	X-39 to X-43

## **Multiple Cable Selection Charts for Cables and Wires of Unequal Diameters**

## How to choose the correct grip size:

- 1. Find the Grip Circumference Range by measuring the circumference of the bundle of different diameter cables to be gripped (see illustration).
- 2. Divide the bundle circumference by 3.14 to determine the diameter.
- **3.** Choose a grip offering a range of cable diameters the same as the cable diameter.



#### For Pulling Grips\*

CAUTION: When a grip is used on multiple cables, the tail end of the grip should be banded after positioning on the cables.

#### **For Cables of Equal Diameters**

Under "Number of Cables in One Grip", find the diameter of your single cable in vertical column. Read the grip diameter range to the right.

If your diameter is the maximum of the range shown, go to the next larger size for Split Grips, stay with the same size for Closed Grips.

**Example:** Three cables, each with .89" (2.26cm) diameter, for a Closed Grip select the 1.50"-1.74" (3.81cm-4.42cm) range, for a Split Grip select the 1.75"-1.99" (4.44cm-5.05cm) range.

#### **Number of Cables in One Grip**

2	3	4	5	6 and 7	8	9	Grip Dia.Range Inches (cm)
.3038	.2531	.2227	.1924	.1722	.1519	.1418	.5061
(.7697)	(.6379)	(.5669)	(.4860)	(.4356)	(.3848)	(.3646)	(1.27-1.55)
.3844	.3136	.2731	.2429	.2226	.1923	.1821	.6274
(.97-1.12)	(.7991)	(.6979)	(.6174)	(.5666)	(.4858)	(.4653)	(1.57-1.88)
.4459	.3649	.3142	.2938	.2634	.2331	.2128	.7599
(1.12-1.50)	(.91-1.24)	(.79-1.07)	(.7497)	(.6686)	(.5879)	(.5371)	(1.90-2.51)
.5975	.4963	.4254	.3848	.3443	.3139	.2835	1.00-1.24
(1.50-1.90)	(1.24-1.60)	(1.07-1.37)	(.97-1.22)	(.86-1.09)	(.7999)	(.7189)	(2.54-3.15)
.7590	.6376	.5465	.4858	.4352	.3946	.3542	1.25-1.49
(1.90-2.29)	(1.60-1.93)	(1.37-1.65)	(1.22-1.47)	(1.09-1.32)	(.99-1.17)	(.89-1.07)	(3.17-3.78)
.90-1.07	.7689	.6577	.5867	.5260	.4654	.4249	1.50-1.74
(2.29-2.72)	(1.93-2.26)	(1.65-1.96)	(1.47-1.70)	(1.32-1.52)	(1.17-1.37)	(1.07-1.24)	(3.81-4.42)
1.07-1.22	.89-1.02	.7788	.6777	.6069	.5462	.4956	1.75-1.99
(2.72-3.10)	(2.26-2.59)	(1.96-2.24)	(1.70-1.96)	(1.52-1.75)	(1.37-1.57)	(1.24-1.42)	(4.44-5.05)
1.22-1.53	1.02-1.28	.88-1.10	.7796	.6986	.6277	.5671	2.00-2.49
(3.10-3.89)	(2.59-3.25)	(2.24-2.79)	(1.96-2.44)	(1.75-2.18)	(1.57-1.96)	(1.42-1.80)	(5.08-6.32)
1.53-1.83	1.28-1.53	1.10-1.32	.96-1.16	.86-1.03	.7793	.7185	2.50-2.99
(3.89-4.65)	(3.25-3.89)	(2.79-3.35)	(2.44-2.95)	(2.18-2.62)	(1.96-2.36)	(1.80-2.16)	(6.35-7.59)
1.83-2.14	1.53-1.79	1.32-1.54	1.16-1.35	1.03-1.20	.93-1.08	.8599	3.00-3.49
(4.65-5.44)	(3.89-4.55)	(3.35-3.91)	(2.95-3.43)	(2.62-3.05)	(2.36-2.74)	(2.16-2.51)	(7.62-8.86)
2.14-2.44	1.79-2.05	1.54-1.76	1.35-1.54	1.20-1.37	1.08-1.24	.99-1.13	3.50-3.99
(5.44-6.20)	(4.55-5.21)	(3.91-4.47)	(3.43-3.91)	(3.05-3.48)	(2.74-3.15)	(2.51-2.87)	(8.89-10.13)
2.44-2.75	2.05-2.30	1.76-1.98	1.54-1.74	1.37-1.55	1.24-1.39	1.13-1.27	4.00-4.49
(6.20-6.98)	(5.21-5.84)	(4.47-5.03)	(3.91-4.42)	(3.48-3.94)	(3.15-3.53)	(2.87-3.23)	(10.16-11.40)
2.75-3.06	2.30-2.56	1.98-2.20	1.74-1.93	1.55-1.72	1.39-1.55	1.27-1.41	4.50-4.99
(6.98-7.77)	(5.84-6.50)	(5.03-5.59)	(4.42-4.90)	(3.94-4.37)	(3.53-3.94)	(3.23-3.58)	(11.43-12.67)

Note: \*This chart is not to be used for Conduit Riser Grips. Refer to the chart for Conduit Riser multiple cable section. It is always recommended that, when multiple cables are installed in a pulling grip, the tail end be banded and tightly taped after installation on the cable bundle. See page X-16 for end bands.

#### **Features and Benefits**

## Kellems® Support Grips

They are used to hold the weight of electrical cable as it hangs in a vertical, sloping or horizontal position. Electrical cable must be supported, or its dead weight can cause excessive strain or pullout at the connections resulting in power failure. Support grips also absorb additional strain from flexure, vibration, expansion and contraction.

Kellems support grips listed in this catalog are made of high grade, non-magnetic tin-coated bronze strand. Stainless steel grips, made of alloy 302–304 series stainless are for severe service or unusual environmental conditions. For exceptional immunity to rust and corrosion with superior strength and flexibility for heavy duty support application in harsh environments available upon request; contact the factory.



02206010



#### Mesh Grip

- The positive action mesh grip is designed for light duty up to heavy duty; closed grips fit over the cable end, split grips wrap around the cable mid-span
- The endless weave provides easy installation onto cable and can be easily repositioned



#### Eye Styles

- Four eye styles available: single (shown), double, universal and offset
- Solid eye assemblies provide eye reinforcement at support hardware
- Each Kellems grip is designed to work on a specific range of cable diameters



#### Cable Identification

- Identification tag shows: catalog number, diameter range, agency approval and bar code
- The strand equalizer positions wires for equal loading throughout the entire grip length



#### Strand Equalizer

 Positions wires for equal loading throughout the entire grip length



## **Standard Duty Support Grips**

Single Eye, Single Weave, Tin-Coated Bronze and Stainless Steel.

## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

#### Single Eye, Closed Mesh

For permanent support when cable end is available to be installed through grip.

	Approx. Breaking Strength Lbs.		Working L	Working Load Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	Stainless Steel	Tin-Coate Bronze	d Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	530	1,370	53	137	7" (17.78)	10" (25.40)	02201013	02401013
.63"74" (1.60-1.88)	790	2,060	79	206	8" (20.32)	10" (25.40)	02201014	02401014
.75"99" (1.90-2.51)	1,020	2,060	102	206	8" (20.32)	13" (33.02)	02201015	02401015
1.00"-1.24" (2.54-3.15)	1,610	2,678	161	268	9" (22.86)	14" (35.56)	02201017	02401017
1.25"-1.49" (3.17-3.78)	1,610	4,490	161	449	10" (25.40)	15" (38.10)	02201018	02401018
1.50"-1.74" (3.81-4.42)	1,610	4,492	161	449	12" (30.48)	17" (43.18)	02201019	02401019
1.75"-1.99" (4.44-5.05)	2,150	5,000	215	500	14" (35.56)	19" (48.26)	02201020	02401020
2.00"-2.49" (5.08-6.32)	3,260	8,940	326	894	16" (40.64)	21" (53.34)	02201021	02401021
2.50"-2.99" (6.35-7.59)	3,260	8,947	326	895	18" (45.72)	23" (58.42)	02201022	02401022
3.00"-3.49" (7.62-8.86)	4,900	13,420	490	1,342	21" (53.34)	25" (63.50)	02201023	02401023
3.50"-3.99" (8.89-10.13)	4,900	_	490	_	24" (60.96)	27" (68.58)	02201024	_



For permanent support when cable end is not available.

	Approx. Breaking Strength Lbs.		Working Lo	Working Load Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	Stainless Steel	Tin-Coated Bronze	Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	530	1,370	53	137	7" (17.78)	10" (25.40)	02202013	02402013
.63"74" (1.60-1.88)	790	2,066	79	207	8" (20.32)	10" (25.40)	02202014	02402014
.75"99" (1.90-2.51)	1,020	2,060	102	206	8" (20.32)	13" (33.02)	02202015	02402015
1.00"-1.24" (2.54-3.15)	1,610	2,670	161	267	9" (22.86)	14" (35.56)	02202017	02402017
1.25"-1.49" (3.17-3.78)	1,610	4,490	161	449	10" (25.40)	15" (38.10)	02202018	02402018
1.50"-1.74" (3.81-4.42)	1,610	4,490	161	449	12" (30.48)	17" (43.18)	02202019	02402019
1.75"-1.99" (4.44-5.05)	2,150	4,375	215	437	14" (35.56)	19" (48.26)	02202020	02402020
2.00"-2.49" (5.08-6.32)	3,260	8,947	326	895	16" (40.64)	21" (53.34)	02202021	02402021
2.50"-2.99" (6.35-7.59)	3,260	8,940	326	894	18" (45.72)	23" (58.42)	02202022	02402022
3.00"-3.49" (7.62-8.86)	4,900	13,420	490	1,342	21" (53.34)	25" (63.50)	02202023	02402023
3.50"-3.99" (8.89-10.13)	4,900	13,420	490	1,342	24" (60.96)	27" (68.58)	02202024	02402024

#### Single Eye, Split Mesh, Rod Closing

For support when cable end is not available.

	Approx. Breaking Strength Lbs.		Working Lo	Working Load Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	Stainless Steel	Tin-Coated Bronze	Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	790	1,050	79	105	7" (17.78)	8.5" (21.59)	02203013	02403013
.63"74" (1.60-1.88)	790	2,050	79	205	8" (20.32)	8.5" (21.59)	02203014	02403014
.75"99" (1.90-2.51)	1,020	2,050	102	205	8" (20.32)	10.5" (26.67)	02203015	02403015
1.00"-1.24" (2.54-3.15)	1,610	2,650	161	265	9" (22.86)	12.5" (31.75)	02203017	02403017
1.25"-1.49" (3.17-3.78)	1,610	4,500	161	450	10" (25.40)	14.5" (36.83)	02203018	02403018
1.50"-1.74" (3.81-4.42)	1,610	4,500	161	450	12" (30.48)	15.5" (39.37)	02203019	02403019
1.75"-1.99" (4.44-5.05)	2,150	6,000	215	600	14" (35.56)	16.5" (41.91)	02203020	02403020
2.00"-2.49" (5.08-6.32)	3,260	8,950	326	895	16" (40.64)	19.5" (49.53)	02203021	02403021
2.50"-2.99" (6.35-7.59)	3,260	7,750	326	775	18" (45.72)	21.5" (54.61)	02203022	02403022
3.00"-3.49" (7.62-8.86)	5,750	8,500	575	850	21" (53.34)	23.5" (59.69)	02203023	02403023
3.50"-3.99" (8.89-10.13)	5,750	_	575	_	24" (60.96)	25.5" (64.77)	02203024	_

Note: E-Eye length. M-Mesh length at nominal diameter.







## **Standard Duty Support Grips**

Double Eye, Single Weave, Tin-Coated Bronze and Stainless Steel.

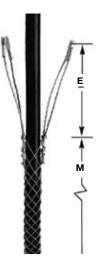
## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

## **Double Eye, Closed Mesh**

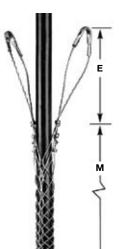
For permanent support	ort when o	cable end	is availabl	e to be in	stalled throu	ugh grip.		
		Breaking gth Lbs.	Working L	oad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	d Stainless Steel	Tin-Coated Bronze	d Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	530	1,370	53	137	4" (10.16)	10" (25.40)	02201001	02401001
.63"74" (1.60-1.88)	790	2,060	79	206	4" (10.16)	10" (25.40)	02201002	02401002
.75"99" (1.90-2.51)	1,020	2,060	102	206	4" (10.16)	13" (33.02)	02201003	02401003
1.00"-1.24" (2.54-3.15)	1,610	2,670	161	267	5" (12.70)	14" (35.56)	02201005	02401005
1.25"-1.49" (3.17-3.78)	1,610	4,490	161	449	5" (12.70)	15" (38.10)	02201006	02401006
1.50"-1.74" (3.81-4.42)	1,610	4,490	161	449	5" (12.70)	17" (43.18)	02201007	02401007
1.75"-1.99" (4.44-5.05)	2,150	5,000	215	500	6" (15.24)	19" (48.26)	02201008	02401008
2.00"-2.49" (5.08-6.32)	3,260	8,940	326	894	6" (15.24)	21" (53.34)	02201009	02401009
2.50"-2.99" (6.35-7.59)	3,260	8,940	326	894	6" (15.24)	23" (58.42)	02201010	02401010
3.00"-3.49" (7.62-8.86)	4,900	12,000	490	1,200	8" (20.32)	25" (63.50)	02201011	02401011
3.50"-3.99" (8.89-10.13)	4,900	12,000	490	1,200	8" (20.32)	27" (68.58)	02201012	02401012



## **Double Eye, Split Mesh, Lace Closing**

For permanent support when cable end is not available.

		Breaking gth Lbs.	Working L	oad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	d Stainless Steel	Tin-Coate Bronze	d Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	530	_	53	_	4" (10.16)	10" (25.40)	02202001	_
.63"74" (1.60-1.88)	790	2,066	79	207	4" (10.16)	10" (25.40)	02202002	02402002
.75"99" (1.90-2.51)	1,020	2,060	102	206	4" (10.16)	13" (33.02)	02202003	02402003
1.00"-1.24" (2.54-3.15)	1,610	2,678	161	268	5" (12.70)	14" (35.56)	02202005	02402005
1.25"-1.49" (3.17-3.78)	1,610	4,490	161	449	5" (12.70)	15" (38.10)	02202006	02402006
1.50"-1.74" (3.81-4.42)	1,610	3,750	161	375	5" (12.70)	17" (43.18)	02202007	02402007
1.75"-1.99" (4.44-5.05)	2,150	5,000	215	500	6" (15.24)	19" (48.26)	02202008	02402008
2.00"-2.49" (5.08-6.32)	3,260	8,940	326	894	6" (15.24)	21" (53.34)	02202009	02402009
2.50"-2.99" (6.35-7.59)	3,260	_	326	_	6" (15.24)	23" (58.42)	02202010	_
3.00"-3.49" (7.62-8.86)	4,900	_	490	_	8" (20.32)	25" (63.50)	02202011	_
3.50"-3.99" (8.89-10.13)	4,900	_	490	_	8" (20.32)	27" (68.58)	02202012	_



## Double Eye, Split Mesh, Rod Closing

For support when cable end is not available.

	Approx. Breaking Strength Lbs.		Working	Load Lbs.	_			
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	d Stainless Steel	Tin-Coate Bronze	ed Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	790	_	79	_	4" (10.16)	6.5"	02203001	_
.63"74" (1.60-1.88)	790	2,050	79	205	4" (10.16)	8.5" (21.59)	02203002	02403002
.75"99" (1.90-2.51)	1,020	2,050	102	205	4" (10.16)	10.5" (26.67)	02203003	02403003
1.00"-1.24" (2.54-3.15)	1,610	2,650	161	265	5" (12.70)	12.5" (31.75)	02203005	02403005
1.25"-1.49" (3.17-3.78)	1,610	3,750	161	375	5" (12.70)	14.5" (36.83)	02203006	02403006
1.50"-1.74" (3.81-4.42)	1,610	3,750	161	375	5" (12.70)	15.5" (39.37)	02203007	02403007
1.75"-1.99" (4.44-5.05)	2,150	5,000	215	215	6" (15.24)	16.5" (41.91)	02203008	02403008
2.00"-2.49" (5.08-6.32)	3,260	8,950	326	326	6" (15.24)	19.5" (49.53)	02203009	02403009
2.50"-2.99" (6.35-7.59)	3,260	8,950	326	326	6" (15.24)	21.5" (54.61)	02203010	02403010
3.00"-3.49" (7.62-8.86)	5,750	11,150	575	1,115	8" (20.32)	23.5" (59.69)	02203011	02403011
3.50"-3.99" (8.89-10.13)	5,750	_	575	_	8" (20.32)	25.5" (64.77)	02203012	_

M \

Note: E-Eye length. M-Mesh length at nominal diameter.



## **Standard Duty Support Grips**

Offset Eye, Single Weave, Tin-Coated Bronze and Stainless Steel.

## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

## Offset Eye, Closed Mesh

For permanent support when cable end is available to be installed through grip.

		k. Breaking ngth Lbs.	Working L	oad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coate Bronze	ed Stainless Steel	Tin-Coated Bronze	d Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	530	1,370	53	137	4" (10.16)	10" (25.40)	02201037	02401037
.63"74" (1.60-1.88)	750	1,950	75	195	4" (10.16)	10" (25.40)	02201038	02401038
.75"99" (1.90-2.51)	950	2,060	95	206	4" (10.16)	13" (33.02)	02201039	02401039
1.00"-1.24" (2.54-3.15)	1,500	2,678	150	268	5" (12.70)	14" (35.56)	02201041	02401041
1.25"-1.49" (3.17-3.78)	1,500	4,490	150	449	5" (12.70)	15" (38.10)	02201042	02401042
1.50"-1.74" (3.81-4.42)	1,500	3,700	150	370	5" (12.70)	17" (43.18)	02201043	02401043
1.75"-1.99" (4.44-5.05)	2,000	4,375	200	437	6" (15.24)	19" (48.26)	02201044	02401044
2.00"-2.49" (5.08-6.32)	3,100	5,500	310	550	9" (22.86)	21" (53.34)	02201045	02401045
2.50"-2.99" (6.35-7.59)	3,100	_	310	_	9" (22.86)	23" (58.42)	02201046	_
3.00"-3.49" (7.62-8.86)	3,800	_	380	_	11" (27.94)	25" (63.50)	02201047	_
3.50"-3.99" (8.89-10.13)	3,250	_	325	_	11" (27.94)	27" (68.58)	02201048	_

## Offset Eye, Split Mesh, Lace Closing

For permanent support when cable end is not available.

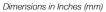
		th Lbs. (N)	Working L	oad Lbs.	_			
Cable Diameter Range Inches (cm)	Tin-Coate Bronze	ed Stainless Steel	Tin-Coate Bronze	d Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	500	_	50	-	4" (10.16)	10" (25.40)	02202037	_
.63"74" (1.60-1.88)	750	1,952	75	195	4" (10.16)	10" (25.40)	02202038	02402038
.75"99" (1.90-2.51)	950	_	95	-	4" (10.16)	13" (33.02)	02202039	_
1.00"-1.24" (2.54-3.15)	1,500	_	150	_	5" (12.70)	14" (35.56)	02202041	_
1.25"-1.49" (3.17-3.78)	1,500	4,490	150	449	5" (12.70)	15" (38.10)	02202042	02402042
1.50"-1.74" (3.81-4.42)	1,500	_	150	_	5" (12.70)	17" (43.18)	02202043	_
1.75"-1.99" (4.44-5.05)	1,800	4,375	180	437	6" (15.24)	19" (48.26)	02202044	02402044
2.00"-2.49" (5.08-6.32)	2,150	5,500	215	550	9" (22.86)	21" (53.34)	02202045	02402045
2.50"-2.99" (6.35-7.59)	2,150	5,500	215	550	9" (22.86)	23" (58.42)	02202046	02402046
3.00"-3.49" (7.62-8.86)	3,250	10,190	325	1,019	11" (27.94)	25" (63.50)	02202047	02402047
3.50"-3.99" (8.89-10.13)	3,250	_	325	-	11" (27.94)	27" (68.58)	02202048	_

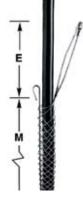
#### Offset Eye, Split Mesh, Rod Closing

For support when cable end is not available.

	Approx. Breaking Strength Lbs. (N)		Working	Working Load Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coate Bronze	ed Stainless Steel	Tin-Coate Bronze	ed Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	500	1,000	50	100	4" (10.16)	7" (17.78)	02203037	02403037
.63"74" (1.60-1.88)	750	1,950	75	195	4" (10.16)	9" (22.86)	02203038	02403038
.75"99" (1.90-2.51)	950	1,950	95	195	4" (10.16)	10" (25.40)	02203039	02403039
1.00"-1.24" (2.54-3.15)	1,500	2,500	150	250	5" (12.70)	12" (30.48)	02203041	02403041
1.25"-1.49" (3.17-3.78)	1,500	4,200	150	420	5" (12.70)	14" (35.56)	02203042	02403042
1.50"-1.74" (3.81-4.42)	1,500	4,500	150	450	5" (12.70)	15" (38.10)	02203043	02403043
1.75"-1.99" (4.44-5.05)	2,000	4,375	200	437	6" (15.24)	16" (40.64)	02203044	02403044
2.00"-2.49" (5.08-6.32)	3,100	8,350	310	835	9" (22.86)	19" (48.26)	02203045	02403045
2.50"-2.99" (6.35-7.59)	3,100	_	310	_	9" (22.86)	20" (50.80)	02203046	_
3.00"-3.49" (7.62-8.86)	4,300	8,400	430	840	11" (27.94)	21" (53.34)	02203047	02403047
3.50"-3.99" (8.89-10.13)	4,900	_	490	_	11" (27.94)	21" (53.34)	02203048	_
3.50"-3.99" (8.89-10.13)	4,900		490		11" (27.94)	21" (53.34)	02203048	_

Note: E-Eye length. M-Mesh length at nominal diameter.







## **Standard Duty Support Grips**

Universal Eye, Single Weave, Tin-Coated Bronze and Stainless Steel.

## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

## **Universal Eye, Closed Mesh**

For permanent supp	ort when	cable end	is availab	le to be in	stalled thro	ugh grip.		
	Approx. Breaking Strength Lbs. (N)		Working L	oad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coate Bronze	ed Stainless Steel	Tin-Coate Bronze	d Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	530	1,370	53	137	18" (45.72	10" (25.40)	02201051	02401051
.63"74" (1.60-1.88)	790	2,060	79	206	18" (45.72)	10" (25.40)	02201052	02401052
.75"99" (1.90-2.51)	1,020	2,066	102	207	18" (45.72)	13" (33.02)	02201053	02401053
1.00"-1.24" (2.54-3.15)	1,610	_	161	_	18" (45.72)	14" (35.56)	02201050	_
1.25"-1.49" (3.17-3.78)	1,610	4,490	161	449	18" (45.72)	15" (38.10)	02201054	02401054
1.50"-1.74" (3.81-4.42)	1,610	4,490	161	449	18" (45.72)	17" (43.18)	02201055	02401055
1.75"-1.99" (4.44-5.05)	2,150	_	215	_	18" (45.72)	19" (48.26)	02201056	_
2.00"-2.49" (5.08-6.32)	3,260	_	326	_	18" (45.72)	21" (53.34)	02201057	_
2.50"-2.99" (6.35-7.59)	3.260	_	326	_	18" (45.72)	23" (58.42)	02201058	_



## Universal Eye, Split Mesh, Lace Closing

For permanent support when cable end is not available.

		. Breaking th Lbs. (N)	Working I	Load Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coate Bronze	d Stainless Steel	Tin-Coate Bronze	ed Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	530	_	53	_	18" (45.72	10" (25.40)	02202050	_
.63"74" (1.60-1.88)	790	2,060	79	206	18" (45.72)	10" (25.40)	02202051	02402051
.75"99" (1.90-2.51)	1,020	_	102	_	18" (45.72)	13" (33.02)	02202052	_
1.00"-1.24" (2.54-3.15)	1,610	_	161	_	18" (45.72)	14" (35.56)	02202054	_
1.25"-1.49" (3.17-3.78)	1,610	_	161	_	18" (45.72)	15" (38.10)	02202055	_
1.50"-1.74" (3.81-4.42)	1,610	_	161	_	18" (45.72)	17" (43.18)	02202056	_
1.75"-1.99" (4.44-5.05)	2,150	_	215	_	18" (45.72)	19" (48.26)	02202057	_
2.00"-2.49" (5.08-6.32)	3,260	_	326	_	18" (45.72)	21" (53.34)	02202058	_
2.50"-2.99" (6.35-7.59)	3,260	_	326	_	18" (45.72)	23" (58.42)	02202059	_
3.50"-3.99" (8.89-10.13)	4,900	_	490	_	18" (45.72)	27" (68.58)	02202061	_



## Universal Eye, Split Mesh, Rod Closing

For support when cable end is not available.

	Approx. Breaking Strength Lbs. (N)		Working	Working Load Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coate Bronze	ed Stainless Steel	Tin-Coate Bronze	ed Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.50"62" (1.27-1.57)	790	_	79	_	18" (45.72	8.5" (21.59)	02203064	_
.63"74" (1.60-1.88)	790	2,050	79	205	18" (45.72)	8.5" (21.59)	02203065	02403065
.75"99" (1.90-2.51)	1,020	2,050	102	205	18" (45.72)	10.5" (26.67)	02203066	02403066
1.00"-1.24" (2.54-3.15)	1,610	2,650	161	265	18" (45.72)	12.5" (31.75)	02203068	02403068
1.25"-1.49" (3.17-3.78)	1,610	4,500	161	450	18" (45.72)	14.5" (36.83)	02203069	02403069
1.50"-1.74" (3.81-4.42)	1,610	4,500	161	450	18" (45.72)	15.5" (39.37)	02203070	02403070
1.75"-1.99" (4.44-5.05)	2,150	_	215	_	18" (45.72)	16.5" (41.91)	02203071	_
2.00"-2.49" (5.08-6.32)	3,260	_	326	_	18" (45.72)	19.5" (49.53)	02203072	_
2.50"-2.99" (6.35-7.59)	3,260	_	326	_	18" (45.72)	21.5" (54.61)	02203073	_
3.00"-3.49" (7.62-8.86)	5.750	_	575	_	18" (45.72)	23.5" (59.69)	02203074	_

Dim. to Sliding Bar Fully Ext'd.

Note: E-Eye length. M-Mesh length at nominal diameter.



## Non-Metallic Support Grips

Single Eye, Double Weave, Non-Metallic Aramid Fiber.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

02601006

Refer to pages X-33 and X-34.



## Kellems® Non-Metallic Support Grips

Kellems® Non-Metallic Support Grips, made of a high strength double weave aramid fiber, are available for supporting cable in corrosive environments.

#### Non-Metallic Support Grips, Single Eye, Closed Mesh

For permanent support	ort when cable e	nd is availal	ble to be installe	ed through grip.		
Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Color Code	Catalog Number
.50"62" (1.27-1.57)	1,000	100	6.0" (15.24)	22" (55.88)	Green	02601001
.63"74" (1.60-1.88)	2,000	200	6.0" (15.24)	24" (60.96)	Yellow	02601002
.75"99" (1.90-2.51)	2,000	200	6.0" (15.24)	28.5" (72.39)	Red	02601003
1.00"-1.24" (2.54-3.15)	3,000	300	6.0" (15.24)	31" (78.74)	Blue	02601004
1.25"-1.49" (3.17-3.78)	3,000	300	6.0" (15.24)	36.5" (92.71)	White	02601005

6.0" (15.24)

40" (101.60)

Pink

Note: Specified for corrosive applications.

1.50"-1.99" (3.81-5.05)

## **Heavy Duty Support Grips**

Single Eye, Double Weave, Tin-Coated Bronze and Stainless Steel



#### Heavy Duty, Single Eye, Closed Mesh

3,000

For heavy duty permanent support when cable end is available to be installed through grip.

300

	Approx. I Streng		Working Loa	ad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	Stainless Steel	Tin-Coated Bronze	Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.75"99" (1.90-2.51)	2,820	4,200	282	420	10" (25.40)	25" (63.50)	02206010	02406010
1.00"-1.24" (2.54-3.15)	4,280	7,300	428	730	12" (30.48)	28" (71.12)	02206011	02406011
1.25"-1.49" (3.17-3.78)	4,280	7,300	428	730	12" (30.48)	30" (76.20)	02206012	02406012
1.50"-1.99" (3.81-5.05)	4,280	11,150	428	1,115	12" (30.48)	34" (86.36)	02206013	02406013



#### Single Eye, Split Mesh, Lace Closing

For permanent support when cable end is not available to be installed through grip.

	Approx. I Strength		Working Loa	ad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	Stainless Steel	Tin-Coated Bronze	Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.75"99" (1.90-2.51)	2,820	4,200	282	420	10" (25.40)	25" (63.50)	02207010	02407010
1.00"-1.24" (2.54-3.15)	4,280	7,300	428	730	12" (30.48)	28" (71.12)	02207011	02407011
1.25"-1.49" (3.17-3.78)	4,280	7,300	428	730	12" (30.48)	30" (76.20)	02207012	02407012
1.50"-1.99" (3.81-5.05)	4,280	11,150	428	1,115	12" (30.48)	34" (86.36)	02207013	02407013

Note: E-Eye length. M-Mesh length at nominal diameter.



## **Heavy Duty Support Grips**

Double Eye, Double Weave, Tin-Coated Bronze and Stainless Steel.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

## **Double Eye, Closed Mesh**

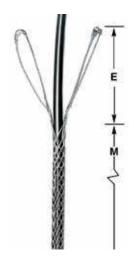
For permanent support when cable end is available to be installed through grip. Approx. Breaking Strength Lbs. (N) Working Load Lbs. Tin-Coated Stainless Tin-Coated Stainless Tin-Coated Cable Diameter Inches (cm) Inches (cm) Stainless Steel Range Inches (cm) Bronze Steel Bronze Steel Bronze .75"-.99" 10" (25.40) 25" (63.50) 02206001 02406001 2,820 4,250 282 (1.90 - 2.51)1.00"-1.24" 4,280 7,300 428 730 10" (25.40) 28" (71.12) 02206002 02406002 (2.54 - 3.15)1.25"-1.49" 4,280 7,300 428 30" (76.20) 02206003 02406003 730 10" (25.40) (3.17 - 3.78)02406004 1.50"-1.99" 4,280 428 34" (86.36) 02206004 11,100 1,110 10" (25.40) (3.81-5.05)2.00"-2.49" 8,050 20,100 805 2,010 12" (30.48) 36" (91.44) 02206005 02406005 (5.08-6.32)2.50"-2.99" 8,050 20,100 805 2,010 12" (30.48) 38" (96.52) 02206006 02406006 (6.35-7.59)10,060 2,520 02206007 02406007 3.00"-3.49" 25,200 1,006 12" (30.48) 40" (101.60) (7.62 - 8.86)3.50"-3.99" 12,070 1,207 12" (30.48) 44" (111.76) 02206008 (8.89-10.13) 4.00"-4.49" 12,070 1,207 12" (30.48) 46" (116.84) 02206009 (10.16-11.40) 4.50"-4.99" 12,070 1,207 12" (30.48) 68" (172.72) 02208009 (11.43-12.67)



#### **Double Eye, Split Mesh, Lace Closing**

For support when cable end is not available.

		. Breaking th Lbs. (N)	Working L	oad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coate Bronze	ed Stainless Steel	Tin-Coated Bronze	d Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.75"99" (1.90-2.51)	2,820	4,250	282	425	10" (25.40)	25" (63.50)	02207001	02407001
1.00"-1.24" (2.54-3.15)	4,280	7,300	428	730	10" (25.40)	28" (71.12)	02207002	02407002
1.25"-1.49" (3.17-3.78)	4,280	7,300	428	730	10" (25.40)	30" (76.20)	02207003	02407003
1.50"-1.99" (3.81-5.05)	4,280	11,150	428	1,110	10" (25.40)	34" (86.36)	02207004	02407004
2.00"-2.49" (5.08-6.32)	8,050	20,150	805	2,010	12" (30.48)	36" (91.44)	02207005	02407005
2.50"-2.99" (6.35-7.59)	8,050	20,150	805	2,010	12" (30.48)	38" (96.52)	02207006	02407006
3.00"-3.49" (7.62-8.86)	10,060	25,200	1,006	2,520	12" (30.48)	40" (101.60)	02207007	02407007
3.50"-3.99" (8.89-10.13)	12,070	30,200	1,207	3,020	12" (30.48)	44" (111.76)	02207008	02407008
4.00"-4.49" (10.16-11.40)	12,070	30,200	1,207	3,020	12" (30.48)	46" (116.84)	02207009	02407009
4.50"-4.99" (11.43-12.67)	12,070	_	1,207	_	12" (30.48)	68" (172.72)	02209009	_



Note: E-Eye length. M-Mesh length at nominal diameter.



## **Service Drop Grips**

Single Eye, Tin-Coated Bronze and Stainless Steel.

## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

## Light Duty, Single Eye, Closed Mesh, Single Weave

For permanent support when cable end is available to be installed.

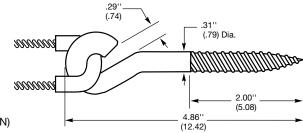
	Approx. I							
	Strengt	th Lbs.	Working Lo	oad Lbs.				
Cable Diameter Range	Tin-Coated	Stainless		Stainless	E	M	Tin-Coated	
Inches (cm)	Bronze	Steel	Bronze	Steel	Inches (cm)	Inches (cm)	Bronze	Stainless Steel
.23"31" (.5879)	290	700	29	70	3" (7.62)	3.75" (9.52)	02216001	02416001
.29"37" (.7494)	290	700	29	70	5" (12.70)	4.25" (10.79)	02216002	02416002
.35"44" (.89-1.12)	500	850	50	85	5.5" (13.97)	4.75" (12.06)	02216003	02416003
.41"50" (1.04-1.27)	500	850	50	85	5.5" (13.97)	5" (12.70)	02216004	02416004
.46"56" (1.17-1.42)	660	850	66	85	6" (15.24)	5.25" (13.33)	02216005	02416005
.52"62" (1.32-1.57)	790	1,050	79	105	7" (17.78)	6.25" (15.87)	02216006	02416006
.58"68" (1.47-1.73)	790	1,050	79	105	7" (17.78)	6¹ " (16.51)	02216007	02416007
.64"75" (1.63-1.90)	790	1,050	79	105	7" (17.78)	6.75" (17.14)	02216008	02416008
.70"81" (1.78-2.06)	790	2,050	79	205	7" (17.78)	7.25" (18.41)	02216009	02416009
.75"87" (1.90-2.21)	1,020	2,050	102	205	8" (20.32)	8" (20.32)	02216010	02416010
.81"94" (2.06-2.39)	1,020	2,050	102	205	8" (20.32)	8.25" (20.95)	02216011	02416011
.87"-1.00" (2.21-2.54)	1,020	_	102	_	8" (20.32)	8.75" (22.22)	02216012	_
.94"-1.06" (2.39-2.69)	1,020	2,050	102	205	9" (22.86)	9" (22.86)	02216013	02416013
1.00"-1.18" (2.54-3.00)	1,020	2,050	102	205	9" (22.86)	9.5" (24.13)	02216014	02416014
1.06"-1.25" (2.69-3.17)	1,020	2,050	102	205	9" (22.86)	9.5" (24.13)	02216015	02416015

## Heavy Duty, Single Eye, Closed Mesh, Multi-Weave

For permanent support when cable end is available to be installed.

	Approx. I Streng		Working Lo	oad Lbs.				
Cable Diameter Range Inches (cm)	Tin-Coated Bronze	Stainless Steel	Tin-Coated Bronze	l Stainless Steel	E Inches (cm)	M Inches (cm)	Tin-Coated Bronze	Stainless Steel
.23"31" (.5879)	500	1,400	50	140	5" (12.70)	4.5" (11.43)	02217001	02417001
.29"37" (.7494)	500	1,150	50	115	5" (12.70)	5.5" (13.97)	02217002	02417002
.35"44" (.89-1.12)	870	1,700	87	170	6" (15.24)	6.5" (16.51)	02217003	02417003
.41"50" (1.04-1.27)	870	1,700	87	170	6" (15.24)	7.5" (19.05)	02217004	02417004
.46"56" (1.17-1.42)	1,050	2,100	105	210	6" (15.24)	8" (20.32)	02217005	02417005
.52"62" (1.32-1.57)	1,050	2,100	105	210	7" (17.78)	8.5" (21.59)	02217006	02417006
.58"68" (1.47-1.73)	1,050	2,100	105	210	7" (17.78)	9.5" (24.13)	02217007	02417007
.64"75" (1.63-1.90)	1,390	4,161	139	416	7" (17.78)	9.5" (24.13)	02217008	02417008
.70"81" (1.78-2.06)	1,390	4,100	139	410	8" (20.32)	10.5" (26.67)	02217009	02417009
.75"87" (1.90-2.21)	1,390	_	139	_	8" (20.32)	10.5" (26.67)	02217010	_
.81"94" (2.06-2.39)	1,390	_	139	_	8" (20.32)	10.5" (26.67)	02217011	_
.87"-1.00" (2.21-2.54)	1,790	5,350	179	535	8" (20.32)	11.5" (29.21)	02217012	02417012
.94"-1.06" (2.39-2.69)	1,790	5,300	179	530	9" (22.86)	12.5" (31.75)	02217013	02417013
1.00"-1.18" (2.54-3.00)	1,790	5,300	179	530	9" (22.86)	13.5" (34.29)	02217014	02417014
1.06"-1.25" (2.69-3.17)	1,790	5,350	179	535	9" (22.86)	14.5" (36.83)	02217015	02417015

Note: E-Eye length. M-Mesh length at nominal diameter.



Screw Hook Catalog Number **20303001** Yield Strength 900 lbs (4003 N)





## **Service Drop Grips**

Universal Eye, Tin-Coated Bronze.

## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

## Light Duty, Universal Eye, Closed Mesh, Single Weave

For permanent support	when cable end is	available to	be installed.		
Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.23"31" (.5879)	290	29	9" (22.86)	3.75" (9.52)	02216016
.29"37" (.7494)	290	29	10" (25.40)	4.25" (10.79)	02216017
.35"44" (.89-1.12)	500	50	10" (25.40)	4.75" (12.06)	02216018
.41"50" (1.04-1.27)	500	50	11" (27.94)	5" (12.70)	02216019
.46"56" (1.17-1.42)	660	66	12" (30.48)	5.25" (13.33)	02216020
.52"62" (1.32-1.57)	790	79	13" (33.02)	6.25" (15.87)	02216021
.58"68" (1.47-1.73)	790	79	13" (33.02)	6.5" (16.51)	02216022
.64"75" (1.63-1.90)	790	79	13" (33.02)	6.75" (17.14)	02216023
.70"81" (1.78-2.06)	790	79	13" (33.02)	7.25" (18.41)	02216024
.75"87" (1.90-2.21)	1,020	102	14" (35.56)	8" (20.32)	02216025
.81"94" (2.06-2.39)	1,020	102	14" (35.56)	8.25" (20.95)	02216026
.87"-1.00" (2.21-2.54)	1,020	102	14" (35.56)	8.75" (22.22)	02216027
.94"-1.06" (2.39-2.69)	1,020	102	15" (38.10)	9" (22.86)	02216028
1.00"-1.18" (2.54-3.00)	1,020	102	15" (38.10)	9.5" (24.13)	02216029
1.06"-1.25" (2.69-3.17)	1,020	102	15" (38.10)	9.5" (24.13)	02216030



## Heavy Duty, Universal Eye, Closed Mesh, Multi-Weave

For permanent support	For permanent support when cable end is available to be installed.										
Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number						
.23"31" (.5879)	500	50	11" (27.94)	4.5" (11.43)	02217016						
.28"37" (.7494)	500	50	11" (27.94)	5.5" (13.97)	02217017						
.35"44" (.89-1.12)	870	87	12" (30.48)	6.5" (16.51)	02217018						
.41"50" (1.04-1.27)	870	87	12" (30.48)	7.5" (19.05)	02217019						
.46"56" (1.17-1.42)	1,050	105	12" (30.48)	8" (20.32)	02217020						
.52"62" (1.32-1.57)	1,050	105	13" (33.02)	8.5" (21.59)	02217021						
.58"68" (1.47-1.73)	1,050	105	13" (33.02)	9.5" (24.13)	02217022						
.64"75" (1.63-1.90)	1,390	139	13" (33.02)	9.5" (24.13)	02217023						
.70"81" (1.78-2.06)	1,390	139	14" (35.56)	10.5" (26.67)	02217024						
.75"87" (1.90-2.21)	1,390	139	14" (35.56)	10.5" (26.67)	02217025						
.81"94" (2.06-2.39)	1,390	139	14" (35.56)	10.5" (26.67)	02217026						
.87"-1.00" (2.21-2.54)	1,790	179	14" (35.56)	11.5" (29.21)	02217027						
.94"-1.06" (2.39-2.69)	1,790	179	15" (38.10)	12.5" (31.75)	02217028						
1.00"-1.18" (2.54-3.00)	1,790	179	15" (38.10)	13.5" (34.29)	02217029						
1.06"-1.25" (2.69-3.17)	1,790	179	15" (38.10)	14.5" (36.83)	02217030						



Note: E-Eye length. M-Mesh length at nominal diameter.



## **Bus Drop Support Grips**

Single Eye, Universal Eye, Galvanized Steel.



#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.

#### **Safety Spring**

Maximum Deflection Inches/Lbs (cm/N)	Approx. Breaking Strength Lbs.	Working Load Lbs.	Length* Inches (cm)	Diameter Inches (cm)	Model Lbs. (N)	Catalog Number
2¾" at 40 lbs. (6.98 at 178)	500	50	8.25" (20.95)	.75" (1.90)	40 lb. spring (178)	20302001
31/8" at 80 lbs. (7.94 at 356)	850	85	8.25" (20.95)	1" (2.54)	80 lb. spring (356)	20302002

Note: Springs can be used with single eye grips by disassembling drawbar from coil, placing through eye and replacing drawbar.

\*No load



## Single Eye, Wide Range

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.24"32" (.6181)	350	35	3" (7.62)	3.5" (8.89)	073041276**
.32"43" (.81-1.09)	450	45	4" (10.16)	4" (10.16)	073041277
.43"56" (1.09-1.42)	550	55	6" (15.24)	4.75" (12.06)	073041278
.56"73" (1.42-1.85)	1,000	100	7" (17.78)	6" (15.24)	073041279
.73"85" (1.85-2.16)	1,400	140	7" (17.78)	6.75" (17.14)	073041280
.85"-1.00" (2.16-2.54)	1,400	140	8" (20.32)	8" (20.32)	073041281
1.00"-1.25" (2.54-3.17)	1,500	150	9" (22.86)	9.5" (24.13)	073041282

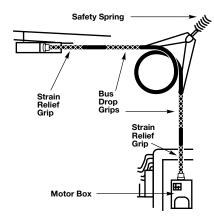


#### Universal Eye, Wide Range

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.32"43" (.81-1.09)	450	45	10" (25.40)	4" (10.16)	073041284
.43"56" (1.09-1.42)	550	55	12" (30.48)	4.75" (12.06)	073041285
.56"73" (1.42-1.85)	1,000	100	13" (33.02)	6" (15.24)	073041286
.73"85" (1.85-2.16)	1,400	140	13" (33.02)	6.75" (17.14)	073041287
.85"-1.00" (2.16-2.54)	1,400	140	14" (35.56)	8" (20.32)	073041288
1.00"-1.25" (2.54-3.17)	1,500	150	15" (38.10)	9.5" (24.13)	073041289
	Inches (cm) .32"43" (.81-1.09) .43"56" (1.09-1.42) .56"73" (1.42-1.85) .73"85" (1.85-2.16) .85"-1.00" (2.16-2.54)	Inches (cm) Strength Lbs.  .32"43" (.81-1.09) 450  .43"56" (1.09-1.42) 550  .56"73" (1.42-1.85) 1,000  .73"85" (1.85-2.16) 1,400  .85"-1.00" (2.16-2.54) 1,400	Inches (cm)     Strength Lbs.     Load Lbs.       .32"43" (.81-1.09)     450     45       .43"56" (1.09-1.42)     550     55       .56"73" (1.42-1.85)     1,000     100       .73"85" (1.85-2.16)     1,400     140       .85"-1.00" (2.16-2.54)     1,400     140	Inches (cm)         Strength Lbs.         Load Lbs.         Inches (cm)           .32"43" (.81-1.09)         450         45         10" (25.40)           .43"56" (1.09-1.42)         550         55         12" (30.48)           .56"73" (1.42-1.85)         1,000         100         13" (33.02)           .73"85" (1.85-2.16)         1,400         140         13" (33.56)           .85"-1.00" (2.16-2.54)         1,400         140         14" (35.56)	Inches (cm)         Strength Lbs.         Load Lbs.         Inches (cm)         Inches (cm)           .32"43" (.81-1.09)         450         45         10" (25.40)         4" (10.16)           .43"56" (1.09-1.42)         550         55         12" (30.48)         4.75" (12.06)           .56"73" (1.42-1.85)         1,000         100         13" (33.02)         6" (15.24)           .73"85" (1.85-2.16)         1,400         140         13" (33.02)         6.75" (17.14)           .85"-1.00" (2.16-2.54)         1,400         140         14" (35.56)         8" (20.32)

Note: E-Eye length. M-Mesh length at nominal diameter.

<sup>\*\*</sup>Item indicated is not UL listed.



#### **Bus Drop Grips and Safety Springs**

Kellems Bus Drop Grips are offered with either a single eye or universal bale attachment. The mesh is single weave galvanized steel with the patented wide range construction. They are suitable for indoor use only. Consult Technical Service for Stainless Steel Grips.

#### Application

Bus Drop Grips provide a safe, easy and economical method to support flexible cord or bus drop cable at bus duct and other industrial areas.

#### **Benefits**

- Easily installed
- Absorb tension, vibration and pull with no cable damage
- Patented mesh construction

#### Safety Spring

Springs can be used with single eye grips by disassembling drawbar from coil, placing through eye and replacing drawbar.

## **Conduit Riser Grips**

#### Single Weave, Closed Mesh

Kellems® Conduit Riser Support Grips are available in closed mesh and in split mesh with lace or rod closures, to cover all applications including single cable or multiple wire support. Refer to page X-37 for grip selection assistance for cable bundles. The standard material is tin-coated bronze strand. The grip is permanently fastened to a support ring, resulting in a one piece unit which will allow air ventilation within the conduit. The ring will fit standard electrical rigid metal conduit and schedule 40 rigid PVC conduit only. See page X-32 for ring dimensions. For permanent support when cable end is available to be installed through the grip.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.





## **IMPORTANT:**

Recommended safety factor is ten for catalog listed support grips.

#### Suitable for Standard Electrical Rigid Metal Conduit and Schedule 40 Rigid PVC Conduit Only

Cable Sizes In. (cm)	.50"62" (1.27-1.57)	.63"74" (1.60-1.88)	.75"99" (1.90-2.51)	1.00"- 1.24" (2.54-3.15)	1.25"- 1.49" (3.17-3.78)	1.50"-1.74" (3.81-4.42)	1.75"-1.99" (4.44-5.05)	2.00"- 2.49" (5.08-6.32)	2.50" -2.99" (6.35-7.59)	3.00"- 3.49" (7.62-8.86)	3.50"- 3.99" (8.89-10.13)
Model	R050	R062	R075	R100	R125	R150	R175	R200	R250	R300	R350
Length In. (cm)	8" (20.32)	9" (22.86)	11" (27.94)	12" (30.48)	12" (30.48)	14" (35.56)	15" (38.10)	17" (43.18)	18" (45.72)	20" (50.80)	21" (53.34)
Conduit Sizes Inches	Catalog Num	nber aking Strength	Lbs. (N)								
3/4	<b>02211106</b> 530 (2,357)	-	-	-	-	-	-	-	-	-	-
1	<b>02211100</b> 490 (2,179)	<b>02211101</b> 790 (3,514)	-	-	-	-	-	-	-	-	-
11/4	<b>02211001</b> 450 (2,002)	<b>02211002</b> 740 (3,292)	<b>02211003</b> 1,030 (4,581)	-	-	-	-	-	-	-	-
11/2	_	<b>02211006</b> 690 (3,069)	<b>02211007</b> 970 (4,315)	<b>02211009</b> 1,610 (7,161)	_	_	-	_	-	-	-
2	_	<b>02211107</b> 640 (2,847)	<b>02211010</b> 920 (4,092)	<b>02211012</b> 1,520 (6,761)	<b>02211013</b> 1,610 (7,161)	-	-	-	-	-	-
21/2	_	-	-	_	<b>02211017</b> 1,510 (6,716)	<b>02211018</b> 1,610 (7,161)	<b>02211019</b> 2,150 (9,563)	_	-	-	-
3	-	-	-	<b>02211022</b> 1,340 (5,960)	<b>02211023</b> 1,400 (6,227)	<b>02211024</b> 1,490 (6,627)	<b>02211025</b> 1,990 (8,851)	<b>02211026</b> 3,260 (14,500)	-	-	-
31/2	_	-	-	-	-	-	-	<b>02211033</b> 2,970 (13,211)	<b>02211034</b> 3,260 (14,500)	_	-
4	-	-	-	-	-	-	<b>02211040</b> 1,670 (7,248)	<b>02211041</b> 2,680 (11,921)	<b>02211042</b> 2,890 (12,855)	<b>02211043</b> 4,080 (18,148)	-
5	-	-	-	-	-	-	-	-	<b>02211061</b> 2,150 (9,563)	<b>02211062</b> 2,860 (12,721)	<b>02211063</b> 3,130 (13,922)
6	_	_	_	_	_	_	_	_	_	<b>02211072</b> 2,245 (9,986)	<b>02211073</b> 2,245 (9,986)

Note: See page X-37 for multiple cables in a single conduit riser grip.



## **Conduit Riser Grips**

#### **Double Weave, Split Mesh, Lace Closing**

Kellems<sup>®</sup> Conduit Riser Support Grips will support cable runs in vertical or sloping standard rigid conduit. The grip is fastened to a support ring which seats on the rim of the conduit. The entire grip is supported by the conduit itself and no other hardware is required. See page X-32 for ring dimensions. The rings will fit schedule 40 rigid PVC conduit and standard electrical rigid metal conduit only. For permanent support when cable end is not available.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.



#### **IMPORTANT:**

Recommended safety factor is ten for catalog listed support grips.

### Suitable for Standard Electrical Rigid Metal Conduit and Schedule 40 Rigid PVC Conduit Only

Cable Sizes In. (cm)	.75"99" (1.90-2.51)	1.00"- 1.24" (2.54-3.15)	1.25"- 1.49" (3.17-3.78)	1.50"-1.74" (3.81-4.42)	1.75"- 1.99" (4.44-5.05)	2.00"- 2.49" (5.08-6.32)	2.50"- 2.99" (6.35-7.59)	3.00"- 3.49" (7.62-8.86)	3.50" -3.99" (8.89-10.13)
Model	RS075	RS100	RS125	RS150	RS175	RS200	RS250	RS300	RS350
Length In. (cm)	11" (27.94)	12" (30.48)	12" (30.48)	14" (35.56)	15" (38.10)	17" (43.18)	18" (45.72)	20" (50.80)	21" (53.34)
Conduit Sizes Inches	Catalog Numbe Approx. Breakir	r ng Strength Lbs. (N	N)						
11/4	<b>02212003</b> 1,580 (7,028)	-	_	-	-	-	-	-	_
11/2	<b>02212007</b> 1,500 (6,672)	_	_	-	_	-	-	_	_
2	<b>02212010</b> 1,430 (6,361)	<b>02212012</b> 1,930 (8,585)	<b>02212013</b> 2,040 (9,074)	_	_	_	_	_	_
21/2	_	_	<b>02212017</b> 1,910 (8,496)	<b>02212018</b> 2,040 (9,074)	_	_	_	_	_
3	_	_	<b>02212023</b> 1,780 (7,917)	<b>02212024</b> 1,890 (8,407)	<b>02212025</b> 2,520 (11,209)	<b>02212026</b> 4,300 (19,126)	_	_	_
31/2	_	_	_	_	_	<b>02212033</b> 3,910 (17,392)	<b>02212034</b> 4,300 (19,126)	_	_
4	_	_	_	_	<b>02212040</b> 2,110 (9,385)	<b>02212041</b> 3,530 (15,701)	<b>02212042</b> 3,820 (16,991)	<b>02212043</b> 5,380 (23,930)	_
5	_	_	_	_	_	_	<b>02212061</b> 2,860 (12,721)	_	_
6	-	_	_	_	-	-	-	-	<b>02212073</b> 2,955 (13,144)

Note: See page X-37 for multiple cables in a single conduit riser grip.



## **Conduit Riser Grips**

#### Single Weave, Split Mesh, Rod Closing

- Easy and fast to install
- Will not damage electrical cable
- Allows cable to expand or contract
- Ideal way to hold cable in vertical conduit
- Prevents cable creep in conduit
- Helps prevent cable pullouts
- The rings will fit schedule 40 rigid PVC conduit and standard electrical rigid metal conduit only
- For support when cable end is not available

#### **IMPORTANT:**

Recommended safety factor is ten for catalog listed support grips.

## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.



### Suitable for Standard Electrical Rigid Metal Conduit and Schedule 40 Rigid PVC Conduit Only

Cable Sizes In. (cm)	.75"99" (1.90-2.51)	1.00"- 1.24" (2.54-3.15)	1.25"- 1.49" (3.17-3.78)	1.50"-1.74" (3.81-4.42)	1.75"- 1.99" (4.44-5.05)	2.00"- 2.49" (5.08-6.32)	2.50"- 2.99" (6.35-7.59)	3.00"- 3.49" (7.62-8.86)	3.50" -3.99" (8.89-10.13)
Model	RR075	RR100	RR125	RR150	RR175	RR200	RR250	RR300	RR350
Length In. (cm)	11" (27.94)	12" (30.48)	12" (30.48)	14" (35.56)	15" (38.10)	17" (43.18)	18" (45.72)	20" (50.80)	21" (53.34)
Conduit Sizes Inches	Catalog Numbe Approx. Breakir	r ng Strength Lbs. (N	N)						
11/4	<b>02213003</b> 1,020 (4,537)	_	_	_	_	_	_	_	_
1½	<b>02213007</b> 970 (4,315)	<b>02213009</b> 1,610 (7,161)	_	_	_	-	_	-	-
2	_	<b>02213012</b> 1,520 (6,761)	<b>02213013</b> 1,610 (7,161)	_	_	_	_	_	-
21/2	_	_	<b>02213017</b> 1,510 (6,716)	<b>02213018</b> 1,610 (7,161)	_	_	_	_	-
3	_	_	<b>02213023</b> 1,400 (6,227)	<b>02213024</b> 1,490 (6,627)	<b>02213025</b> 1,990 (8,851)	<b>02213026</b> 3,260 (14,500)	_	_	_
31/2	_	_	_	_	_	<b>02213033</b> 2,970 (13,211)	_	_	_
4	_	_	_	_	_	<b>02213041</b> 2,670 (11,876)	<b>02213042</b> 2,890 (12,855)	_	-

Note: See page X-37 for multiple cables in a single conduit riser grip.

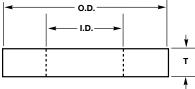
## **Conduit Ring Dimensions**

Ring dimensions are found in the chart below. The ring material is corrosion resistant. These rings will fit schedule 40 rigid PVC conduit and standard electrical rigid metal conduit only.

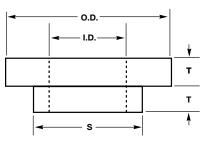
## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-33 and X-34.



Conduit Size 3/4" and 1"



Conduit Size 11/4" to 6"

Conduit Size Inches	Ring Number	O.D. Inches (cm)	I.D. Inches (cm)	S Inches (cm)	T Inches (cm)
3/4	C-3/4	.94" (2.39)	.62" (1.57)	_	.19" (.48)
1	C-1	1.17" (2.97)	.80" (2.03)	_	.19" (.48)
11/4	C-11/4	1.50" (3.81)	1.03" (2.62)	1.31" (3.33)	.16" (.41)
11/2	C-1½	1.76" (4.47)	1.23" (3.12)	1.52" (3.86)	.16" (.41)
2	C-2	2.23" (5.66)	1.55" (3.94)	1.97" (5.00)	.16" (.41)
21/2	C-2½	2.67" (6.78)	2.05" (5.21)	2.40" (6.10)	.16" (.41)
3	C-3	3.20" (8.13)	2.55" (6.48)	2.97" (7.54)	.22" (.56)
31/2	C-3½	3.80" (9.65)	3.05" (7.75)	3.47" (8.81)	.22" (.56)
4	C-4	4.30" (10.92)	3.55" (9.02)	3.94" (10.01)	.22" (.56)
41/2	C-4½	4.80" (12.19)	4.03" (10.24)	4.45" (11.30)	.22" (.56)
5	C-5	5.30" (13.46)	4.46" (11.33)	4.96" (12.60)	.22" (.56)
6	C-6	6.30" (16.00)	5.36" (13.61)	5.96" (15.14)	.25" (.63)

## Kellems® Support Grips

Kellems Support Grips are used to hold the weight of electrical cable as it hangs in a vertical, sloping or horizontal position. Electrical cable must be supported, or its dead weight can cause excessive strain or pullout at the connections resulting in power failure. Support grips also absorb additional strain from flexure, vibration, expansion and contraction. Kellems Support Grips listed in this catalog are made of high grade, non-magnetic tin-coated bronze strand. Stainless steel grips, made of alloy 302–304 SST for severe service or unusual environmental conditions, are available on request.

#### **Select the Correct Support Grip**

Each Kellems grip is designed to work on a specific range of cable diameters.

- **Step 1** Refer to the Kellems chart below to determine the grip style best suited for your application.
- Step 2 Determine your cable outside diameter.
- **Step 3** Find the grip size that encompasses your cable diameter.
- **Step 4** Whenever possible, use a closed mesh that assembles over the cable end. If the cable end is not available, use a split mesh.
- **Step 5** Where available, select an eye style that suits your needs.
- **Step 6** Select the proper material—tinned bronze or stainless steel\*.
- Step 7 Estimate the tension to be put on the grip, establish the working load you require and compare this to the listed approximate breaking strength of the grip to insure that the grip will be strong enough. Refer to page X-34 for safety and working load considerations.

## **WARNING:**

It is very important to read and understand all safety information before proceeding. Failure to use as directed may result in property damage, personal injury or death.

Grips are to be installed and utilized by a qualified technician in accordance with all applicable national and local safety and electrical codes. Consult a licensed project safety professional, if necessary.

Ensure that the correct grip is selected for your specific needs. Grips should only be used for their intended purpose and not for other applications. Banding the tail end of the grip is required to prevent unintended release of the grip's hold from the cable and to achieve maximum gripping strength. The strength of a Kellems grips is based on laboratory testing and does not evaluate variable conditions such as cable type, gripping surfaces, cable movement or impact loads. Suitability for the application must be determined by the user. Thoroughly examine the condition of the grip prior to each use. Grips that are worn, bent, corroded, or show other signs of damage, such as frayed or broken wires, should never be used and must be replaced.

Do not modify the grip in any way.

Ensure that the recommended work load of the grip is suitable for the application. Never use a grip beyond its safe working load, which is the approximate breaking strength divided by the factor of safety. The recommended factor of safety is five (5) for pulling grips and ten (10) for support grips.

Pulling hardware should only be attached to the eye of the grip.

A swivel is recommended for attachment to the grip's eye in applications where torque release is necessary. Torque can build up in high tension pulling applications.

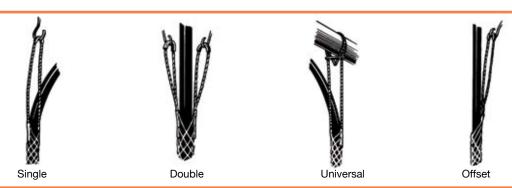
Do not run grips and swivels around sheaves or bull wheels while under tension. For synthetic rope, use Kellems Dua-Pull Grips only.

#### **Support Grip Selection Chart**

Grip Styles	Application
Closed mesh	Standard, permanent support, cable end available.
Split lace closing	Standard, permanent support, cable end unavailable.
Split rod closing	Standard, temporary support, cable end unavailable. Tape or band tail end of wire mesh grip after positioning for permanent support.
Material*	Tin-coated bronze standard or stainless steel by special request.
Standard support grips	Support vertical runs to 99 ft. loads to 600 lbs.
Heavy duty grips	Support vertical runs over 100 ft. loads over 600 lbs.
Service drop	Light duty to support service entrance cable.
Bus drop	Light duty support, indoors only, on Bus drop cable.
Conduit riser	Support cable runs in rigid (Schedule 40) conduit.
Fiber optic cable support a	rips Support fiber optic cable

Note: \*Most catalog listed support grips are made of tin-coated bronze strand. To order stainless steel support grips, change the first three catalog number digits from 022-0X-xxx to 024-0X-xxx. Consult Technical Service for details.

#### **Eye Styles**



## Safety and Working Load Factors for Wire Mesh Grips

The broad application of Kellems grips on a wide variety of objects requires that adequate safety factors be used to establish working loads. The approximate breaking strength of a Kellems grip represents an average calculation based on data established from actual direct tension testing done in our engineering laboratories.

It is impossible to catalog or guarantee a safety factor suitable for all applications as operating conditions are never the same. The tension, diameter, movement, number of objects gripped, gripping surface, and the attachments used are just some of the factors which vary with each application. These factors, together with the effects of abrasion, corrosion, prior use or abuse and any other variables of a specific application, must be considered by the user and the grip replaced as appropriate. Where the

conditions of the application are not well defined or known, or where risk of injury to persons or property is involved, a greater safety factor should be utilized.

#### **IMPORTANT:**

Under normal conditions, Kellems' recommended factor of safety is five for catalog listed pulling grips, and ten for catalog listed support grips.

Any warranty as to quality, performance or fitness for use of grips is always premised on the condition that the published breaking strengths apply only to new, unused grips, and that such products are properly stored, handled, used, maintained, and inspected by the user at a frequency appropriate for the use and condition of the grip.

#### **Examples**

Grip Style	Approx. Breaking Strength Lbs. (N)	Safety Factor	Max. Recommended Load Lbs. (N)	Catalog Number
Pulling Grips	27,200 (120,986)	5	5,440 (24,197)	03301027
Support Grips	1,610 (7,161)	10	161 (716)	02202019

The maximum recommended working load is the tension to be exerted on the grip in application with a margin of safety to take care of unforeseen and unusual circumstances.

It is the end-user's decision to determine how much of a safety factor is acceptable for the application.

The metric unit of measure (force) for breaking strength and load is newtons (N). To convert from newtons to the metric unit of weight (kilograms) the conversion factor is 9.808 newtons/kilogram.

#### **Support Grip Materials**

Material	Features	Grip Type
Tin-coated bronze wire	Corrosion resistant for normal outside areas	Support grips
	Non-magnetic	<ul> <li>Service drop grips</li> </ul>
	<ul> <li>Moderate strength</li> </ul>	Conduit riser grips
Stainless steel wire	High strength	Support grips
(302-304)	<ul> <li>Corrosion resistant</li> </ul>	<ul> <li>Hose containment grips</li> </ul>
Galvanized steel wire	Slightly magnetic	Bus drop grips
	• Not subject to continuous outside environment	
Non-metallic aramid fiber	Corrosion resistant for highly corrosive gases	Support grips

#### **Approvals**

CSA Certifications are indicated on appropriate product catalog pages.

Note: It is always recommended that the tail end of the grip be banded after the installation on the cable to prevent accidental release of the mesh. See page X-16 for end bands.

## **Split Support Grip Lace Closing Instructions**

Single Weave Grips should be laced with single strand lacing; double weave with double strand. Lacing strands should be the same material as the grip. Kellems supplies the appropriate lacing with each grip.

- 1. Start the lacing at the lead or anchoring end of the grip. Thread the lacings through the first two loops of the split and pull through until the lacings are centered at this point. Lace as you would your shoe, crossing the lacings before lacing the next two loops.
- 2. Don't pull lacing too tight. Leave a space between adjoining loops approximately equal to the width of one diamond of the mesh.
- 3. Twist the lacing strands tightly together at the tail end of the grip.
- 4. Wrap the ends of the lacings once or twice tightly around the tail of the grip, twisting the ends together securely. Excess lace can be cut off.











### **Split Support Grip Rod Closing Instructions**

The stainless steel rod is a precise built-in feature which makes threading easy and fast. The strands of the mesh pass around the rod and match up with the strands from the opposite direction. The rod does not touch the cable at any point and therefore cannot cut the cable. Rod Closing Grips are reusable. They may be removed and reused as many times as desired.

#### 1. Fast to install

- Wrap the grip around the cable and thread the rod through the pre-formed loops with a corkscrew motion, using the curved end of the rod to engage the loops.
- 2. The action required is a steady push and twist simultaneously. The fingers of the left hand are used to bring the loops together just ahead of the hook on the end of the rod.
- 3. To remove, simply pull the rod out.







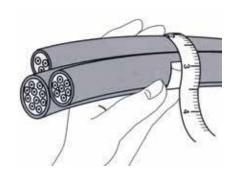


## For Support Grips Only\*

#### Multiple Cable Selection Charts for Cables and Wires of Unequal Diameters

#### How to choose the correct grip size:

- **1.** Find the Grip Circumference Range by measuring the circumference of the bundle of different diameter cables to be gripped (see illustration).
- 2. Divide the bundle circumference by 3.14 to determine the diameter.
- **3.** Choose a grip offering a range of cable diameters the same as the cable diameter.



#### **For Cables of Equal Diameters**

Under "Number of Cables in One Grip", find the diameter of your single cable in vertical column. Read the grip diameter range to the right.

If your diameter is the maximum of the range shown, go to the next larger size for Split Grips, stay with the same size for Closed Grips.

**Example:** 3 cables, each with .89" (2.26) diameter, for a Closed Grip select the 1.50"-1.74" (3.81-4.42) range, for a Split Grip select the 1.75"-1.99" (4.44-5.05) range.

#### **Number of Cables in One Grip**

2	3	4	5	6 and 7	8	9	Grip Dia. Range Inches (cm)
.3038	.2531	.2227	.1924	.1722	.1519	.1418	.5061
(.7697)	(.6379)	(.5669)	(.4861)	(.4356)	(.3848)	(.3646)	(1.27-1.55)
.3844	.3136	.2731	.2429	.2226	.1923	.1821	.6274
(.97-1.12)	(.7991)	(.6979)	(.6174)	(.5666)	(.4858)	(.4653)	(1.57-1.88)
.4459	.3649	.3142	.2938	.2634	.2331	.2128	.7599
(1.12-1.50)	(.91-1.24)	(.79-1.07)	(.7497)	(.6686)	(.5879)	(.5371)	(1.90-2.51)
.5975	.4963	.4254	.3848	.3443	.3139	.2835	1.00-1.24
(1.50-1.90)	(1.24-1.60)	(1.07-1.37)	(.97-1.22)	(.86-1.09)	(.7999)	(.7189)	(2.54-3.15)
.7590	.6376	.5465	.4858	.4352	.3946	.3542	1.25-1.49
(1.90-2.29)	(1.60-1.93)	(1.37-1.65)	(1.22-1.47)	(1.09-1.32)	(.99-1.17)	(.89-1.07)	(3.17-3.78)
.90-1.07	.7689	.6577	.5867	.5260	.4654	.4249	1.50-1.74
(2.29-2.72)	(1.93-2.26)	(1.65-1.96)	(1.47-1.70)	(1.32-1.52)	(1.17-1.37)	(1.07-1.24)	(3.81-4.42)
1.07-1.22	.89-1.02	.7788	.6777	.6069	.5462	.4956	1.75-1.99
(2.72-3.10)	(2.26-2.59)	(1.96-2.24)	(1.70-1.96)	(1.52-1.75)	(1.37-1.57)	(1.24-1.42)	(4.44-5.05)
1.22-1.53	1.02-1.28	.88-1.10	.7796	.6986	.6277	.5671	2.00-2.49
(3.10-3.89)	(2.59-3.25)	(2.24-2.79)	(1.96-2.44)	(1.75-2.18)	(1.57-1.96)	(1.42-1.80)	(5.08-6.32)
1.53-1.83	1.28-1.53	1.10-1.32	.96-1.16	.86-1.03	.7793	.7185	2.50-2.99
(3.89-4.65)	(3.25-3.89)	(2.79-3.35)	(2.44-2.95)	(2.18-2.62)	(1.96-2.36)	(1.80-2.16)	(6.35-7.59)
1.83-2.14	1.53-1.79	1.32-1.54	1.16-1.35	1.03-1.20	.93-1.08	.8599	3.00-3.49
(4.65-5.44)	(3.89-4.55)	(3.35-3.91)	(2.95-3.43)	(2.62-3.05)	(2.36-2.74)	(2.16-2.51)	(7.62-8.86)
2.14-2.44	1.79-2.05	1.54-1.76	1.35-1.54	1.20-1.37	1.08-1.24	.99-1.13	3.50-3.99
(5.44-6.20)	(4.55-5.21)	(3.91-4.47)	(3.43-3.91)	(3.05-3.48)	(2.74-3.15)	(2.51-2.87)	(8.89-10.13)
2.44-2.75	2.05-2.30	1.76-1.98	1.54-1.74	1.37-1.55	1.24-1.39	1.13-1.27	4.00-4.49
(6.20-6.98)	(5.21-5.84)	(4.47-5.03)	(3.91-4.42)	(3.48-3.94)	(3.15-3.53)	(2.87-3.23)	(10.16-11.40)
2.75-3.06	2.30-2.56	1.98-2.20	1.74-1.93	1.55-1.72	1.39-1.55	1.27-1.41	4.50-4.99
(6.98-7.77)	(5.84-6.50)	(5.03-5.59)	(4.42-4.90)	(3.94-4.37)	(3.53-3.94)	(3.23-3.58)	(11.43-12.67)

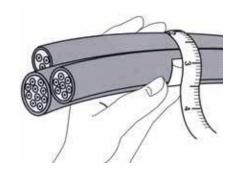
Note: "This chart is to be used for determining grip size when multiple cables are held in a single Support Grip. For Conduit Riser multiple cable selection, see page X-37. It is always recommended that, when multiple cables are installed in a Support Grip, the tail end of the grip be banded after installation on the cable bundle. See page Tech-23 for cable and wire charts.

## For Conduit Riser Grips Only\*

### Multiple Cable Selection Charts for Cables and Wires of Unequal Diameters

#### How to choose the correct grip size:

- **1.** Find the Grip Circumference Range by measuring the circumference of the bundle of different diameter cables to be gripped (see illustration).
- **2.** Divide the bundle circumference by 3.14 to determine the diameter.
- **3.** Choose a grip offering a range of cable diameters the same as the cable diameter.



#### For Cables of Equal Diameters

Under "Number of Cables in One Grip", find the diameter of your single cable in vertical column. Read the grip diameter range to the right. If your diameter is the maximum of the range shown, go to the next larger size for Split Grips, stay with the same size for Closed Grips.

**Example:** 3 cables, each with .85" (2.16) diameter, for a Closed Grip select the 1.50"-1.74" (3.81-4.42) range, for a Split Grip select the 1.75"-1.99" (4.44-5.05) range.

#### **Number of Equal Diameter Cables in One Grip**

2	3	4	5	6 and 7	8	9	Grip Dia. Range Inches (cm)
.2936	.2430	.2125	.1822	.1620	.1518	.1417	.5062
(.7491)	(.6176)	(.5363)	(.4656)	(.4151)	(.3846)	(.3643)	(1.27-1.57)
.3743	.3136	.2630	.2327	.2124	.1922	.1820	.6374
(.94-1.09)	(.7991)	(.6676)	(.5869)	(.5361)	(.4856)	(.4651)	(1.60-1.88)
.4458	.3748	.3141	.2836	.2532	.2329	.2127	.7599
(1.12-1.47)	(.94-1.22)	(.79-1.04)	(.7191)	(.6381)	(.5874)	(.5369)	(1.90-2.51)
.5972	.4960	.4251	.3745	.3340	.3036	.2834	1.00-1.24
(1.50-1.83)	(1.24-1.52)	(1.07-1.30)	(.94-1.14)	(.84-1.02)	(.7691)	(.7186)	(2.54-3.15)
.7387	.6172	.5261	.4654	.4148	.3743	.3540	1.25-1.49
(1.85-2.21)	(1.55-1.83)	(1.32-1.55)	(1.17-1.37)	(1.04-1.22)	(.94-1.09)	(.89-1.02)	(3.17-3.78)
.88-1.01	.7385	.6271	.5563	.4956	.4451	.4147	1.50-1.74
(2.24-2.57)	(1.85-2.16)	(1.57-1.80)	(1.40-1.60)	(1.24-1.42)	(1.12-1.30)	(1.04-1.19)	(3.81-4.42)
1.02-1.16	.8696	.7281	.6472	.5764	.5258	.4854	1.75-1.99
(2.59-2.95)	(2.18-2.44)	(1.83-2.06)	(1.63-1.83)	(1.45-1.63)	(1.32-1.49)	(1.22-1.37)	(4.44-5.05)
1.17-1.44	.97-1.20	.82-1.02	.7390	.6580	.5972	.5567	2.00-2.49
(2.97-3.66)	(2.46-3.05)	(2.08-2.59)	(1.85-2.29)	(1.65-2.03)	(1.50-1.83)	(1.40-1.70)	(5.08-6.32)
1.45-1.73	1.21-1.45	1.03-1.22	.91-1.08	.8196	.7387	.6881	2.50-2.99
(3.68-4.39)	(3.07-3.68)	(2.62-3.10)	(2.31-2.74)	(2.06-2.44)	(1.85-2.21)	(1.73-2.06)	(6.35-7.59)
1.74-2.02	1.46-1.69	1.23-1.43	1.09-1.26	.97-1.11	.83-1.01	.8294	3.00-3.49
(4.42-5.13)	(3.71-4.29)	(3.12-3.63)	(2.77-3.20)	(2.46-2.82)	(2.11-2.57)	(2.08-2.39)	(7.62-8.86)
2.03-2.31	1.70-1.93	1.44-1.63	1.27-1.44	1.12-1.27	1.02-1.15	.95-1.08	3.50-3.99
(5.16-5.87)	(4.32-4.90)	(3.66-4.14)	(3.23-3.66)	(2.84-3.23)	(2.59-2.92)	(2.41-2.74)	(8.89-10.13)

Note: \*This chart is to be used for determining grip size when multiple cables are held in a single Conduit Riser Grip. For Support Grip multiple cable selection, see page X-36. It is always recommended that, when multiple cables are installed in a Conduit Riser Grip, the tail end of the grip be banded after installation on the cable bundle. See page Tech-23 for cable and wire charts.

#### **Features and Benefits**

## **Fiber Optic Pulling Grips**

Kellems has wide experience with grips for use with fiber optic cable. As the industry leader in producing wire mesh grips for the stringent requirements of fiber optic applications, Kellems has developed several series of grips for use with fiber optic communications cable.

These grips include pulling grips with built in swivels, grips with steel ends to protect fragile cable ends, grips with low profiles to pull cables in tight places and the OPTISOK® an effective tool to place pre-terminated cables. Also available are grips to support fiber optic cable.





#### Non-Metallic

 OPTISOK® non-metallic fiber optic pulling tool for pre-terminated, inside plant fiber optic cables and bundles of twisted pair



#### Galvanized Steel

- Pulling grip for loose tube fiber optic cable
- These grips are used for outside plant cable; they are easy to install and remove, reusable and have a slim profile for small build up



#### Application

- Kellems flexible eye pulling grips for fiber optic cable are used for the installation of fiber optic communication lines either underground, overhead, through conduit or through enclosures
- They will fit single cables or cable bundles, are easily installed on the cable and are reusable



#### Comprehensive Offering

- Hubbell offers a full line of fiber optic pulling grips for all application needs
- OPTISOK® Grip is a revolutionary tool to pull pre-terminated fiber optic cables
- They will protect the connectors and guide the bundle through the pulling environment

# OPTISOK® Non-Metallic Fiber Optic Pulling Tool for Pre-Terminated, Inside Plant Fiber Optic Cables and Bundles of Twisted Pair

Kellems offers a unique and simple to use tool for the installation of pre-connectorized fiber optic cables, jumpers and bundles of twisted pair communication cables - the  $\mathsf{OPTISOK}^{@}$ .

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-44 and X-45.

The OPTISOK® is a highly flexible and expandable non-metallic sleeve open on one end and with a pulling ring on the other. It will expand to enclose the larger group of fiber optic connectors and grab the cable below the connector bundle by wrapping and taping to provide a gripping tool that will grab the cable(s) below the connectors. The pulling ring can be attached to a pulling line or fish tape and the OPTISOK® will act as the pulling tool.

OPTISOK® will contain and protect the connector bundle and save time and labor by making the pulling job easier, protecting the connectors from possible damage during the pull and facilitating the passage of the connector bundle through cramped and tight spaces. The OPTISOK® can be used to pull cables through plenums, underfloor duct, office partitions, raised access floors and conduits. Three sizes are available for all applications.

## OPTISOK® Non-Metallic Fiber Optic Pulling Tool

Bundle/Size Range Inches (cm)	Maximum Work Load Lbs.	Approx. O/A Length Inches (cm)	Ring O.D. Inches (cm)	Ring Thickness Inches (cm)	Catalog Number
.125"562" (.318-1.427)	30	28" (71.12)	.71" (1.803)	.10" (.254)	CCPS1
.250"750" (.635-1.905)	40	31" (78.74)	.71" (1.803)	.10" (.254)	CCPS2
.750"-1.750" (1.905-4.445)	50	33" (83.82)	1.57" (3.988)	.16" (.406)	CCPS3

#### How to Select OPTISOK®

- Identify connector bundle diameter to be inserted into the OPTISOK®.
- Choose appropriate catalog number based on size range.

#### **Installation Information**

- **Step 1** Expand open end of OPTISOK® and gently work in fiber optic connector bundle.
- Step 2 Still gently, work connector bundle up to the forward section of the OPTISOK®.
- Step 3 Starting at approximately 6" (15.2cm) from tail end of OPTISOK®, tightly fold over the OPTISOK® around cables and tape wrapped section 3" (7.62cm) past tail end onto the bundle.
- **Step 4** Securely attach pulling line or tape to pulling ring.

Note: To remove OPTISOK® carefully unwrap tape and slide out cables and connectors or cut OPTISOK® away without damaging connectors or cables.

#### Step 1



Step 3



Step 2



Step 4



## Pulling Grip for Loose Tube Fiber Optic Cable, Galvanized Steel

Kellems offers a wire mesh specifically designed to pull loose tube fiber optic cable and meet the special pulling requirements recommended by fiber optic cable manufacturers.

Many fiber optic cable manufacturers require special cable preparation prior to pulling where a short section of the outer jacket is stripped off exposing the aramid strength member. This creates two cable diameters, one including the jacket and a second smaller diameter at the strength member. Kellems fiber grip with its special weave will accommodate and securely grab both diameters, at the outside jacket and the internal aramid strength member.

Additionally, this galvanized steel mesh grip has longer leads at the pulling eye to facilitate pulling the cable up through the top, a very low profile lug and eye to slip through tight areas, and short shoulders to protect the cable while maintaining the slim profile.

The grip can be used to pull cable overhead as well as underground through conduit and duct. It easily mates with a swivel and has the necessary strength to securely make pulls.

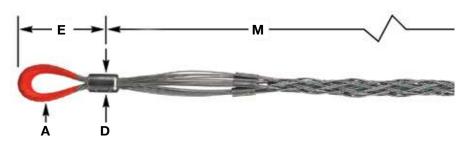
## **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-44 and X-45.

#### **Application Information**

- Prior to pulling cable, follow cable manufacturers' cable preparation recommendations
- Never exceed cable manufacturers' pulling tension recommendations
- Never use grips to approximate breaking strength safety factor of 5 recommended



#### Pulling Grip For Loose Tube Fiber Optic Cable, Galvanized Steel

Diameter Range Inches (cm)	Maximum Breaking Strength Lbs.	Working Load Lbs.	E Eye Length Inches (cm)	M Mesh Length Inches (cm)	D Lug Diameter Inches (cm)	A Eye Diameter Inches (cm)	Catalog Number
.312"625" (.79-1.59)	3,000	600	6.3" (16.00)	22.5" (57.15)	.51" (1.30)	.20" (.51)	PFOLT312



## Pulling Grips for Other Outside Plant Cables, Swivel Eye, Flexible Eye, Split Style, Low Profile

Kellems Pulling Grips for fiber optic cable are made of high strength galvanized steel strand. They feature a multiweave mesh, with one-half the mesh length double weave, and the second half single weave. This special weave provides positive holding power while allowing the grip to remain flexible with no damage to the cable jacket. Added features include a steel nose cone which protects the cable end and allows the grip to pass easily through conduit and enclosures. The eye connects easily to a swivel or a pulling line. Several grip sizes are available to accommodate all diameters of fiber optic cable.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

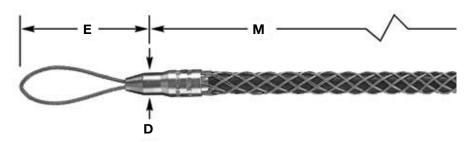
Refer to pages X-44 and X-45.

#### **Application**

Kellems Flexible Eye Pulling Grips for fiber optic cable are used for the installation of fiber optic communication lines either underground, overhead, through conduit or through enclosures. They will fit single cables or cable bundles, are easily installed on the cable and are reusable.

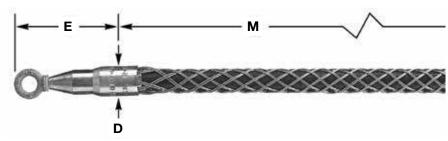
#### **Benefits**

- High strength multiweave mesh for positive holding power
- Highly flexible mesh to follow the pulling path of the cable
- Steel nose cone reduces snags and hang-ups and protects cable end
- · Easily installed and removed
- A dependable, reusable pulling tool



## Fiber Optic Pulling Grip, Flexible Eye

1.0"22" (2556)         1,000         200         5.5" (14)         9" (23)         0.8" (2)         033291000           .21"35" (.5389)         1,500         300         5.5" (14)         14" (36)         0.8" (2)         033291001           .32"48" (.81-1.22)         2,200         440         6.0" (15)         18" (46)         0.9" (2.29)         033291002           .42"61" (1.07-1.55)         2,800         560         6.0" (15)         21" (53)         0.9" (2.29)         033291003           .53"74" (1.35-1.88)         3,300         660         6.5" (17)         24" (61)         1.3" (3.30)         033291004           .64"87" (1.63-2.21)         4,700         940         6.5" (17)         27" (69)         1.3" (3.30)         033291005	Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Approx. Inches (cm)	M Approx. Inches (cm)	D Approx. Inches (cm)	Catalog Number
.32"48" (.81-1.22) 2,200 440 6.0" (15) 18" (46) 0.9" (2.29) <b>033291002</b> .42"61" (1.07-1.55) 2,800 560 6.0" (15) 21" (53) 0.9" (2.29) <b>033291003</b> .53"74" (1.35-1.88) 3,300 660 6.5" (17) 24" (61) 1.3" (3.30) <b>033291004</b>	.10"22" (.2556)	1,000	200	5.5" (14)	9" (23)	0.8" (2)	033291000
.42"61" (1.07-1.55) 2,800 560 6.0" (15) 21" (53) 0.9" (2.29) <b>033291003</b> .53"74" (1.35-1.88) 3,300 660 6.5" (17) 24" (61) 1.3" (3.30) <b>033291004</b>	.21"35" (.5389)	1,500	300	5.5" (14)	14" (36)	0.8" (2)	033291001
.53"74" (1.35-1.88) 3,300 660 6.5" (17) 24" (61) 1.3" (3.30) 033291004	.32"48" (.81-1.22)	2,200	440	6.0" (15)	18" (46)	0.9" (2.29)	033291002
	.42"61" (1.07-1.55)	2,800	560	6.0" (15)	21" (53)	0.9" (2.29)	033291003
.64"87" (1.63-2.21) 4,700 940 6.5" (17) 27" (69) 1.3" (3.30) <b>033291005</b>	.53"74" (1.35-1.88)	3,300	660	6.5" (17)	24" (61)	1.3" (3.30)	033291004
	.64"87" (1.63-2.21)	4,700	940	6.5" (17)	27" (69)	1.3" (3.30)	033291005



#### Fiber Optic Pulling Grip, Swivel Eye

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Approx. Inches (cm)	M Approx. Inches (cm)	D Approx. Inches (cm)	Catalog Number
.21"35" (.5389)	1,500	300	4.0" (10.16)	14" (35.56)	0.9" (2.29)	033291008
.32"48" (.81-1.22)	2,200	440	4.0" (10.16)	18" (45.72)	0.9" (2.29)	033291009
.42"61" (1.07-1.55)	2,800	560	4.0" (10.16)	21" (53.34)	0.9" (2.29)	033291010
.53"74" (1.35-1.88)	3,250	650	4.8" (12.19)	24" (60.96)	1.3" (3.30)	033291011
.64"87" (1.63-2.21)	4,700	940	4.8" (12.19)	27" (68.58)	1.3" (3.30)	033291012

Note: E-Eye length. M-Mesh length at nominal diameter.



## Pulling Grips for Other Outside Plant Cables, Swivel Eye, Flexible Eye, Split Style, Low Profile

Kellems Pulling Grips for fiber optic cable are made of high strength galvanized steel strand. They feature a multiweave mesh, with one-half the mesh length double weave, and the second half single weave. This special weave provides positive holding power while allowing the grip to remain flexible with no damage to the cable jacket. Added features include a steel nose cone which protects the cable end and allows the grip to pass easily through conduit and enclosures. The eye connects easily to a swivel or a pulling line. Several grip sizes are available to accommodate all diameters of fiber optic cable.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

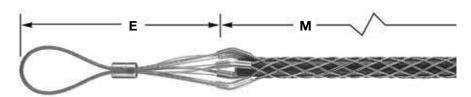
Refer to pages X-44 and X-45.

#### **Application**

Kellems Flexible Eye Pulling Grips for fiber optic cable are used for the installation of fiber optic communication lines either underground, overhead, through conduit or through enclosures. They will fit single cables or cable bundles, are easily installed on the cable and are reusable.

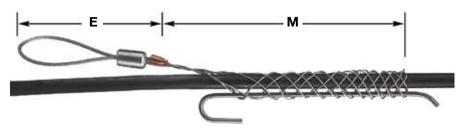
#### **Benefits**

- High strength multiweave mesh for positive holding power
- Highly flexible mesh to follow the pulling path of the cable
- · Steel nose cone reduces snags and hang-ups and protects cable end
- Easily installed and removed
- A dependable, reusable pulling tool



## Fiber Optic Pulling Grip, Flexible Eye, Low Profile, Double/Single Weave Mesh

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Approx. Inches (cm)	M Approx. Inches (cm)	Catalog Number
.10"22 (.2556)	900	180	7.5" (19)	10" (25)	033291193
.21"35" (.5389)	1,400	280	7.5" (19)	14" (36)	033291194
.32"48" (.81-1.22)	2,000	400	8.5" (22)	19" (48)	033291195
.42"61" (1.07-1.55)	2,500	500	8.5" (22)	21" (53)	033291196
.53"74" (1.35-1.88)	3,000	600	8.5" (22)	23" (58)	033291197
.64"87" (1.63-2.21)	4,200	840	8.5" (22)	25" (64)	033291198
.75"-1.00" (1.90-2.54)	4,200	840	8.5" (22)	28" (71)	033291199



#### Fiber Optic Slack Pulling Grip, Split Mesh, Rod Closing, Single Weave

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Approx. Inches (cm)	M Approx. Inches (cm)	Catalog Number
.25"37" (.6394)	300	60	3" (7.6)	4.7" (12)	033291015
.38"49" (.97-1.24)	800	160	3" (7.6)	5" (13)	033291016
.50"61" (1.27-1.55)	800	160	3" (7.6)	7.5" (19)	033291017
.62"74" (1.57-1.88)	1,200	240	3" (7.6)	8" (20)	033291018

Note: E-Eye length. M-Mesh length at nominal diameter.



## **Fiber Optic Support Grips**

Kellems Support Grips for fiber optic cable are specially designed to hold the cable weight as it hangs in a vertical or horizontal position. Fiber optic cable must be supported and Kellems Grips provide the support easily and economically.

These grips are made of high grade, non-magnetic tin-coated bronze strand. They are offered in universal bale or single eye configurations and are available in either closed mesh (for use where the cable end is available) or in split mesh, rod closing (for installation on existing cable runs or at specific locations).

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

Refer to pages X-44 and X-45.

# Fiber Optic Single Eye Cable Support Grip, Closed Mesh, Single Weave For permanent support when cable end is available to be installed through grip.

king Working Load Lbs.	E Approx. Inches (cm)	M Approx. Inches (cm)	
	` '	inches (CIII)	Catalog Number
30	3" (7.6)	1.7" (4.3)	022291000
30	3" (7.6)	2.5" (6.4)	022291001
30	4" (10)	2.5" (6.4)	022291002
30	5" (13)	4" (10)	022291003
40	6" (15)	4" (10)	022291004
60	7" (18)	5.5" (14)	022291005
80	8" (20)	6" (15)	022291006
	30 30 30 40 60	30 3" (7.6) 30 4" (10) 30 5" (13) 40 6" (15) 60 7" (18)	30 3" (7.6) 2.5" (6.4) 30 4" (10) 2.5" (6.4) 30 5" (13) 4" (10) 40 6" (15) 4" (10) 60 7" (18) 5.5" (14)

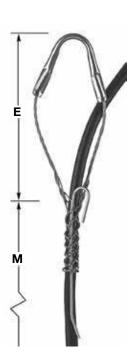


## Fiber Optic Single Eye Cable Support Grip, Split Mesh, Rod Closing, Single Weave

For support when cable end not available.

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Approx. Inches (cm)	M Approx. Inches (cm)	Catalog Number
.18"25" (.4663)	300	30	3" (7.6)	2.5" (6.4)	022291016
.23"32" (.5881)	300	30	3" (7.6)	2.5" (6.4)	022291017
.30"39" (.7699)	300	30	4" (10)	2.5" (6.4)	022291018
.37"48" (.94-1.22)	300	30	5" (13)	4" (10)	022291019
.46"58" (1.17-1.47)	400	40	6" (15)	5" (13)	022291020
.56"71" (1.42-1.80)	600	60	7" (18)	5" (13)	022291021
.69"88" (1.75-2.24)	800	80	8" (20)	6" (15)	022291022

Note: E-Eye length. M-Mesh length at nominal diameter.



## **Support Grips for Fiber Optic Cable**

Kellems Support Grips for fiber optic cable are specially designed to hold the cable weight as it hangs in a vertical or horizontal position. Fiber optic cable must be supported and Kellems Grips provide the support easily and economically.

These grips are made of high grade, non-magnetic tin-coated bronze strand. They are offered in universal bale or single eye configurations and are available in either closed mesh (for use where the cable end is available) or in split mesh, rod closing (for installation on existing cable runs or at specific locations).

#### **Split Support Grip Rod Closing Instructions**

The stainless steel rod is a precise built-in feature which makes threading easy and fast. The strands of the mesh pass around the rod and match up with the strands from the opposite direction. The rod does not touch the cable at any point and therefore cannot cut the cable. Rod Closing Grips are reusable. They may be removed and reused as many times as desired.

#### **Fast to Install**

- **Step 1** Wrap the grip around the cable and thread the rod through the preformed loops with a corkscrew motion, using the curved end of the rod to engage the loops.
- **Step 2** The action required is a steady push and twist simultaneously. The fingers of the left hand are used to bring the loops together just ahead of the hook on the end of the rod.
- **Step 3** To remove, simply pull the rod out.









Kellems has wide experience with grips for use with fiber optic cable. As the industry leader in producing wire mesh grips for the stringent requirements of fiber optic applications, Kellems has developed several series of grips for use with fiber optic communications cable.

These grips include pulling grips with built in swivels, grips with steel ends to protect fragile cable ends, grips with low profiles to pull cables in tight places and the OPTISOK® an effective tool to place preterminated cables. Also available are grips to support fiber optic cable.

#### Select the Correct Fiber Optic Grip

Each Kellems grip is designed to work on a specific range of cable diameters.

- **Step 1** Determine your cable outside diameter.
- **Step 2** Find the grip size that encompasses your cable diameter.
- **Step 3** Whenever possible, use a closed mesh that assembles over the cable end. If the cable end is not available, use a split mesh.
- **Step 4** Where available, select an eye style that suits your needs.
- **Step 5** Estimate the tension to be put on the grip, establish the working load you require and compare this to the listed approximate breaking strength of the grip to insure that the grip will be strong enough.

## Safety And Working Load Factors For Wire Mesh Grips

The broad application of Kellems grips on a wide variety of objects requires that adequate safety factors be used to establish working loads. The approximate breaking strength of a Kellems grip represents an average calculation based on data established from actual direct tension testing done in our engineering laboratories.

It is impossible to catalog or guarantee a safety factor suitable for all applications as operating conditions are never the same. The tension, diameter, movement, number of objects gripped, gripping surface, and the attachments used are just some of the factors which vary with each application. These factors, together with the effects of abrasion, corrosion, prior use or abuse and any other variables of a specific application, must be considered by the user and the grip replaced as appropriate. Where the conditions of the application are not well defined or known

or where risk of injury to persons or property is involved, a greater safety factor should be utilized.

#### **IMPORTANT:**

Under normal conditions, Kellems' recommended factor of safety is five for catalog listed pulling grips, and ten for catalog listed support grips.

Any warranty as to quality, performance or fitness for use of grips is always premised on the condition that the published breaking strengths apply only to new, unused grips, and that such products are properly stored, handled, used, maintained and inspected by the user at a frequency appropriate for the use and condition of the grip.

For grip applications on materials other than those that the grips have been specifically designed for, consult the factory.

#### **Examples**

Grip Style	Approx. Breaking Strength Lbs. (N)	Safety Factor	Max. Recommended Load Lbs. (N)	Catalog Number
Pulling Grips	2,500 (11,120)	5	500 (2,224)	033291196
Support Grips	400 (1,779)	10	40 (178)	022291004

The maximum recommended working load is the tension to be exerted on the grip in application with a margin of safety to take care of unforeseen and unusual circumstances.

It is the end-user's decision to determine how much of a safety factor is acceptable to for the application.

#### **Fiber Optic Grip Materials**

Material	Features	Product Group
Galvanized steel wire	<ul><li>High strength</li></ul>	<ul> <li>Pulling grips</li> </ul>
	<ul> <li>Not subject to continuous outside environment</li> </ul>	
Tin-coated bronze wire	<ul> <li>Corrosion resistant for normal outside areas</li> </ul>	<ul> <li>Support grips</li> </ul>
	Non-magnetic	
	Moderate strength	
Non-metallic braid	Superior flex life	• OPTISOK®
	Non-conductive	
	<ul> <li>Corrosion resistant</li> </ul>	
	Moderate strength	

#### **Approvals**

CSA Certification is indicated on appropriate product catalog pages.

## **Hose Containment Grips**

Kellems<sup>®</sup> Hose Containment Grips are used on high pressure, flexible hose lines to prevent the hose from whipping violently in the event of hose failure at the fitting. These grips will prevent serious injury to personnel and damage to equipment by holding the hose in place in the event of hose failure.

Kellems® patented Hose Containment Grips are made of stainless steel double weave mesh construction for high strength and come complete with hose clamps.

#### **IMPORTANT:**

Read all breaking strength, safety and technical data relating to this product.

#### **Types of Attachment**

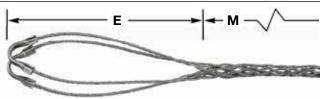
The six attachment methods shown below provide unlimited flexibility of attachment to meet any condition.



#### Type A

Single Eye, used where fastening is made with eyebolts or similar anchor terminations.

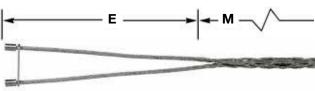
Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.38"69" (.97-1.75)	2,900	290	10" (25)	24" (61)	014021285
.50"94" (1.27-2.39)	3,400	340	10" (25)	24" (61)	014021230
1.00"-1.56" (2.54-3.96)	9,400	940	10" (25)	36" (91)	014021453
1.25"-1.94" (3.18-4.93)	14,400	1,440	48" (122)	60" (152)	014021593
2.75"-3.44" (6.99-8.74)	12,500	1,250	10" (25)	48" (122)	014021524



#### Type E

Double Eye Grip, used where fastening is made with eyebolts or similar anchor terminations.

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.50"94" (1.27-2.39)	4,250	425	8" (20)	24" (61)	014021224
.75"-1.25" (1.91-3.18)	6,000	600	8" (20)	24" (61)	014021223
1.00"-1.56" (2.54-3.96)	8,000	800	8" (20)	24" (61)	014021279



#### Type U

Universal Bale Grip, used to fasten around a structure or closed eye.

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.31"56" (.79-1.42)	2,100	210	12" (30)	24" (61)	014021304
.38"69" (.97-1.75)	2,600	260	12" (30)	24" (61)	014021308
.50"94" (1.27-2.39)	3,100	310	12" (30)	24" (61)	014021138
.50"94" (1.27-2.39)	3,100	310	24" (61)	24" (61)	014021139
.75"-1.25" (1.91-3.18)	4,500	450	12" (30)	24" (61)	014021140
1.00"-1.56" (2.54-3.96)	6,000	600	12" (30)	24" (61)	014021142
1.25"-1.94" (3.18-4.93)	6,000	600	12" (30)	36" (91)	014021527

Note: E- Eye length. M-Mesh length at nominal diameter.

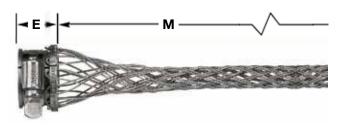
It should be emphasized that Kellems<sup>®</sup> Hose Containment Grips are not to be used as a pressure reinforcing device for hose systems. These grips are custom made. Consult Technical Services for details.

## **Hose Containment Grips**

Kellems Hose Containment Grips are supplied in diameters, length and attachments to meet individual requirements. Contact the Wiring Device-Kellems factory for specific information. These grips help meet OSHA Federal Register 1926-302 (b), 1926-603 (9), (10), JIC H-1-1973 (H13.11) and JIC P-1-1975 (P11.34) requirements.

## **IMPORTANT:**

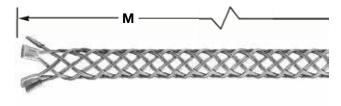
Read all breaking strength, safety and technical data relating to this product.



## Type F

Split fitting to fit AN-818 nuts. Fitting is positioned over nut and located with internal flange. A hose clamp is furnished and required to hold the fitting in correct position.

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.38"69" (.97-1.75)	2,900	290	1" (2.54)	24" (61)	014021208
.50"94" (1.27-2.39)	3,400	340	1" (2.54)	24" (61)	014021156
.50"94" (1.27-2.39)	3,400	340	1" (2.54)	12" (30)	014021185
.50"94" (1.27-2.39)	3,400	340	1" (2.54)	12" (30)	014021186
.50"94" (1.27-2.39)	3,400	340	1" (2.54)	24" (61)	014021216
.75"-1.25" (1.91-3.18)	6,000	600	1" (2.54)	24" (61)	014021113
.75"-1.25" (1.91-3.18)	6,000	600	1" (2.54)	12" (30)	014021120
.75"-1.25" (1.91-3.18)	6,000	600	1" (2.54)	24" (61)	014021301
1.00"-1.56" (2.54-3.96)	6,000	600	1" (2.54)	24" (61)	014021157
1.00"-1.56" (2.54-3.96)	8,000	800	1.12" (2.84)	24" (61)	014021366
1.25"-1.94" (3.18-4.93)	8,000	800	1.12" (2.84)	36" (91)	014021314



## Type T

Tube Grips obtain complete grip coverage when hose is partially covered at either end with attachment grips. Type T-Grips fill in the exposed hose area between the two end grips. A telescoped assembly permits overlap to any degree desired beyond the 3" minimum.

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs.	Working Load Lbs.	E Inches (cm)	M Inches (cm)	Catalog Number
.50"94" (1.27-2.39)	3,400	340	_	24" (61)	014021152
.75"-1.25" (1.91-3.18)	6,000	600	_	24" (61)	014021085
1.44"-2.19" (3.66-5.56)	12,500	1,250	_	48" (122)	014021075

Note: E- Eye length. M-Mesh length at nominal diameter.



## Type Y

Threaded bolt (5/16 – 18 x 1 1/2" long), used to fasten through drilled holes in a plate.

Note: Available upon request.

It should be emphasized that Kellems® Hose Containment Grips are not to be used as a pressure reinforcing device for hose systems. Kellems® Hose Containment Grips are supplied in diameters, length and attachments to meet individual requirements. Contact Technical services for specific information.

Kellems Strain Relief Grips are designed to prevent tension from being transmitted to joints and terminals on electrical cord, cable and conduit. In most applications, a Kellems grip for strain relief is stronger than the cable itself and gives much greater security than the use of a fitting alone. Kellems Grips for strain relief help make electrical systems safer, and save money by minimizing downtime from costly electrical failure due to cable pull-out. Kellems Grips also aid in compliance with the National Electric Code's terminal tension protection requirements.

### Select the Correct Grip for Strain Relief

Kellems Grips for strain relief are designed to fit on electrical cord, cable or flexible conduit.

- **Step 1** Refer to the chart below to determine the grip style best suited for your application.
- **Step 2** Determine your cable outside diameter or conduit size.
- **Step 3** Locate environment—indoors or outdoors.
- **Step 4** Decide if a liquidtight seal is required.
- **Step 5** Select NPT size and fitting style.

#### Strain Relief System Selection Chart

Grip Type		Application	Features	Cord or Conduit Range Inches (cm)	Type Fitting or Attachment	Page Number
Deluxe Cord Aluminum Fitting/ Stainless Steel Grip		Outdoors or indoors where subjected to moisture or splash. Examples are crane and hoist pendant drop stations, hand tools, pumps and processing equipment.	Aluminum fittings, stainless steel mesh, neoprene oil-and- watertight bushing. Double-single weave.	.187"-3.250" (.47-8.25)	NPT, PG, and metric aluminum, male straight, 45° male, 90° male, female straight. Thread sizes %"-3".	X-50, X-51, X-54
Deluxe Cord Nylon Fitting/ Stainless Steel Grip		Outdoors or indoors where subjected to moisture or splash. Examples are marine and food processing equipment.	Nylon fitting, stainless steel mesh, double-single weave, neoprene oil-and- watertight bushing.	.187"-1.125" (.47-2.86)	NPT nylon, male straight, 90° male. Thread sizes ½"-1".	X-52
Deluxe Cord Nylon Fitting/ Non-metallic Grip		Indoor or outdoors. Provides liquidtight seal, where exposed to moisture. Excellent for oil refining and chemical processing.	Non-metallic grip is corrosion resistant, nonconductive and provides superior grip- ping and flexing benefits. Neoprene liquidtight bushing. Nylon fitting.	.187"-1.000" (.47-2.54)	NPT nylon, straight male, thread sizes $\frac{1}{2}$ -1" 90° male, thread sizes $\frac{1}{2}$ "-1".	X-53
Deluxe Cord Stainless Steel Fitting And Grip		Indoor or outdoor use where exposed to moisture. Very strong for heavy abuse areas such as drilling platforms, steel mills and mines.	Stainless steel fitting and grip for strength. Neoprene liquidtight bushing. Double/single weave grip.	.187"-1.000" (.47-2.54)	Straight male Only with NPT Thread sizes ½"-1".	X-53
Dust-Tight Strain Relief	TO THE STATE OF TH	Indoor use only for wiring of electrical enclosures, machine tools, portable power tools, bus drop cable systems.	Neoprene gasket-seals out chips, dirt, dust. One piece design with galvanized steel mesh. Insulating bushing available Zinc-plated steel locknut.	.240"-2.450" (.61-6.22)	Straight male NPS or NPT	X-55
Liquidtight Flexible Conduit Grip (Metal and Non-Metallic)		Wiring of machine tools, electrical enclosures, motors and systems where metallic liquidtight flexible conduit is subjected to vibration, flexure, motion or strain.	Stainless steel mesh, liquidtight fittings. Sealing "O" rings (optional). Choice of fittings.	.375"-4.000" trade sizes	NPT ½"-4", Hubbell fittings, Male straight, 45° male, 90° male, female straight.	X-58, X-59
Liquidtight Flexible Conduit Grip (UL Type A)		Wiring or machine tools, electrical enclosures, motors and systems where conduit is subject to vibration and strain.	Stainless steel mesh, liquidtight fittings with "O" ring and locknut.	.375"-2.008" trade size male	NPT steel, Hubbell fittings, straight male, 90° Thread sizes ½"-2".	X-60

### **Features and Benefits**

## **Deluxe Cord Grip**

Deluxe cord grips help to alleviate pull tension on terminals, control cable arc-of-bend, prevent cord pull-out and provide a liquidtight seal. They are offered with either aluminum, stainless steel or nylon fittings in a variety of configurations and NPT thread sizes. Additionally, a completely non-metallic product is available.

## **Application**

Specific uses are: wiring enclosures, pendant stations, hand tools, construction, processing and material handling equipment, pumps, motors and machine tools.

#### **Benefits**

- Helps to prevent cable pull-out
- Controls cable arc-of-bend
- Provides a liquidtight seal
- Corrosion resistant stainless steel mesh with aluminum collar



07401008



#### Mesh Grip

- Stainless steel mesh is corrosion resistant; can be used inside or outside
- Eliminates cable or flexible conduit pull out and reduces costly downtime
- Endless weave provides easy cable/ flexible conduit installation



#### **Deluxe Cord Grips**

- An NPT and PG threaded body allows easy attachment to either threaded hub or knock-out in box
- A liquidtight fitting is available with both cable and conduit fittings; prevents liquids from running through the fitting into the enclosure



#### Cable Protection

- Multiweave grip gives cable arc-of-bend control minimizing cable damage and extending cable life
- It is the strongest strain relief device available; meets and exceeds all code requirements; prevents cable/conduit pull-out



#### Comprehensive Offering

- Hubbell offers a full line of deluxe cord grips with various material finishes
- Deluxe cord grips are used indoors or outdoors to help prevent cord pull-out and where cables are subjected to moisture, splash or submersion



## **Deluxe Cord Grips**

Aluminum Fittings, Stainless Steel Mesh, Liquidtight for Insulated Cables.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.



PT Thread	Grip Diameter Ra	inge		
ize Inches	Inches (cm)		Form Size	Catalog Number
<u></u>	.250"312"	(.6379)	<u> </u>	07401001
3	.312"375"	(.7995)	F1	07401002
	.375"437"	(.95-1.11)		07401003
	.187"250"	(.4763)		07401004
	.250"375"	(.6395)	F0	07401006
2	.375"500"	(.95-1.27)	F2	07401008
	.500"625"	(1.27-1.59)		07401010
	.625"750"	(1.59-1.90)		074011247*
	.750"875"	(1.90-2.22)	F3	074011248*
	.187"250"	(.4763)		07401011
	.250"375"	(.6395)		07401013
	.375"500"	(.95-1.27)	F2	07401015
	.500"625"	(1.27-1.59)		07401017
	.625"750"	(1.59-1.90)		07401018
	.750"875"	(1.90-2.22)	F3	07401018
	.375"500"	(.95-1.27)		074011195
	.500"625"	(1.27-1.59)		07401019
	.625"750"	(1.59-1.90)	F4	07401021
	.750"875"	(1.90-2.22)		07401023
	.875"-1.000"	(2.22-2.54)		07401025
	1.000"-1.125"	(2.54-2.86)		074011250*
	1.125"-1.250"	(2.86-3.17)	F5	074011028*
	1.250"-1.375"	(3.17-3.49)		074011029*
	.750"875"	(1.90-2.22)		074011251
	.875"-1.000"	(2.22-2.54)		07401026
/4	1.000"-1.125"	(2.54-2.86)	F5	07401027
	1.125"-1.250"	(2.86-3.17)		07401028
	1.250"-1.375"	(3.17-3.49)		074011178*
	.750"875"	(1.90-2.22)		074011252
	.875"-1.000"	(2.22-2.54)		07401029
/2	1.000"-1.125"	(2.54-2.86)	F5	07401030
	1.125"-1.250"	(2.86-3.17)		07401031
	1.250"-1.375"	(3.17-3.49)		07401032
	1.312"-1.437"	(3.33-3.65)		074011253
	1.437"-1.562"	(3.65-3.97)		074011254*
, 2	1.562"-1.687"	(3.97-4.28)	F6	074011255*
	1.687"- 1.812"	(4.28-4.60)		074011256*
	1.750"-1.875"	(4.44-4.76)		074011257*
	1.250"-1.375"	(3.17-3.49)		074011258
	1.312"-1.437"	(3.33-3.65)		074011259
	1.437"-1.562"	(3.65-3.97)		07401033
	1.562"-1.687"	(3.97-4.28)	F6	07401034
	1.687"-1.812"	(4.28-4.60)		07401035
	1.750"- 1.875"	(4.44-4.76)		074011260
	1.812"-1.937"	(4.60-4.92)		074011261
	1.937"-2.062"	(4.92-5.24)		074011261*
	2.062"-2.187"	(5.24-5.55)	F7	074011262*
	2.187"-2.312"	(5.55-5.87)	1 /	074011263*
		(5.87-6.19)		
	2.312"-2.437"			074011265*
	1.688"-1.812"	(4.29-4.60)		074011030
	1.812"-1.937"	(4.60-4.92)		074011031
2	1.937"-2.062"	(4.92-5.24)	F7	074011032
	2.062"-2.187"	(5.24-5.55)	• •	074011033
	2.187"-2.312"	(5.55-5.87)		074011034
	2.312"-2.437"	(5.87-6.19)		074011266*
	1.937"-2.062"	(4.92-5.24)		074011036
	2.062"-2.187"	(5.24-5.55)	F7	074011037
	2.187"-2.312"	(5.55-5.87)	1 /	074011038
	2.312"-2.437"	(5.87-6.19)		074011039
	2.437"-2.625"	(6.19-6.67)		074011186



3.000"-3.250" Note: Kellems® Deluxe Cord Grips are suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class II Div. 2 & 2, Class III Div. 2 & 2, Class III Div. 2 & 2, Class I \*Cable jacket may have to be stripped to pass through connector body.

Dimensions in Inches (mm)

3

2.625"-2.812"

2.812"-3.000"

(6.67-7.14)

(7.14-7.62)

(7.62 - 8.25)

074011187

074011188

074011189\*

F8





## **Deluxe Cord Grips**

Aluminum Fittings, Stainless Steel Mesh, Liquidtight for Insulated Cables.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.

## **Straight Female Thread**

NPT Thread Size Inches	Grip Diameter F Inches (cm)	Range	Form Size	Catalog Number
1/2	.375"500" .500"625"	(.95-1.27) (1.27-1.59)	F2	07401043 07401045
3/4	.500"625"	(1.27-1.59)	F2	07401052
3/4	.625"750"	(1.59-1.90)	F4	07401053

## 90° Male Thread

NPT Thread Size Inches	Grip Diameter R Inches (cm)	ange	Form Size	Catalog Number
3/8	.250"312" .312"375" .375"437"	(.6379) (.7995) (.95-1.11)	F1	07401071 07401072 07401073
1/2	.187"250" .250"375" .375"500" .500"625"	(.4763) (.6395) (.95-1.27) (1.27-1.59)	F2	07401074 07401076 07401078 07401080*
3/4	.375"500" .500"625" .625"750" .750"875"	(.95-1.27) (1.27-1.59) (1.59-1.90) (1.90-2.22)	F3	07401081 07401083 07401084* 074011275*
1	.500"625" .625"750" .750"875" .875"-1.000" 1.000"-1.125"	(1.27-1.59) (1.59-1.90) (1.90-2.22) (2.22-2.54) (2.54-2.86)	F4	07401085 07401087 07401089 07401091* 074011229*
11/4	.750"875" .875"-1.000" 1.000"-1.125" 1.125"-1.250"	(1.90-2.22) (2.22-2.54) (2.54-2.86) (2.86-3.17)	F5	074011230 07401137 07401108 074011042*
1½	1.000"-1.125" 1.125"-1.250" 1.250"-1.375"	(2.54-2.86) (2.86-3.17) (3.17-3.49)	F5	074011045 074011046 074011047
2	1.312"-1.437" 1.437"-1.562" 1.687"-1.812" 1.750"-1.875"	(3.33-3.65) (3.65-3.97) (4.28-4.60) (4.44-4.76)	F6	074011233 074011244 074011246 074011234*





## 45° Male Thread

NPT Thread Size Inches	Grip Diameter R Inches (cm)	ange	Form Size	Catalog Number
1/2	.250"375" .375"500" .500"625"	(.6395) (.95-1.27) (1.27-1.59)	F2	074011236 074011021 074011237*
3/4	.500"625" .625"750" .750"875"	(1.27-1.59) (1.59-1.90) (1.90-2.22)	F3	074011049 074011051* 074011239*
1	.625"750" .750"875" .875"-1.000"	(1.59-1.90) (1.90-2.22) (2.22-2.54)	F4	074011055 074011057 074011199*
11/4	1.000"-1.125" 1.125"-1.250"	(2.54-2.86) (2.86-3.17)	F5	074011059 074011060

Note: Kellems® Deluxe Cord Grips are suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class III Div. 1 & 2 of the National Electric Code Sections 501.10(b)(2), 502.10(a)(2), 502.10(b)(2), 503.10(a)(2) and 503.10(b). \*Cable jacket may have to be stripped to pass through connector body.





## **Deluxe Cord Grips**

Nylon Fittings, Stainless Steel Mesh, Liquidtight for Insulated Cables.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.



### Straight Male Thread

NPT Thread Size Inches	Grip Diameter F Inches (cm)	Range	Form Size	Catalog Number
	.187"250"	(.4763)		074011331
1/	.250"375"	(.6395)	F2	074011332
1/2	.375"500"	(.95-1.27)	F2	074011333
	.500"625"	(1.27-1.59)		074011334*
	.375"500"	(.95-1.27)		074011335
3/4	.500"625"	(1.27-1.59)	F3	074011336
9/4	.625"750"	(1.59-1.90)	F3	074011337
	.750"875"	(1.90-2.22)		074011338*
	.625"750"	(1.59-1.90)		074011341
4	.750"875" (1.90-2.22)	F4	074011342	
ı	.875"-1.000"	(2.22-2.54)	F4	074011343
	1.000"-1.125"	(2.54-2.86)		074011344*

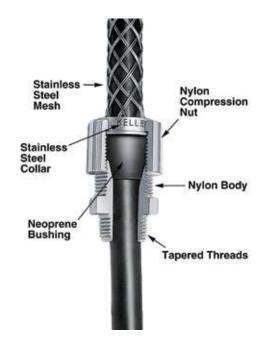




NPT Thread Size Inches	Grip Diameter Inches (cm)	Range	Form Size	Catalog Number
	.250"375"	(.6395)		074011346
1/2	.375"500"	(.95-1.27)	F2	074011347
	.500"625"	(1.27-1.59)		074011348*
	.375"500"	(.95-1.27)		074011349
3/4	.500"625"	(1.27-1.59)	F3	074011350
	.625"750"	(1.59-1.90)		074011351*

Note: Kellems® Deluxe Cord Grips are suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class III Div. 1 & 2 of the National Electric Code Sections 501.10(b)(2), 502.10(a)(2), 502.10(b)(2), 503.10(a)(2) and 503.10(b).

\*Cable jacket may have to be stripped to pass through connector body.







## **Deluxe Cord Grips**

Nylon Fittings, Non-Metallic Mesh, and Stainless Steel Fittings, Stainless Steel Mesh, Liquidtight for Insulated Cables.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.

## Nylon Fittings Non-Metallic Mesh, Liquidtight for Insulated Cables **Straight Male Thread**

NPT Thread Size Inches	Grip Diameter I Inches (cm)	Range	Form Size	Catalog Number
3/8	.187"250" .250"312" .312"375"	(.4763) (.6379) (.7995)	F1	CG304NM CG305NM CG306NM
1/2	.187"250" .250"375" .375"500"	(.4763) (.6395) (.95-1.27)	F2	CG404NM CG406NM CG408NM
3/4	.375"500" .500"625" .625"750"	(.95-1.27) (1.27-1.59) (1.59-1.90)	F3	CG608NM CG610NM CG612NM
1	.500"625" .625"750" .750"875" .875"-1.000"	(1.27-1.59) (1.59-1.90) (1.90-2.22) (2.22-2.54)	F4	CG810NM CG812NM CG814NM CG816NM



#### 90° Male Thread

NPT Thread	Grip Diameter Range	- O	0
Size Inches	Inches (cm)	Form Size	Catalog Number
1/	.250"375" (.6395)	F0	CG40690NM
1/2	.375"500" (.95-1.27)	CG40890NM	
	.375"500" (.95-1.27)		CG60890NM
3/4	.500"625" (1.27-1.59)	F3	CG61090NM
	.625"750" (1.59-1.90)		CG61290NM*
	.625"750" (1.59-1.90)	F4	CG81290NM
1	.750"875" (1.90-2.22)	F4	CG81490NM



## Stainless Steel Fittings, Stainless Steel Mesh, Liquidtight for Insulated Cables Straight Male Thread

NPT Thread Size Inches	Grip Diameter F Inches (cm)	Range	Form Size	Catalog Number
1/2 .3	.187"250" .250"375" .375"500" .500"625"	(.4763) (.6395) (.95-1.27) (1.27-1.59)	F2	CG404SST CG406SST CG408SST CG410SST
3/4	.375"500" .500"625"	(.95-1.27) (1.27-1.59)	F2	CG608SST CG610SST
3/4	.625"750" .750"875"	(1.59-1.90) (1.90-2.22)	F3	CG612SST CG614SST
1	.500"625" .625"750" .750"875" .875"-1.000"	(1.27-1.59) (1.59-1.90) (1.90-2.22) (2.22-2.54)	F4	CG810SST CG812SST CG814SST CG816SST



Note: Kellems® Deluxe Cord Grips are suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class III Div. 1 & 2 of the National Electric Code Sections 501.10(b)(2), 502.10(a)(2), 502.10(b)(2), 503.10(a)(2) and 503.10(b). \*Cable jacket may have to be stripped to pass through connector body.



## **PG and Metric Threaded Deluxe Cord Grips**

Aluminum Fittings, Stainless Steel Mesh, Liquidtight for Insulated Cables.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.



## Straight PG\* Male Thread

Hub Size	Cord Diameter Rar Inches (cm)	nge	Form Size	Catalog Number
PG16	.500"625"	(1.27-1.59)	F2	074PG16010
PG21	.500"625"	(1.27-1.59)	F2	074PG21010
D004	.625"750"	(1.59-1.90)	Γ0.	074PG211247
PG21	.750"875"	(1.90-2.22)	F3	074PG211248
	.625"750"	(1.59-1.90)		074PG29021
PG29	.750"875"	(1.90-2.22)	F4	074PG29023
	.875"-1.000"	(2.22-2.54)		074PG29025
PG29	1.125"-1.250"	(2.86-3.17)	F5	074PG291028*
PG36	1.125"-1.250"	(2.86-3.17)	F5	074PG36028*

Note: \*Panzergewinde.



## **Straight Metric Male Thread**

	Cord Diameter Rar	ge		
Hub Size	Inches (cm)		Form Size	Catalog Number
M20	.500"625"	(1.27-1.59)	F2	074M20010
MOE	.625"750" (1.59-1.90)	F3	074M251247	
M25	.750"875"	(1.90-2.22)	Fδ	074M251248
M25	.500"625"	(1.27-1.59)	F2	074M25017
	.625"750"	(1.59-1.90)		074M32021
MOO	.750"875"	(1.90-2.22)	F4	074M32023
M32	.875"-1.000"	(2.24-2.54)	Γ4	074M32025
	1.000"-1.125"	(2.54-2.86)		074M321250
M32	1.125"-1.250"	(2.86-3.17)	F5	074M321028

Note: Kellems® Deluxe Cord Grips are suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class III Div. 1 & 2 of the National Electric Code Sections 501.10(b)(2), 502.10(a)(2), 502.10(b)(2), 503.10(a)(2) and 503.10(b).

\*Cable jacket may have to be stripped to pass through connector body.

## **Specifications**

Material	Temperature Range
Aluminum (Body) Stainless Steel (Mesh) Neoprene (Bushings)	-30°F to +240°F (-34°C to +115°C). -30°F to +240°F (-34°C to +115°C). -30°F to +240°F (-34°C to +115°C).
Hazardous Locations	Suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class III Div. 1 & 2 N.E.C. Reference 501.10(b)(2), 502.10(a)(2), 502.10(b)(2), 503.10(a)(2) and 503.10(b).
Approvals	
Deluxe Cord Grips	UL Listed in accordance with Standard 514B for indoor/outdoor use. UL Control numbers 898D and 899D.
Wet Locations	Suitable for use in wet locations when used with a listed sealing ring between box and fitting.





## **Dust-Tight Strain Relief Grips**

Aluminum Fittings, Galvanized Steel Mesh for Insulated Cables.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.

## Non-Insulated, Wide Range Strain Relief

Thread Size	Cord Diame Inches (cm		Mesh Length @ Nom. Dia. Inches (cm)	Catalog Number
	.24"32"	(.6181)	3.25" (8.25)	073031200
½ NPT	.32"43"	(.81-1.09)	3.75" (9.52)	073031201
	.43"54"	(1.09-1.37)	4.75" (12.06)	073031202
¾ NPT	.54"73"	(1.37-1.85)	6.5" (16.51)	073031203A
1 NPT	.73"97"	(1.85-2.46)	7" (17.78)	073031204
1¼ NPT	.97"-1.25"	(2.46-3.17)	9" (22.86)	073031205
PG29*	.73"97"	(1.85-2.46)	7" (17.78)	073PG291204

Note: \*Panzergewinde.



## Insulated, Wide Range Strain Relief with Insulating Bushing

Thread Size	Cord Diameter Range Inches (cm)	Mesh Length @ Nom. Dia. Inches (cm)	Dim. A Inches (cm)	Min. Space Between Grips Inches (cm)	Catalog Number
	.24"32" (.6181)	3.25" (8.25)	1" (2.54)	1.25" (3.17)	073031206
½ NPS	.32"43" (.81-1.09)	3.75" (9.52)	1" (2.54)	1.25" (3.17)	073031207
	.43"54" (1.09-1.37)	4.75" (12.06)	1" (2.54)	1.25" (3.17)	073031208
¾ NPS	.54"73" (1.37-1.85)	6.5" (16.51)	1" (2.54)	1.5" (3.81)	073031209A
1 NPS	.73"97" (1.85-2.46)	7" (17.78)	1.313" (3.02)	1.75" (4.44)	073031210
1¼ NPS	.97"-1.25" (2.46-3.17)	9" (22.86)	1.313" (3.02)	2.25" (5.71)	073031211
1½ NPT	1.25"-1.50" (3.17-3.81)	11.75" (29.84)	1.313" (3.02)	2.5" (6.35)	073031212
2 NPT	1.50"-1.70" (3.81-4.32)	13.25" (33.65)	1.375" (3.49)	3.25" (8.25)	073031213
O1/ NDT	1.70"-2.00" (4.32-5.08)	13.5" (34.29)	1.5" (3.81)	3.625" (9.21)	073031214
2½ NPT	2.00"-2.45" (5.08-6.22)	13.75" (34.92)	1.5" (3.81)	3.625" (9.21)	073031215





## **I-Grips for Insulated Cables**

Kellems<sup>®</sup> I-Grips are made of high strength, plastic coated galvanized steel strand. They are offered in six sizes to fit all cable diameters used with Hubbell Insulgrip<sup>®</sup> Kellems I-Grips will control cable arc-of-bend and reduce high pull tensions from being transmitted to the wiring terminals.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.



### **Application**

Kellems<sup>®</sup> I-Grips will fit 2, 3, 4 and 5 wire Hubbell Insulgrip<sup>®</sup> plugs and connector bodies. The eye tabs fit under the nylon cord clamp and the screws slide through the eyelets, securing the grip in place.

I-Grips can be used on any Insulgrip cord set which requires cable, arc-of-bend control or heavy duty strain relief. Cord sets used at in-door construction sites or for plant maintenance jobs are examples.

These grips are for indoor use only.

#### **Benefits**

- Easily attached to Insulgrip plugs and connector bodies
- Controls cable arc-of-bend
- Provides heavy-duty strain relief
- Fits all sizes



#### **I-Grips**

Cable Diame Inches (cm)		E Inches (cm)	M Inches (cm)	Catalog Number
.32"43"	(.81-1.09)	1.25" (3.17)	4" (10.16)	07310001
.43"56"	(1.09-1.42)	1.25" (3.17)	4.75" (12.06)	07310002
.56"73"	(1.42-1.85)	1.50" (3.81)	6" (15.24)	07310003
.73"85"	(1.85-2.16)	1.50" (3.81)	6.5" (16.51)	07310004
.85"-1.00"	(2.16-2.54)	1.50" (3.81)	8" (20.32)	07310005
1.00"-1.25"	(2.54-3.17)	1.50" (3.81)	10" (25.40)	07310006

Note: E-Eye length. M-Mesh length at nominal diameter.

Eyelet hole diameter .203" (.52cm).

I-Grips should not be used on Insulgrip devices when "Seal-Tite®" weatherproof covers are to be installed.



## **Thread Adapters for Multi-Pin Connectors**

Kellems<sup>®</sup> Thread Adapters are devices formatting AN-MS connectors and other multi-pin connectors to Kellems grips with NPT threaded fittings. They are made of aluminum with internal threads and replace the connector cord clamp. These adapters permit the installation of Kellems Grips, to prevent cable or conduit pull-out and control arc-of-bend.

## **Applications**

Thread adapters allow the installation of Kellems<sup>®</sup> Grips on multi-pin connectors at electrical consoles, mobile equipment, control switches, assembly equipment and testing machines.

#### **Benefits**

- Easy installation
- Allows the use of Kellems grips
- Extends connector and cable life



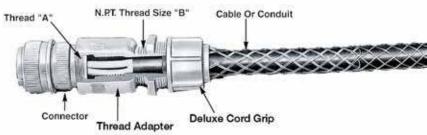
Thread Adapter 091041006

## **Thread Adapters for Multi-Pin Connectors**

	Th	read Adapter	rs		Deluxe Cord Gr	ips	Strain Relief	· Grips	Liquidtight Conduit Grips (Insulated Throat)
AN-MS Connector Size**	AN-MS Cable Clamp Number***	Thread Size A Inch		Catalog Number	Cable Diameter Range Inches (cm)	Catalog Number	Cable Diameter Range Inches (cm)	Catalog Number	Catalog Number
8S, 10S 10SL, 12, 12S 14, 14S	3057-3 3057-4 3057-6	½" x 28" 5%" x 24" 34" x 20"	3/8	091041000 091041001 091041002	.250"312" (.6379) .312"375" (.7995) .375"437" (.95-1.11)	07401001 07401002 07401003		_	_
14, 14S 16, 16S 18	3057-6 3057-8 3057-10	3/4" x 20" 7/8" x 20" 1" x 20"	1/2	091041003 091041004 091041006	.187"250" (.4763 .250"375" (.6395) .375"500" (.95-1.27) .500"625" (1.27-1.59)	07401004 07401006 07401008 07401010*	.24"32" (.6181) .32"43" (.81-1.09) .43"54" (1.09-1.37)	073031200 073031201 073031202	074093512 —
16, 16S 18 20, 22	3057-8 3057-10 3057-12	%" x 20" 1" x 20" 1%16" x 18"	3/4	091041005 091041007 091041008	.187"250" (.4763) .250"375" (.6395) .375"500" (.95-1.27) .500"625" (1.27-1.59) .625"750" (1.59-1.90)	07401011 07401013 07401015 07401017 07401018	.54"74" (1.37-1.85)	073031203	074093513
20, 22 24, 28 32 36	3057-12 3057-16 3057-20 3057-24	1¾6" x 18" 1¼6" x 18" 1¾" x 18" 2" x 18"	1	091041009 091041010 091041012 091041015	.375"500" (.95-1.27) .500"625" (1.27-1.59) .625"750" (1.59-1.90) .750"875" (1.90-2.22) .875"-1.000" (2.22-2.54)	074011195 07401019 07401021 07401023 07401025	.73"97" (1.85-2.46)	073031204	074093514
24, 28 32 36	3057-16 3057-20 3057-24	1½6" x 18" 1¾" x 18" 2" x 18"	11⁄4	091041011 091041013 091041016	.750"875" (1.90-2.22) .875"-1.000" (2.22-2.54) 1.000"-1.125" (2.54-2.86) 1.125"-1.375" (2.86-3.17)	074011251 07401026 07401027 07401028	.97"-1.25" (2.46-3.17)	073031205	074093515
32 36 40	3057-20 3057-24 3057-28	1¾" x 18" 2" x 18" 2¼" x 16"	1½	091041014 091041017 091041019	.875"-1.000" (2.22-2.54) 1.000"-1.125" (2.54-2.86) 1.125"-1.250" (2.86-3.17) 1.250"-1.375" (3.17-3.49)	07401029 07401030 07401031 07401032		_	074093516

Note: \*Cable jacket may have to be stripped to pass through connector body.

#### Example



<sup>\*\*</sup>Number stamped on connector shell.

<sup>\*\*\*</sup>Number stamped on clamp shell.



## **Strain Relief for Liquidtight Conduit**

Steel Fitting, Stainless Steel Mesh for Liquidtight Metal Conduit and PolyTuff® I Non-Metallic Conduit.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.

### **Benefits**

- Helps prevent conduit pull-out and damage at the fitting
- Reduces equipment downtime

## **Straight With Male Fitting**



	NDT				
Conduit Trade Size Inches	NPT Fitting Size Inches	Mesh Le Inches	ength (cm)	Catalog Number (Insulated)	Catalog Number (Non-insulated)
3/8	1/2	3"	(7.62)	074093511	074093401
1/2	1/2	3.5"	(8.89)	074093512	074093402
3/4	3/4	4"	(10.16)	074093513	074093403
1	1	5"	(12.70)	074093514	074093404
1¼	11⁄4	6"	(15.24)	074093515	074093405
1½	1½	6.75"	(17.14)	074093516	074093406
2	2	8"	(20.32)	074093518	074093408
2½	21/2	9.75"	(24.76)	074093520	074093410
3	3	11"	(27.94)	074093522	074093412
4	4	14"	(35.56)	074093526	_

### 90° Angle With Male Fitting



Conduit Trade Size	NPT Fitting Size	Mesh Length	Catalog Number	Catalog Number
Inches	Inches	Inches (cm	ě .	(Non-insulated)
3/8	1/2	3" (7.6	074093541	074093421
1/2	1/2	3.5" (8.3	(39) <b>074093542</b>	074093422
3/4	3/4	4" (10	.16) <b>074093543</b>	074093423
1	1	5" (12	70) <b>074093544</b>	074093424
11/4	11⁄4	6" (15	.24) <b>074093545</b>	074093425
1½	1½	6.75" (17	14) <b>074093546</b>	074093426
2	2	8" (20	.32) <b>074093548</b>	074093428
2½	2½	9.75" (24	.76) <b>074093550</b>	_
3	3	11" (27	94) <b>074093552</b>	_

Note: For use with Liquidtight Metal conduit and PolyTuff® I Non-Metallic conduit.





## **Strain Relief for Liquidtight Conduit**

Steel Fitting, Stainless Steel Mesh for Liquidtight Metal Conduit and PolyTuff® I Non-Metallic Conduit.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.

## **Straight With Chase Fitting**

Conduit	NPT		
Trade Size Inches	Fitting Size Inches	Mesh Length Inches (cm)	Catalog Number
1/2	1/2	3.5" (8.89)	07406079
3/4	3/4	4" (10.16)	07406080
1	1	5" (12.70)	07406081
11⁄4	11⁄4	6" (15.24)	07406082
1½	1½	6.75" (17.14)	07406083



## 45° Angle With Male Fitting

Conduit Trade Size Inches	NPT Fitting Size Inches	Mesh Len Inches	igth (cm)	Catalog Number (Insulated)	Catalog Number (Non-insulated)
3/8	1/2	3"	(7.62)	074093561	074093441
1/2	1/2	3.5"	(8.89)	074093562	074093442
3/4	3/4	4"	(10.16)	074093563	074093443
1	1	5"	(12.70)	074093564	074093444
11/4	11/4	6"	(15.24)	074093565	074093445
1½	1½	6.75"	(17.14)	074093566	074093446
2	2	8"	(20.32)	074093568	074093448

Note: For use with Liquidtight Metal conduit and PolyTuff® I Non-Metallic conduit.





## **Strain Relief for Liquidtight Conduit**

Steel Fitting, Stainless Steel Mesh for UL Type A Liquidtight Conduit.

## **IMPORTANT:**

Read all safety and technical data relating to this product.

Refer to pages X-61 through X-68.



### **Straight Male Hubbell Fitting**

Conduit Trade Size	NPT Fitting Size			
Inches	Inches	Inches (ci	n)	Catalog Number
3%	1/2	3.75" (9	.52)	H038CNK
1/2	1/2	4.5" (1	1.43)	H050CNK
3/4	3/4	6.25" (1	5.87)	H075CNK
1	1	7.5" (19	9.05)	H100CNK
11/4	11⁄4	9" (2	2.86)	H125CNK
1½	1½	13.5" (3	4.29)	H150CNK
2	2	14.5" (3	6.83)	H200CNK



## 90° Male Hubbell Fitting

Conduit	NPT		
Trade Size Inches	Fitting Size Inches	Mesh Length Inches (cm)	Catalog Number
3/8	1/2	3.75" (9.52)	H0389CNK
1/2	1/2	4.5" (11.43)	H0509CNK
3/4	3/4	6.25" (15.87)	H0759CNK
1	1	7.5" (19.05)	H1009CNK
1¼	1¼	9" (22.86)	H1259CNK
1½	1½	13.5" (34.29)	H1509CNK
2	2	14.5" (36.83)	H2009CNK

Wire Mesh Grip Materials

Material	Features	Product Group
Galvanized steel wire	High strength	Strain relief grips
	<ul> <li>Not subject to continuous outside environment</li> </ul>	• I-Grips
Stainless steel wire	High strength	Deluxe cord grips
(302/304)	<ul> <li>Corrosion resistant</li> </ul>	<ul> <li>Liquidtight, flexible, metal conduit grips</li> </ul>
	<ul> <li>Slightly magnetic</li> </ul>	<ul> <li>UL type A conduit grips</li> </ul>
Non-metallic strand	Superior flex life	Non-metallic deluxe cord grips
	<ul> <li>Non-conductive</li> </ul>	
	Corrosion resistant	
	<ul> <li>Moderate strength</li> </ul>	

## **Operating Temperatures**

Material	Temperature Range
Aluminum	-40°F to +300°F (-40°C to +149°C).
Aluminum Deluxe Cord Grips	-30°F to +240°F (-34°C to +115°C).
Non-Metallic Deluxe Cord Grips	-30°F to +225°F (-34°C to +107°C).
Nylon	-40°F to +225°F (-40°C to +107°C).
Nylon Fitting with Stainless Steel Mesh	-40°F to +225°F (-40°C to +107°C).
Stainless Steel	-60°F to +1000°F (-51°C to +537°C).
Stainless Steel Deluxe Cord Grips	-30°F to +240°F (-34°C to +115°C).
Neoprene (Bushings)	-30°F to +240°F (-34°C to +115°C).

## **Hazardous Locations**

	Product Categories
The product categories listed to the right are suitable	Deluxe cord grip, aluminum fitting;
for use in hazardous locations per Class I Div. 2,	Deluxe cord grip, nylon fitting;
Class II Div. 1 & 2, Class III Div. 1 & 2.	Deluxe cord grip, non-metallic;
	Sealtite conduit grips;
	Dustight strain relief grips.

## **Flammability**

Non-metallic deluxe cord grips will not support combustion. Listed below are the ratings.							
Component Rating							
Mesh grip	UL 94HB.						
Fitting	UL 94X-2.						

## **Approvals**

UL Listing and CSA Certification are indicated on appropriate product catalog pages.								
Agency UL Control Number								
Underwriters Laboratories Inc.	898D and 899D.							
UL Listed in accordance with Standard 514B for indoor/outdoor use.								

## **Wet Locations**

	Product Categories	
The products noted to the right are suitable	Deluxe cord grip, aluminum fitting;	
for use in wet locations when a listed sealing	Deluxe sealing ring cord grip;	
ring is used between box and fitting.	Deluxe cord grip, non-metallic;	
	Sealtite conduit grips;	
	Hubbell non-metallic conduit grips;	
	Cord connectors;	
	Hubbell Juniors;	
	PolyTuff <sup>®</sup> connectors;	
	Hubbell sealtite conduit connectors.	

### Form Size Definition

The term "Form Size" refers to the physical mass or overall dimensions of a cord connector. Form 1 is the smallest size, Form 8 is the largest size.

#### **Knockout Holes**

NPT Hub Size Inches	Knockout Min. to M		ecommended nes (cm)	
1/4	.540"	to	.570"	(1.37-1.45)
3/8	.671"	to	.701"	(1.70-1.78)
1/2	.859"	to	.906"	(2.18-2.30)
3/4	1.094"	to	1.141"	(2.78-2.90)
1	1.359"	to	1.406"	(3.45-3.57)
11/4	1.719"	to	1.766"	(4.37-4.49)
1½	1.969"	to	2.016"	(5.00-5.12)
2	2.453"	to	2.500"	(6.23-6.35)
2½	2.953"	to	3.000"	(7.50-7.62)
3	3.578"	to	3.625"	(9.09-9.21)

#### **Product Data**

## **Deluxe Cord Grips, Liquidtight for Insulated Cables**

Deluxe Cord Grips helps to alleviate pull tension on terminals, control cable arc-of-bend, prevent cord pull-out, and provide a liquidtight seal. They are offered with either aluminum, stainless steel or nylon fittings in a variety of configurations and NPT thread sizes. Additionally, a completely non-metallic product is offered on page X-53.

### **Application**

Deluxe Cord Grips are used indoors or outdoors to help prevent cord pull-out, and where cables are subjected to moisture, splash or submersion. Specific uses are: wiring enclosures, pendant stations, hand tools, construction, processing and material handling equipment, pumps, motors and machine tools.

#### **Benefits**

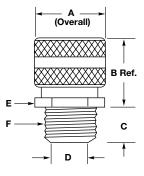
- Helps to prevent cable pull-out
- Controls cable arc-of-bend
- Provides a liquidtight seal
- Corrosion resistant stainless steel mesh with aluminum collar

## **Deluxe Cord Grips Fitting Dimensions**

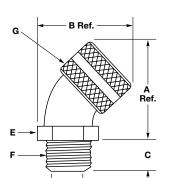
## **Straight Hubbell Connectors**

		Aluminu	um, Inch	nes (cm)				Nylon, Inches (cm)					Stainless Steel, Inches (cm)							
F NPT		Α	В	С	D Throat	Е		A	В	С	D Throat	Е		A		В	С	D Throat	Е	
Inches	Forn	n Dia.	Ref.		Dia.	A/C*	A/F*	Dia.	Ref.		Dia.	A/C*	A/F*	A/C*	A/F*	Ref.		Dia.	A/C*	A/F*
<b>%</b> -18	1	.88" (2.24)	.90" (2.29)	.46" (1.17)	.44" (1.12)	.99" (2.51)	.88" (2.24)	1.00" (2.54)	1.10" (2.79)	.43" (1.09)	.45" (1.14)	1.00" (2.54)	.93" (2.36)	1.01" (2.57)	.88" (2.24)	.90" (2.29)	.46" (1.17)	.45" (1.14)	.87" (2.21)	.75" (1.90)
1/2-14	1	.88" (2.24)	.90" (2.29)	.46" (1.17)	.44" (1.12)	.99" (2.51)	.88" (2.24)	1.00" (2.54)	1.10" (2.79)	.43" (1.09)	.45" (1.14)	1.00" (2.54)	.93" (2.36)	_	_	_	_	_	_	_
1/2-14	2	1.13" (2.87)	1.10" (2.79)	.55" (1.40)	.64" (1.63)	1.11" (2.82)	1.00" (2.54)	1.32" (3.35)	1.50" (3.81)	.53" (1.35)	.58" (1.47)	1.25" (3.17)	1.12" (2.84)	1.30" (3.30)	1.13" (2.87)	1.10" (2.79)	.54" (1.37)	.63" (1.60)	1.16" (2.95)	1.00" (2.54)
1/2-14	3	1.38" (3.51)	1.50" (3.81)	.55" (1.40)	.64" (1.63)	1.40" (3.56)	1.25" (3.17)	_	_	_	_	_	_	_	_	_	_	_	_	_
3/4-14	2	1.13" (2.87)	1.10" (2.79)	.55" (1.40)	.64" (1.63)	1.29" (3.28)	1.13" (2.87)	_	_	_	_	_	-	_	_	-	_	_	_	_
34-14	3	1.38" (3.51)	1.50" (3.81)	.55" (1.40)	.82" (2.08)	1.40" (3.56)	1.25" (3.17)	1.56" (3.96)	1.60" (4.06)	.55" (1.40)	.77" (1.96)	1.44" (3.66)	1.31" (3.33)	1.59" (4.04)	1.38" (3.51)	1.30" (3.30)	.56" (1.42)	.81" (2.06)	1.44" (3.66)	1.25" (3.17)
1-11½	3	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_	_	_
1-11½	4	1.75" (4.44)	1.60" (4.06)	.71" (1.80)	1.02" (2.59)	1.81" (4.60)	1.62" (4.11)	1.88" (4.78)	1.75" (4.44)	.70" (1.78)	1.01" (2.57)	1.84" (4.67)	1.63" (4.14)	2.02" (5.13)	1.75" (4.44)	1.40" (3.56)	.70" (1.78)	1.03" (2.62)	1.88" (4.78)	1.63" (4.14)
1-11½	5	2.31" (5.87)	1.70" (4.32)	.66" (1.68)	1.01" (2.57)	2.28" (5.79)	2.00" (5.08)	_	_	_	_	_	_	_	_	_	_	_	_	_
11/4-111/2	5	2.31" (5.87)	1.70" (4.32)	.74" (1.88)	1.26" (3.20)	2.28" (5.79)	2.12" (5.38)	_	_	_	_	_	_	_	_	_	_	_	_	_
1½-11	5	2.31" (5.87)	1.70" (4.32)	.74" (1.88)	1.38" (3.51)	2.28" (5.79)	2.12" (5.38)	_	_	_	_	_	_	_	_	_	_	_	_	_
1½-11½	6	3.00" (7.62)	2.20" (5.59)	.75" (1.90)	1.50" (3.81)	2.97" (7.54)	2.75" (6.98)	_	_	_	_	_	_	_	_	_	_	_	_	_
2-11½	6	3.00" (7.62)	2.20" (5.59)	.80" (2.03)	1.92" (4.88)	3.24" (8.24)	3.00" (7.62)	_	_	_	_	_	_	_	_	_	_	_	_	_
2-11½	7	3.85" (9.78)	2.70" (6.86)	.88" (2.24)	1.94" (4.93)	4.05" (10.29)	3.75" (9.52)	_	=	_	=	_	_	_	=	_	_	_	=	_
2½-8	7	3.85" (9.78)	2.70" (6.86)	1.30" (3.30)	2.32" (5.89)	4.34" (11.02)	4.02" (10.21)							_		_				
2½-8	8	4.75" (12.06)	2.70" (6.86)	1.25" (3.17)	2.38" (6.05)	4.86" (12.34)	4.50" (11.43)	_	_		_			_	_	_			_	
3-8	7	3.85" (9.78)	2.70" (6.86)	1.30" (3.30)	2.54" (6.45)	4.34" (11.02)	4.01" (10.21)	_	_	_	_	_	_	_	_	_	_	_	_	_
3-8	8	4.50" (11.43)	2.70" (6.86)	1.38" (3.51)	3.00" (7.62)	4.86" (12.34)	4.50" (11.43)	_	_	_	_	_	_	_	_	_	_	_	_	_

Note: \*A/C— Across Corners; A/F—Across Flats.



## **Deluxe Cord Grips Fitting Dimensions**



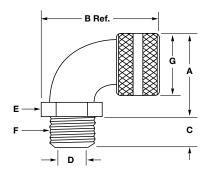
## 45° Hubbell Connectors

		Aluminur	n, Inches (cm)						
F		Α	В	С	D		E	G	
NPT Inches	Form	Ref.	Ref.	Ü	Throat Dia.	Across Comers	Across Flats	Dia.	
1/2-14	2	2.00" (5.08)	1.90" (4.83)	.550" (1.40)	.560" (1.42)	1.270" (3.23)	1.110" (2.79)	1.125" (2.86)	
3/4-14	3	2.30" (5.84)	2.50" (6.53)	.560" (1.42)	.750" (1.90)	1.480" (3.76)	1.281" (3.25)	1.375" (3.49)	
1-11½	4	2.60" (6.60)	2.80" (7.11)	.700" (1.78)	1.000" (2.54)	1.690" (4.29)	1.500" (3.81)	1.750" (4.44)	
11/4-111/2	5	3.90" (9.91)	3.90" (9.91)	.740" (1.88)	1.250" (3.17)	2.45" (6.22)	2.125" (5.40)	2.310" (5.87)	
1½-11½	5	3.90" (9.91)	3.90" (9.91)	.740" (1.88)	1.500" (3.81)	2.45" (6.22)	2.125" (5.40)	2.310" (5.87)	

## 90° Hubbell Connectors

		Aluminu	m, Inches (	cm)					Nylon, Iı	nches (cm)					
F		Α	В	С	D		E	G	Α	В	С	D .		E	G
NPT Inches	Form		Ref.		Throat Dia.	A/C*	A/F*	Dia.		Ref.		Throat Dia.	A/C*	A/F*	Dia.
<b>%</b> -18	1	1.27" (3.23)	2.00" (5.08)	.460" (1.17)	.440" (1.12)	1.15" (2.92)	1.10" (2.79)	.875" (2.22)	_	_	_	_	_	_	_
1/2-14	2	1.56" (3.96)	2.30" (5.84)	.500" (1.27)	.546" (1.39)	1.30" (3.30)	1.13" (2.87)	1.125" (2.86)	1.41" (3.58)	2.50" (6.35)	.550" (1.40)	.575" (1.46)	1.23" (3.12)	1.12" (2.82)	1.315" (3.34)
3/4-14	3	1.79" (4.55)	2.80" (7.11)	.560" (1.42)	.765" (1.94)	1.49" (3.78)	1.31" (3.33)	1.375" (3.49)	1.65" (4.19)	2.81" (7.14)	.560" (1.42)	.765" (1.94)	1.42" (3.61)	1.29" (3.28)	1.560" (3.96)
1-11½	4	2.08" (5.28)	3.20" (8.13)	.700" (1.78)	1.000" (2.54)	1.70" (4.32)	1.50" (3.81)	1.750" (4.44)	1.99" (5.05)	3.30" (8.38)	.700" (1.78)	1.010" (2.57)	1.82" (4.62)	1.60" (4.06)	1.875" (4.76)
11/4-111/2	5	3.18" (8.08)	4.30" (10.92)	.730" (1.85)	1.260" (3.20)	2.47" (6.27)	2.15" (5.46)	2.310" (5.87)		_	_	_	_	_	-
1½-11½	5	3.18" (8.08)	4.30" (10.92)	.750" (1.92)	1.500" (3.81)	2.47" (6.27)	2.15" (5.46)	2.310" (5.87)		_	_	_	_	_	_
2-11½	6	3.51" (8.92)	5.50" (13.97)	.800" (2.03)	1.920" (4.88)	2.98" (7.57)	2.78" (7.06)	3.000" (7.62)	_	_	_	_	_	_	_

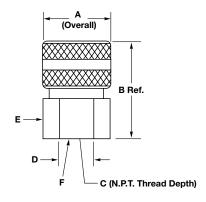
Note: \*A/C - Across Corners; A/F - Across Flats.



## **Deluxe Cord Grips Fitting Dimensions**

### **Female Hubbell Connectors**

		Aluminum	, Inches (cm)				
F		Α	В	С	D		Е
NPT Inches	Form	Dia.	Ref.		Throat Dia.	Across Comers	Across Flats
<b>3</b> /8-18	1	.88" (2.24)	1.40" (3.56)	.560" (1.42)	.44" (1.12)	.94" (2.39)	.81" (2.06)
1/2-14	2	1.13" (2.87)	1.80" (4.57)	.560" (1.42)	.63" (1.60)	1.15" (2.92)	1.00" (2.54)
34-14	2	1.13" (2.87)	2.10" (5.33)	.750" (1.90)	.63" (1.60)	1.44" (3.66)	1.25" (3.17)
1-11½	4	1.75" (4.44)	2.30" (5.84)	.880" (2.24)	1.10" (2.79)	1.88" (4.78)	1.63" (4.14)
11/4-111/2	5	2.31" (5.87)	2.80" (7.11)	.950" (2.41)	1.43" (3.63)	2.64" (6.71)	2.29" (5.82)
1½-11½	5	2.31" (5.87)	2.80" (7.11)	.950" (2.41)	1.43" (3.63)	2.64" (6.71)	2.29" (5.82)



## **Product Data**

## **Dust-Tight Strain Relief Grips for Insulated Cables**

Kellems<sup>®</sup> Strain Relief Grips connect flexible cord or bus drop cable to electrical enclosures. For indoor use only, they are available with either insulated or non-insulated aluminum fittings, and feature single weave, galvanized steel mesh grips with patented wide range mesh construction. They come with a locknut and a neoprene gasket that provides a dust tight seal.

## **Application**

Used to connect electrical cable to power boxes, cabinets, panel boards, power centers, machine tools and with bus drop systems.

## **Benefits**

- Helps prevent cord or cable pull-out
- Provides a dust tight seal
- Easy installation

- Patented mesh construction
- One piece design

## Strain Relief Grips for Liquidtight Flexible Metal and PolyTuff® I Non-Metallic Conduit

Kellems Liquidtight, Flexible Metal Conduit Grips are offered with high quality Hubbell plated steel fittings in a wide variety of NPT sizes and configurations, either insulated or non-insulated. The addition of a stainless steel mesh to these fittings makes them stronger than the conduit itself. Kellems Conduit Grips helps prevent conduit pull-out from the connecting fitting that is subject to stress, pull tension, vibration, motion or strain. They promote safe electrical systems and reduce equipment downtime.

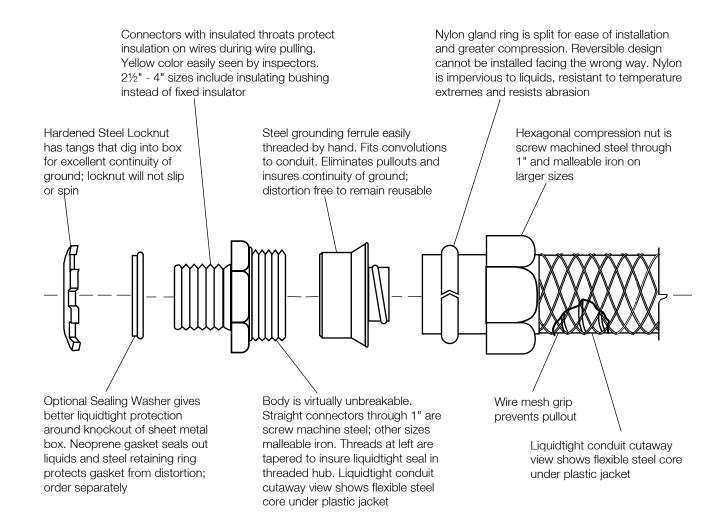
### **Application**

Kellems Conduit Grips are used in the wiring of machine tools, motors, molding equipment, transformers, weaving and paper machines, fans, lighting, bakeries, breweries, food processing, chemical plants, dairies, mines and any application that requires Liquidtight Conduit.

#### **Benefits**

- Helps prevent conduit pull-out and damage at the fitting
- Reduces equipment downtime
- Liquidtight fittings
- Easily installed
- Stainless steel grip resists corrosion

Kellems Conduit Grips are suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class III Div. 1 & 2 of the National Electric Code.



## **Liquidtight Conduit Grip Fitting Dimensions, Inches**

## Straight with Male Fitting

Dimer	nsions, Ir	nches						
Trade	Α	В	С		D		E	
Size Inches	s Ref.	Ref.	A/C*	A/F*	Throat Dia.	A/C*	A/F*	Catalog Number
3/8	1.43"	.59"	1.20"	1.06"	.61"	1.07"	.93"	074093401
1/2	1.43"	.59"	1.34"	1.19"	.61"	1.22"	1.06"	074093402
3/4	1.56"	.59"	1.55"	1.37"	.84"	1.43"	1.25"	074093403
1	1.68"	.66"	1.95"	1.69"	1.06"	1.73"	1.56"	074093404
11/4	2.03"	.63"	2.39"	2.06"	1.37"	2.36"	2.08"	074093405
1½	2.21"	.63"	2.72"	2.38"	1.53"	2.79"	2.48"	074093406
2	2.28"	.69"	3.08"	2.87"	2.06"	3.32"	2.90"	074093408

## Straight with Male Fitting with Insulated Throat

Dimen	sions, Ir	nches						
Trade	Α	В	С		D	E		
Size Inches	Ref.	Ref.	A/C*	A/F*	Throa Dia.	A/C*	A/F*	Catalog Number
3/8	1.50"	.66"	1.20"	1.06"	.57"	1.07"	.93"	074093511
1/2	1.50"	.66"	1.34"	1.19"	.57"	1.22"	1.06"	074093512
3/4	1.62"	.66"	1.55"	1.38"	.78"	1.43"	1.25"	074093513
1	1.75"	.72"	1.95"	1.69"	.98"	1.73"	1.56"	074093514
11/4	2.09"	.69"	2.39"	2.06"	1.29"	2.36"	2.08"	074093515
1½	2.28"	.69"	2.72"	2.37"	1.53"	2.79"	2.48"	074093516
2	2.34"	.75"	3.08"	2.87"	1.95"	3.32"	2.90"	074093518
2½	3.56"	1.06"	3.92"	3.62"	2.42"	3.85"	3.60"	074093520
3	3.81"	1.06"	4.70"	4.31"	3.01"	4.65"	4.33"	074093522
4	3.81"	1.06"	5.75"	5.31"	3.96"	5.75"	5.39"	074093526

## 45° Angle with Male Fitting

Dimer	nsions, l	nches							
Trade	Н	J	K	L	L		M N		
Size Inche	s	Ref.		A/C*	A/F*	Throat Dia.	A/C*	A/F*	Catalog Number
3/8	1.19"	1.28"	.59"	1.20"	1.06"	.60"	1.16"	1.02"	074093441
1/2	1.19"	1.28"	.59"	1.34"	1.19"	.61"	1.21"	1.06"	074093442
3/4	1.19"	1.43"	.59"	1.55"	1.45"	.84"	1.50"	1.32"	074093443
1	1.38"	1.53"	.66"	1.95"	1.69"	1.05"	1.82"	1.59"	074093444
11/4	1.42"	1.69"	.63"	2.39"	2.06"	1.37"	2.32"	2.03"	074093445
1½	1.66"	2.00"	.66"	2.72"	2.38"	1.60"	2.62"	2.29"	074093446
2	1.69"	2.25"	.66"	3.08"	2.88"	2.05"	3.21"	2.80"	074093448

## 45° Angle with Male Fitting with Insulated Throat

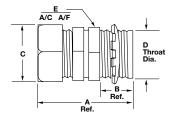
Dimen	sions, I	nches							
Trade Size	Н	J	K	L		M - Throa	. N		- Catalog
Inches	5	Ref.		A/C*	A/F*	Dia.	A/C*	A/F*	Number
3/8	1.25"	1.28"	.66"	1.20"	1.06"	.57"	1.16"	1.02"	074093561
1/2	1.25"	1.28"	.66"	1.34"	1.19"	.57"	1.21"	1.06"	074093562
3/4	1.25"	1.44"	.66"	1.55"	1.45"	.78"	1.50"	1.32"	074093563
1	1.44"	1.53"	.72"	1.95"	1.69"	.98"	1.82"	1.59"	074093564
11⁄4	1.48"	1.69"	.69"	2.39"	2.06"	1.29"	2.32"	2.03"	074093565
1½	1.72"	2.00"	.72"	2.72"	2.38"	1.53"	2.62"	2.29"	074093566
2	1.75"	2.25"	.72"	3.08"	2.87"	1.95"	3.21"	2.80"	074093568

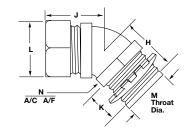
## 90° Angle with Male Fitting

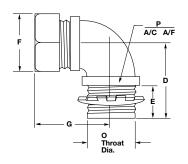
Dimen	ısions, lı	nches							
Trade	D	Е		F	G	0		Р	
Size Inches	3		A/C*	A/F*	Ref.	Throat Dia.	A/C*	A/F*	Catalog Number
3/8	1.31"	.59"	1.20"	1.06"	1.44"	.60"	1.13"	.99"	074093421
1/2	1.31"	.59"	1.34"	1.12"	1.44"	.61"	1.21"	1.00"	074093422
3/4	1.44"	.59"	1.55"	1.45"	1.63"	.83"	1.48"	1.29"	074093423
1	1.78"	.66"	1.95"	1.60"	2.19"	1.05"	1.80"	1.57"	074093424
11/4	1.97"	.63"	2.39"	2.06"	2.50"	1.37"	2.32"	2.02"	074093425
1½	2.19"	.66"	2.72"	2.38"	2.69"	1.61"	2.58"	2.25"	074093426
2	2.53"	.66"	3.08"	2.87"	3.25"	2.05"	3.14"	2.75"	074093428

## 90° Angle with Male Fitting with Insulated Throat

Dimen	sions, I	nches							
	D	E		F	G	0		Р	
Size Inches			A/C*	A/F*	Ref.	Throat Dia.	A/C*	A/F*	Catalog Number
3/8	1.38"	.66"	1.20"	1.06"	1.44"	.60"	1.13"	.99"	074093541
1/2	1.38"	.66"	1.34"	1.12"	1.44"	.57"	1.21"	1.00"	074093542
3/4	1.50"	.66"	1.55"	1.45"	1.63"	.78"	1.48"	1.29"	074093543
1	1.84"	.66"	1.95"	1.60"	2.19"	.98"	1.80"	1.57"	074093544
11/4	2.03"	.69"	2.39"	2.06"	2.50"	1.29"	2.32"	2.02"	074093545
1½	2.25"	.69"	2.72"	2.38"	2.69"	1.53"	2.58"	2.20"	074093546
2	2.59"	.72"	3.08"	2.87"	3.25"	1.95"	3.14"	2.75"	074093548
2½	3.44"	1.00"	3.92"	3.63"	4.25"	2.42"	3.78"	3.50"	074093550
3	3.75"	1.00"	4.70"	4.31"	4.87"	3.01"	4.64"	4.30"	074093552









## Strain Relief for UL Type A, Flexible, Liquidtight Conduit

Kellems Grips for UL Type A, non-metallic, flexible, liquidtight conduit are available in straight and 90° male and feature a high quality Hubbell plated steel or malleable iron fitting, complete with a sealing O-ring, lock nut and stainless steel mesh. These grips increase the retention of the conduit in the fitting, control its arc-of-bend and provide a liquidtight seal.

## **Application**

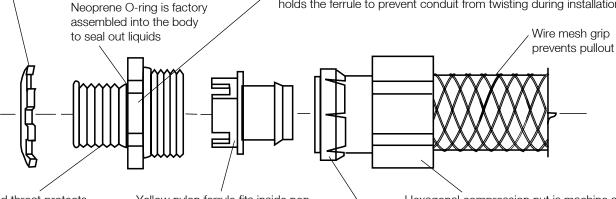
These grips are used on UL Type A non-metallic conduit connections at limit switches, motor boxes, panel boards, control stations and on all types of machinery and machine tools.

Steel Locknut has tangs that dig into box for excellent continuity of ground; locknut will not slip or spin

#### **Benefits**

- Provides a liquidtight seal
- Helps prevent conduit pull-out
- Reduces conduit cutting, kinking, fraying and splitting at the fitting
- Easily installed

Body is virtually unbreakable. Straight connectors through 1" are screw machine steel; other sizes are malleable iron. Threads are tapered to insure liquidtight seal when used in threaded hub; octagonal shape inside holds the ferrule to prevent conduit from twisting during installation



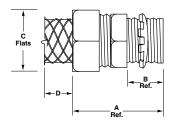
Insulated throat protects insulation on wires during pulling; yellow color easily seen by inspectors

Yellow nylon ferrule fits inside nonmetallic conduit to hold the shape; barb in designed to assure liquidtight seal even with non-square cut; ferrule is keyed to fit into body to prevent conduit twisting Hexagonal compression nut is machine steel through 1" malleable iron on larger sizes; tapered interior compresses sleeve over conduit sealing out liquids and preventing pullout

Yellow nylon sleeve installs over conduit; six slits in sleeve permit tight compression onto conduit as compression nut is tightened

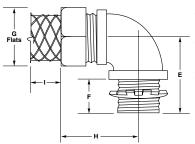
### Dimensional Charts For UL Type A, Liquidtight Conduit Grip Fittings

#### Straight with Male Fitting with Insulated Throat



Dimensions	Inches (cm)				
Trade Size NPT Inches	Α	В	С	D	Catalog Number
3/8	1.922" (4.88)	.594" (1.51)	1.156" (2.94)	3.75" (9.52)	H038CNK
1/2	1.922" (4.88)	.594" (1.51)	1.250" (3.17)	4.50" (11.43)	H050CNK
3/4	2.016" (5.12)	.594" (1.51)	1.500" (3.81)	6.25" (15.87)	H075CNK
1	2.157" (5.48)	.719" (1.83)	1.844" (4.68)	7.50" (19.05)	H100CNK
11/4	2.219" (5.64)	.750" (1.91)	2.312" (5.87)	9.00" (22.86)	H125CNK
1½	2.344" (5.95)	.750" (1.91)	2.578" (6.55)	13.50" (34.29)	H150CNK
2	2.406" (6.11)	.750" (1.91)	3.187" (8.09)	14.50" (36.83)	H200CNK

### 90° Angle with Male Fitting with Insulated Throat



Dimensions	Inches (cm)					
Trade Size NPT Inches	E	F	G	Н	1	Catalog Number
3/8	1.250" (3.18)	.594" (1.51)	1.156" (2.94)	1.453" (3.69)	3.75" (9.52)	H0389CNK
1/2	1.281" (3.25)	.594" (1.51)	1.250" (3.17)	1.453" (3.69)	4.50" (11.43)	H0509CNK
3/4	1.438" (3.65)	.594" (1.51)	1.500" (3.81)	1.000" (2.54)	6.25" (15.87)	H0759CNK
1	1.750" (4.44)	.719" (1.83)	1.844" (4.68)	2.125" (5.40)	7.50" (19.05)	H1009CNK
11/4	1.969" (5.00)	.750" (1.91)	2.312" (5.87)	2.344" (5.95)	9.00" (22.86)	H1259CNK
1½	2.250" (5.71)	.750" (1.91)	2.578" (6.55)	2.500" (6.35)	13.50" (34.29)	H1509CNK
2	2.531" (6.43)	.750" (1.91)	3.187" (8.09)	2.781" (7.06)	14.50" (36.83)	H2009CNK
	, ,	, ,	, ,	, ,	, ,	

## **Features and Benefits**

### **Cord Connectors**

Hubbell has the broadest line and the widest choice of materials in the industry. NPT hub sizes from 1/4" to 3" in straight male end, 90°, 45°, female and underground feed connectors. They are available in your choice of aluminum, plated steel, nylon and stainless steel.

The zinc-plated steel cord connectors offers the strength of steel and the corrosion resistance of zinc-plating. These heavy-duty connectors hold up to most manufacturing chemicals including acid solutions, solvents and other corrosive materials.

Their machined steel nut and body allows for tightening the compression nut and NPT hub without worrying about stripping the threads. For larger size cord, NPT hub sizes 1" to 2", Hubbell utilizes malleable iron connectors which provide excellent holding and liquidtight performance.

Hubbell's nylon cord connectors resist most common industrial corrosives and provide highly effective pullout protection in a lightweight design. They are ideal for any application where weight, conductivity or corrosion may be an issue. They're available in NPT hub sizes from ½" to 1".

Stainless steel cord connectors provide superior strength and corrosion resistance for industrial and military applications. They are machined from 300 series stainless steel and come in ¼" to 1", NPT hub sizes.





#### Liquidtight Seal

- Lubricated neoprene bushing compresses easily for a liquidtight seal and added pull-out protection
- The connector body is a one-piece design with machined threads; a tapered interior seats the bushing evenly for a liquidtight seal



#### **Connector Body**

 Machined threads provide a strong positive seal; the tapered interior dome easily drives the bushing into the connector body



#### Connector Identification

 The patented GOTCHA® ring incorporates a split hinge design to prevent friction and provide strain relief, also color-coded for sizing identification



#### Comprehensive Offering

- Hubbell offers a full line of machined aluminum cord connectors in NPT hub sizes ¼" through 1" and cast aluminum 1" to 3"
- They provide durable performance and a clean attractive look without adding unwanted weight; NPT hub sizes ¼" to 1" feature an attractive knurled finish which makes them easy to handle



UL Listed to Type 4, 4X, 12 and 13

## **Straight Male Cord Connectors**

Form Size 1-3

IP66\*



Stra		

Sti	aight Male							
	Cord Dia. Inches (mm)	Form Size	Color Code	Machined Aluminum	Machined Zinc- Plated Steel	Stainless Steel	Nylon Gray	Nylon Black
1/4	.06"13" (1.6-3.2) .13"19" (3.2-4.7) .19"25" (4.7-6.3) .25"31" (6.3-7.9) .31"38" (7.9-9.5) .38"44" (9.5-11)	F1	Green Orange Red Black White Blue	SHC1002 SHC1003 SHC1004 SHC1005**	- - - - -	- SHC1003SS SHC1004SS - -	SHC1001CR SHC1002CR SHC1003CR SHC1004CR SHC1005CR SHC1006CR	- - - - SHC2005CR
3/8	.06"13" (1.6-3.2) .13"19" (3.2-4.7) .19"25" (4.7-6.3) .25"31" (6.3-7.9) .31"38" (7.9-9.5) .38"44" (9.5-11.0)	F1	Green Orange Red Black White Blue	SHC1007 SHC1008 SHC1009 SHC1010 SHC1011 SHC1012		- SHC1009SS - SHC1011SS SHC1012SS	SHC1008CR SHC1009CR SHC1010CR SHC1011CR SHC1011CR	SHC2008CR SHC2010CR SHC2011CR SHC2012CR
/2	.19"25" (4.7-6.3) .25"31" (6.3-7.9) .31"38" (7.9-9.5) .38"44" (9.5-11.0)	F1	Red Black White Blue	SHC1015 SHC1016 SHC1017 SHC1018	- - -	- - -	_ _ _	- - -
1/2	.06"13" (1.6-3.2) .13"19" (3.2-4.7) .19"25" (4.7-6.3) .25"38" (6.39.7) .38"50" (9.7-12.7) .50"63" (12.7-15.9)	F2	Green Orange Red White Blue Brown	SHC1019 SHC1020 SHC1021 SHC1022 SHC1023 SHC1024	HC1020ZP SHC1021ZP SHC1022ZP SHC1023ZP SHC1024ZP	- SHC1020SS SHC1021SS SHC1022SS SHC1023SS SHC1024SS	SHC1019CR SHC1020CR SHC1021CR SHC1022CR SHC1023CR SHC1024CR**	- SHC2021CR SHC2022CR SHC2023CR SHC2024CR**
	.38"50" (9.7-12.7)		Blue	SHC1025	_	_	_	_
1/2	.50"63" (12.7-15.9)	F3	Brown	SHC1026	_	_	_	_
	.63"75" (15.9-19.0)		Yellow	SHC1027**	SHC1027ZP**	-	_	_
	.75"88" (19.0-22.2)		Orchid	SHC1028**	SHC1028ZP**			_
	.06"13"(1.6-3.2)		Green	SHC1029		_	_	_
	.13"19"(3.2-4.7)		Orange	SHC1030	SHC1030ZP	_	_	_
3/4	.19"25"(4.7-6.3)	F2	Red White	SHC1031	SHC1031ZP	_	_	_
	.25"38"(6.3-9.7) .38"50" (9.7-12.7)		White Blue	SHC1032 SHC1033	SHC1032ZP SHC1033ZP	_	_	_
	.50"63" (12.7-15.9)		Brown	SHC1033	SHC1033ZP SHC1034ZP	_	_	_
	.38"50" (9.5-12.7)		Blue	-	SHC1035ZP	SHC1035SS	SHC1035CR	SHC2035CR
	.50"63" (12.7-15.9)		Brown	SHC1036	_	SHC1036SS	SHC1036CR	SHC2036CR
4	.63"75" (15.9-19.0)	F3	Yellow	SHC1037	SHC1037ZP	SHC1037SS	SHC1037CR	SHC2037CR
	.75"88" (19.0-22.2)		Orchid	SHC1038**	SHC1038ZP**	SHC1038SS**	SHC1038CR**	SHC2038CR**
	.50"63" (12.7-15.9)		Brown	_	SHC1097ZP	_	_	_
1	.63"75" (15.9-19.0)	F3	Yellow	_	SHC1098ZP	_	_	_
	.75"88" (19.0-22.2)		Orchid	_	SHC1099ZP	_	_	_
	.38"50" (9.7-12.7)		Blue	SHC1039	_	_	SHC1039CR	_
	.50"63" (12.7-15.9)		Brown	SHC1040	_	_	SHC1040CR	SHC2040CR
4	.63"75" (15.9-19.0)	Ε4	Yellow	SHC1041	_	SHC1041SS	SHC1041CR	SHC2041CR
1	.75"88" (19.0-22.2)	F4	Orchid	SHC1042	_	SHC1042SS	SHC1042CR	SHC2042CR
	.88"-1.00"(22.2-25.4)		Gray	SHC1043	SHC1043ZP	SHC1043SS	SHC1043CR	SHC2043CR
	1.00"-1.13" (25.4-28.6	3)	Pink	SHC1044**	_	SHC1044SS**	SHC1044CR**	SHC2044CR**

Note: See pages X-78 to X-88 for technical information and dimensional drawings.

<sup>\*</sup>IP66 Suitability when used with optional metal clad O-ring, see page X-75 for additional information.

<sup>\*\*</sup>Cable Jacket may have to be stripped to pass through connector body.

Form 4 aluminum and plated steel nuts are machined, bodies are cast aluminum.

Locknuts sold separately. See page X-75 for additional information.



Type 4, 4X, 12 and 13

**Straight Male Cord Connectors** 

IP66\*

Form Size 5-8





## **Straight Male**

Ou a.,	giit iviaio				
NPT Hub Size	Cord Diameter Inches (mm)	Form Size	Cast Aluminum	Malleable Iron	
1	.88"-1.00" (22.2-25.4) 1.00"-1.13" (25.4-28.6) 1.13"-1.25" (28.6-31.7) 1.25"-1.38" (31.7-34.9)	F5	SHC1046 SHC1047** SHC1048** SHC1049**	_ _ _ _	
1¼	.75"88" (19.0-22.2) .88"-1.00" (22.2-25.4) 1.00"-1.13" (25.4-28.6) 1.13"-1.25" (28.6-31.7) 1.25"-1.38" (31.7-34.9)	F5	SHC1050 SHC1051 SHC1052 SHC1053 SHC1054**	– SHC1052ZP SHC1053ZP SHC1054ZP	
1½	.75"88" (19.0-22.2) .88"-1.00" (22.2-25.4) 1.00"-1.13" (25.4-28.6) 1.13"-1.25" (28.6-31.7) 1.25"-1.38" (31.7-34.9)	F5	SHC1055 SHC1056 SHC1057 SHC1058 SHC1059	— — SHC1057ZP SHC1058ZP SHC1059ZP	
1½	1.38"-1.50" (34.9-38.1) 1.50"-1.63" (38.1-41.3) 1.63"-1.75" (41.3-44.4) 1.75"-1.88" (44.4-47.6)	F6	SHC1061 SHC1062** SHC1063** SHC1064**	_ _ _ _	
2	1.25"-1.38" (31.7-34.9) 1.38"-1.50" (34.9-38.1) 1.50"-1.63" (38.1-41.3) 1.63"-1.75" (41.3-44.4) 1.75"-1.88" (44.4-47.6)	F6	SHC1065 SHC1066 SHC1067 SHC1068 SHC1069	- - - - -	
2	1.69"-1.81" (42.9-46.0) 1.81"-1.94" (46.0-49.2) 1.94"-2.06" (49.2-52.4) 2.06"-2.19" (52.4-55.6) 2.19"-2.31" (55.6-58.7)	F7	SHC1070 SHC1071 SHC1072** SHC1073** SHC1074**	- - - - -	
2½	1.69"-1.81" (42.9-46.0) 1.81"-1.94" (46.0-49.2) 1.94"-2.06" (49.2-52.4) 2.06"-2.19" (52.4-55.6) 2.19"-2.31" (55.6-58.7) 2.31"-2.44" (58.7-61.9)	F7	SHC1076 SHC1077 SHC1078 SHC1079 SHC1080 SHC1081**	- - - - - -	
3	1.69"-1.81" (42.9-46.0) 1.94"-2.06" (49.2-52.4) 2.06"-2.19" (52.4-55.6) 2.19"-2.31" (55.6-58.7) 2.31"-2.44" (58.7-61.9)	F7	SHC1086 SHC1088 SHC1089 SHC1090 SHC1091	- - - - -	
3	2.44"-2.63" (61.9-66.7) 2.63"-2.81" (66.7-71.4) 2.81"-3.00" (71.4-76.2) 3.00"-3.25" (76.2-82.5)	F8	SHC1092 SHC1093 SHC1094 SHC1095**	_ _ _	

Note: See pages X-78 to X-88 for technical information and dimensional drawings.

<sup>\*\*</sup>P66 Suitability when used with optional metal clad O-ring, see page X-75 for additional information.

\*\*Cable jacket may have to be stripped to pass through connector body.

Locknuts sold separately. See page X-75 for additional information.



UL Listed to Type 4, 4X, 12 and 13

## 45° and 90° Male Cord Connectors

Form Size 1-6













### 90° Male

00	widic				772-0				
NPT Hub Size	Cord Diamete Inches (mm)	er	Form Size	Color Code	Machined Aluminum†	Machined Zinc- Plated Steel∆	Cast Aluminum	Nylon Gray	Nylon Black
3/8	.25"31" .31"38" .38"44"	(6.3-7.9) (7.9-9.5) (9.5-11.0)	F1	Black White Blue	NHC1010 NHC1011 NHC1012	_ _ _	- - -	_ _ _	_ _ _
1/2	.06"13" .13"19" .19"25" .25"38" .38"50" .50"63"	(1.6-3.2) (3.2-4.7) (4.7-6.3) (6.3-9.7) (9.7-12.7) (12.7-15.9)	F2	Green Orange Red White Blue Brown	— NHC1020 NHC1021 NHC1022 NHC1023 NHC1024**	 NHC1021ZP NHC1022ZP NHC1023ZP NHC1024ZP**	- - - - -	HC1020CR NHC1021CR NHC1022CR NHC1023CR NHC1024CR**	- - NHC2022CR NHC2023CR NHC2024CR**
3/4	.38"50" .50"63" .63"75" .75"88"	(9.7-12.7) (12.7-15.9) (15.9-19.0) (19.0-22.2)	F3	Blue Brown Yellow Orchid	NHC1035 NHC1036 NHC1037 NHC1038	NHC1035ZP NHC1036ZP NHC1037ZP NHC1038ZP	- - -	NHC1035CR NHC1036CR NHC1037CR NHC1038CR	- - -
1	.50"63" .63"75" .75"88" .88"-1.00" 1.00"-1.13"	(12.7-15.9) (15.9-19.0) (19.0-22.2) (22.2-25.4) (25.4-28.7)	F4	Brown Yellow Orchid Gray Pink	NHC1040 NHC1041 NHC1042 NHC1043** NHC1044**	_ NHC1041ZP _ _ _ _	- - - -	— NHC1041CR NHC1042CR NHC1043CR —	_ NHC2041CR NHC2042CR** _ _
11/4	.88"-1.00" 1.00"-1.13" 1.13"-1.25" 1.25"-1.38"	(22.2-25.4) (25.4-28.6) (28.6-31.7) (31.7-34.9)	F5	_ _ _ _	- - - -	- - - -	NHC1051 NHC1052 NHC1053** NHC1054**	_ _ _	_ _ _ _
1½	1.00"-1.13" 1.13"-1.25" 1.25"-1.38"	(25.4-28.6) (28.6-31.7) (31.7-34.9)	F5	_ _ _	- - -	= =	NHC1057 — NHC1059	=	- - -
2	1.38"-1.50"	(34.9-38.1)	F6	_	_	_	NHC1066	_	_







#### 45° Male

70	IVIGIC					F-5-485-1	111-70-10-	
NPT Hub Size	Cord Diamet Inches (mm)		Form Size	Color Code	Machined Aluminum†	Machined Zinc- Plated Steel∆	Cast Aluminum	
1/2	.19"25" .25"38" .38"50" .50"63"	(4.7-6.3) (6.3-9.7) (9.7-12.7) (12.7-15.9)	F2	Red White Blue Brown	VHC1021 VHC1022 VHC1023 VHC1024**	VHC1022ZP VHC1023ZP VHC1024ZP**		
3/4	.38"50" .50"63" .63"75"	(9.7-12.7) (12.7-15.9) (15.9-19.0)	F3	Blue Brown Yellow	VHC1035 VHC1036 VHC1037**	_ _ _	- - -	
1	.63"75" .75"88"	(15.9-19.0) (19.0-22.2)	F4	Yellow Orchid	VHC1041 VHC1042	<del>-</del> -	_	
11/4	1.00"-1.13" 1.13"-1.25"	(25.4-28.6) (28.6-31.7)	F5		<u>-</u>	-	VHC1052 VHC1053**	

Note: See pages X-78 to X-88 for technical information and dimensional drawings.

<sup>\*</sup>IP66 Suitability when used with optional metal clad O-ring, see page X-75 for additional information.

<sup>\*\*</sup>Cable jacket may have to be stripped to pass through connector body.

<sup>†</sup>Nuts are machined aluminum and bodies are cast aluminum.

 $<sup>\</sup>Delta Compression \ nuts \ are \ machined \ zinc\text{-}plated \ steel \ and \ bodies \ are \ zinc\text{-}plated \ malleable \ iron.$ 

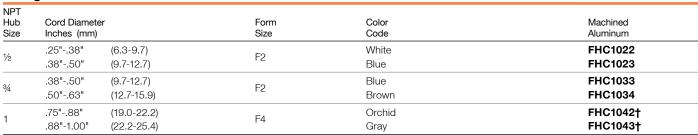
Locknuts sold separately. See page X-75 for additional information.

## Straight Female, Underground Feeder and Metric Connectors

Form Size 1-4



## Straight Female



Note: See pages X-78 to X-88 for technical information and dimensional drawings.

\*Cable jacket may have to be stripped to pass through connector body.

†Nuts are machined aluminum and bodies are cast aluminum.















**Underground Feeder Connectors** 

•	9	••••••				
NPT Hub Size	Cord Diameter Inches (mm)	Wire Size	UF** Machined Aluminum	Machined Zinc-Plated Steel	Nylon Gray	Nylon Black
1/2	.2"x.4" min (5.1 x .25"55" max (6.3 x	2 # 14, 2 # 12, 2 # 10.	UFC0001	UFC0001ZP	UFC0001CR	UFC2001CR
3/4	.2"x.4" min (5.1x <sup>-1</sup> .25"55" max (6.3x	' 'J # 1'J	UFC0002	-	_	-
3/4	.2"x.6" min (5.1x <sup>-1</sup> .26"x.78" max (6.6x	' 'X # 1'J	UFC0003	-	UFC0003CR	UFC2003CR

Note: See pages X-78 to X-88 for technical information and dimensional drawings.

\*IP66 Suitability when used with optional metal clad O-ring, see page X-75 for additional information.

Locknuts sold separately, see page X-75 for additional information.



UL Listed to Type 4, 4X, 12 and 13<sup>†</sup>

### **Metric Aluminum Cord Connectors**

	0 / 114111111	Co. a Co			
Metric Hub Size	Cord Diame		Form Size	Color Code	Catalog Number
M16	.31"38"	(7.9-9.7)	F1	White	SHCM161011
M20	.31"38"	(7.9-9.7)	F1	White	SHCM201017
	.25"38"	(6.3-9.7)		White	SHCM201022
M20	.38"50"	(9.7-12.7)	F2	Blue	SHCM201023
	.50"62"	(12.7-15.8)		Brown	SHCM201024
MOE	.38"50"	(9.7-12.7)	Γ0.	Blue	SHCM251033
M25	.50"62"	(12.7-15.8)	F2	Brown	SHCM251034
M30	63"-75"	(15.9-19.0)	E3	Yellow	SHCM301037

Note: †When used with metal clad O-ring, see page X-75 for additional information. Non-metallic Locknuts sold separately, see page X-75 for additional information.



<sup>\*\*</sup>Wire sizes vary among manufacturers.



## Low Profile NPT, PG and Metric Thread Connectors

Non-Metallic Cord Connectors.









## **Low Profile NPT Cord Connectors**

NPT Hub Size	Cord Diameter Inches (mm)	Black	Gray	Non-metallic Locknuts
3/8	.18"31" (4.6-7.9)	SEC38BA*	SEC38GA*	31622002LPK50
1/2	.17"45" (4.3-11.4)	SEC50BA	SEC50GA	31622003LPK50
3/4	.25"48" (6.35-12.19)	<del>-</del>	SEC75RGA	31622007LPK50
3/4	.45"71" (11.4-18.0)	SEC75BA	SEC75GA	31622007LPK50
1	.59"-1.00" (15-25.4)	SEC100BA	SEC100GA	31622008LPK50

Note: See pages X-78 to X-88 for technical information and dimensional drawings. Catalog numbers with "PK50" suffix are bulk packed 50 pieces.







## Low Profile PG<sup>\(\Delta\)</sup> Cord Connectors

	Cord Diameter	DI I	0	N
Hub Size	Inches (mm)	Black	Gray	Non-metallic Locknuts
PG7	.11"25" (2.9-6.4)	SECP7BA*	SECP7GA*	LNP7BPK100
PG9	.18"31" (4.6-7.9)	SECP9BA*	SECP9GA*	LNP9BPK100
PG11	.23"40" (5.8-10.0)	SECP11BA*	SECP11GA*	LNP11BPK100
PG13.5	.17"47" (4.3-11.9)	SECP13BA	SECP13GA	LNP13BPK100
PG16	.23"53" (5.8-13.5)	SECP16BA	SECP16GA	LNP16BPK100
PG21	.45"71" (11.4-17.9)	SECP21BA	SECP21GA	LNP21BPK100
PG29	.59"99" (15-25.2)	SECP29BA	SECP29GA	LNP29BPK25
PG36	.88"-1.30" (22.2-32.0)	SECP36BA	SECP36GA	LNP36BPK25







### **Low Profile Metric Cord Connectors**

Hub Size	Cord Diameter Inches (mm)	Black	Gray	Non-metallic Locknuts
M12	.12"25" (2.9-6.4)	SECM12B	SECM12G	LNM12BPK100
M16	.11"31" (2.7-7.9)	SECM16B	SECM16G	LNM16BPK100
M20	.17"45" (4.3-11.4)	SECM20B*	SECM20G*	LNM20BPK100
M25	.49"71" (12.3-18.0)	SECM25B*	SECM25G*	LNM25BPK100
M32	.59"-1.00" (15.0-25.4)	SECM32B*	SECM32G*	LNM32BPK100
M40	.87"-1.30" (22.0-32.0)	SECM40B	SECM40G	LNM40BPK100

Note: See pages X-78 to X-88 for technical information and dimensional drawings.

Catalog numbers above with "PK100" suffix, i.e. LNP7BPK100, are bulk packed 100 per carton. Catalog numbers above with "PK25" suffix, i.e. LNP29BPK25, are bulk packed 25 per carton.

\*Items indicated are UL recognized components.

∆Panzergewinde.

## **Accessories**





## **Multi-Hole Cord Grip Connectors**

NPT Hub Size	Cord Diameter Inches (mm)	Color	Holes	Catalog Number
1/2	.205" (5.2mm)	Black	2	SEC50B252
3/4	.205" (5.2mm)	Black	3	SEC75B352
3/4	.205" (5.2mm)	Black	4	SEC75B452
1/2	.220" (5.6mm)	Black	3	SEC50B356
1	.215" (5.5mm)	Black	9*	SEC100BSMH9
11/4	.215" (5.5mm)	Black	13*	SEC125BSMH13

Note: \*Skinned bushings, field configurable.





## **Cord Connector Parts**

<u> </u>	J.11100101 1 a. 10				
NPT Hub Size	Cord Diameter Inches (mm)	Form Size	Bushing Catalog Number	Color Code	GOTCHA <sup>®</sup> Ring Catalog Number
	.062"125" (1.58-3.17)		31518101BPK100	Green	31648035GPK100
	.125"187" (3.17-4.76)		31518102BPK100	Orange	31648036GPK100
1/. 3/. 1/.	.187"250" (4.76-6.35)	F1	31518103BPK100	Red	31648037GPK100
1/4, 3/8, 1/2	.250"312" (6.35-7.93)	ГІ	31518104BPK100	Black	31648038GPK100
	.312"375" (7.93-9.50)		31518105BPK100	White	31605010GPK100
	.375"437" (9.50-11.1)		31518106BPK100	Blue	31648039GPK100
	.187"250" (4.76-6.35)		31518110BPK100	Red	31648042GPK100
1/ 2/	.250"375" (6.35-9.50)	F2	31518111BPK100	White	31605015GPK100
1/2, 3/4	.375"500" (9.50-12.7)	FZ	31518112BPK100	Blue	31648043GPK100
	.500"625" (12.7-15.8)		31518113BPK100	Brown	31648044GPK100
	.375"500" (9.50-12.7)		31518116BPK100	Blue	31648045GPK100
1/ 2/	.500"625" (12.7-15.8)	Ε0.	31518117BPK100	Brown	31648046GPK100
1/2, 3/4	.625"750" (15.8-19.0)	F3	31518118BPK100	Yellow	31648047GPK100
	.750"875" (19.0-22.2)		31518119BPK100	Orchid	31648048GPK100
	.500"625" (12.7-15.8)		31518123BPK100	Brown	31648050GPK100
	.625"750" (15.8-19.0)		31518124BPK100	Yellow	31648051GPK100
1	.750"875" (19.0-22.2)	F4	31518125BPK100	Orchid	31648052GPK100
	.875"-1.00" (22.2-25.4)		31518126BPK100	Gray	31648053GPK100
	1.00"-1.125" (25.4-28.5)		31518127BPK100	Pink	31648054GPK100

Note: Catalog numbers above with "PK100" suffix, i.e. 31518101BPK100, are bulk packed 100 per carton







## Locknuts and **Metal Clad Sealing O-Rings**

	-99-		
NPT	7. 5		
Hub Size	Zinc-Plated Steel Locknuts	Non-Metallic Locknuts	Metal Clad Sealing O-Rings*
1/4	<del>-</del>	31622001LPK50	<del>-</del>
3/8	<del>-</del>	31622002LPK50	<del>-</del>
1/2	00322001LPK50	31622003LPK50	20509001
3/4	00322002LPK50	31622007LPK50	20509002
1	00322003LPK50	31622008LPK50	20509003
11/4	00322004LPK50	<del>-</del>	20509004
1½	00322005LPK50	_	20509005
2	<del>-</del>	<del>-</del>	20509006
21/2	<b>-</b>	<del>-</del>	20509007
3	_	_	20509008

Note: Catalog numbers above with "PK50" suffix, i.e. 00322001LPK50, are bulk packed 50 per carton. See page X-87 for technical information and dimensional drawings.

\*UL listed and CSA certified.

### **Features and Benefits**

Hubbell Juniors are a miniature liquidtight version of the full-sized Hubbell cord connectors. They feature the same GOTCHA® ring technology and neoprene bushings.

They also come with or without a nylon spiral for arcofbend control and longer cord life. They are available in 1/4", 3%", and 1/2" NPT sizes in both gray and black.





#### Liquidtight Seal

- Lubricated neoprene bushing compresses evenly for a liquidtight seal and added pull-out protection
- Nylon connector body is a one-piece design with a tapered interior that seals the bushing evenly for a positive seal



#### Connector Body

- Nylon spiral provides arc-of-bend control for cord protection
- Threaded hexagon shaped nylon locknut secures tightly and is also corrosion resistant



#### Connector Protection

- Patented GOTCHA® ring incorporates a split hinge design to prevent friction and provide strain relief
- Nylon compression nut has a tapered interior dome to easily drive the bushing into the connector body



#### Comprehensive Offering

• Hubbell Juniors are a miniature liquidtight version of the full-sized Hubbell cord connectors and feature the same GOTCHA® ring technology and neoprene bushings



## **Hubbell Juniors® Miniature Nylon Cord Connectors**

**Miniature Nylon Cord Connector** 

NPT Hub Size	Cord Diam Inches (m	ieter Range m)	Black	Gray
	.08"14"	(1.9-3.4)	HJ1001BP	PK25 HJ1001GPK25
1/4	.14"20"	(3.4-5.1)	HJ1002BP	PK25 HJ1002GPK25
	.20"27"	(5.1-6.7)	HJ1003BP	PK25 HJ1003GPK25
	.15"21"	(3.7-5.3)	HJ1004BP	PK25 HJ1004GPK25
3/8	.21"28"	(5.3-7.0)	HJ1005BP	PK25 HJ1005GPK25
	.28"34"	(7.0-8.6)	HJ1006BP	PK25 HJ1006GPK25
	.06"13"	(1.6-3.2)	HJ1055BP	PK25 HJ1055GPK25
	.13"19"	(3.2-4.7)	HJ1056BP	PK25 HJ1056GPK25
1/	.19"25"	(4.7-6.3)	HJ1057BP	PK25 HJ1057GPK25
1/2	.25"31"	(6.3-7.9)	HJ1058BP	PK25 HJ1058GPK25
	.31"38"	(7.9-9.5)	HJ1059BP	PK25 HJ1059GPK25
	.38"44"	(9.5-11.1)	HJ1060BP	PK25 HJ1060GPK25



**Black Cord Connector** 



**Gray Cord Connector** 

**Miniature Nylon Cord Connector with Spiral** 

NPT	Cord Diameter Range			
Hub Size	Inches	(mm)	Black	Gray
	.08"14"	(1.9-3.4)	HJ1010BPK25	HJ1010GPK25
1/4	.14"20"	(3.4-5.1)	HJ1011BPK25	HJ1011GPK25
	.20"27"	(5.1-6.7)	HJ1012BPK25	HJ1012GPK25
	.15"21"	(3.7-5.3)	HJ1013BPK25	HJ1013GPK25
3/8	.21"28"	(5.3-7.0)	HJ1014BPK25	HJ1014GPK25
	.28"34"	(7.0-8.6)	HJ1015BPK25	HJ1015GPK25
	.13"19"	(3.2-4.7)	HJ1038BPK25	HJ1038GPK25
	.19"25"	(4.7-6.3)	HJ1039BPK25	HJ1039GPK25
1/2	.25"31"	(6.3-7.9)	HJ1040BPK25	HJ1040GPK25
	.31"38"	(7.9-9.5)	HJ1041BPK25	HJ1041GPK25
	.38"44"	(9.5-11.1)	HJ1042BPK25	HJ1042GPK25
2/	.25"49"	(6.4-12.3)	HJ1043BPK25*	HJ1043GPK25*
3/4	.45"71"	(11.4-18.0)	HJ1044BPK25*	HJ1044GPK25*



Black Cord Connector with Spiral



Gray Cord Connector with Spiral

Note: \*Locknuts sold separately, see page X-75 for additional information.

## Miniature Nylon Snap-In Cord Connector with Spiral

Cord Diameter Range Inches (mm)	For Chassis Thickness	Black	Gray
.22"27" (5.6-6.9)	.10" (2.5) Max	HS1001BPK25	HS1001GPK25
.28"32" (7.1-8.1)	.10" (2.5) Max	HS1002BPK25	HS1002GPK25
.30"36" (7.6-9.1)	.13" (3.2) Max	HS1003BPK25	HS1003GPK25
.32"43" (8.1-10.9)	.13" (3.2) Max	HS1004BPK25	HS1004GPK25

Note: Catalog numbers above with "PK25" suffix, i.e. HJ1001GPK25, are bulk packed 25 per carton. See page X-88 for technical information and dimensional drawings.





## **Operating Temperatures**

Material	Temperature Range
Aluminum	-40°F to +300°F (-40°C to +149°C)
Nylon (connectors and GOTCHA® rings)	-40°F to +225°F (-40°C to +107°C)
Plated steel*	-60°F to +1000°F (-51°C to +537°C)
Stainless steel*	-60°F to +1000°F (-51°C to +537°C)
Neoprene (bushings)	-30°F to +240°F (-34°C to +115°C)

Note: \*Due to the limiting factors of nylon and neoprene, any complete cord connector with a GOTCHA ring, Form 1-5, will continuously perform in the range of -30°F to +225°F (-34°C to +107°C).

Cord connectors without GOTCHA rings, Form 6-8, will continuously operate in the range -30°F to +240°F (-34°C to +115°C) due to the limiting factor of neoprene.

#### **Hazardous Locations**

Hubbell cord connectors are suitable for use in hazardous locations per Class I Div. 2, Class II Div. 1 & 2, Class III Div. 1 & 2 in accordance with the NEC.

#### **Flammability**

Hubbell nylon cord connectors have a UL 94-V2 rating.

### **Approvals**

Agency

UL Listed in accordance with Standard 514B for indoor/outdoor use.

CSA Certified.

United States Coast Guard Approved, Title 46-Part 111.

#### Form Size Definition

The term "Form Size" refers to the physical overall size of a cord connector.

Form 1 is the smallest size.

Form 8 is the largest size.

### **Knockout Holes**

NPT Min. to		e Recommended	Knockout Hole PG	e Recomme	nded		ockout Hole etric	Recommended	
Hub Size	Inches	(mm)	Hub Size	Inches	(mm)		ıb Size	Inches	(mm)
1/4	.54"57"	(13.7-14.5)	PG7	492"	(12.5)	M1	12	.472"	(12)
3/8	.67"70"	(17.0-17.8)	PG9	599"	(15.2)	M	16	.629"	(16)
1/2	.86"91"	(21.8-23.0)	PG11	.733"	(18.6)	M2	20	.787"	(20)
3/4	1.04"-1.09"	(26.4-27.8)	PG13.5	.804"	(20.4)	M2	25	.984"	(25)
1	1.36"-1.41"	(34.5-35.7)	PG16	.888"	(22.5)	M	32	1.25"	(32)
11/4	1.72"-1.77"	(43.7-44.9)	PG21	1.15"	(28.3)	M	40	1.57"	(40)
1½	1.97"-2.02"	(50.0-51.2)	PG29	1.47"	(34.3)				
2	2.45"-2.50"	(62.3-63.5)	PG36	1.85"	(47.0)				
21/2	2.95"-3.00"	(75.0-76.2)							
3	3.58"-3.63"	(90.9-92.1)							

## NPT, PG and Metric Thread Low Profile Connectors

Specifications

Material 6/6 Nylon. Gland Buna N.

Temperature Range -22°F to 225°F (-30°C to 107°C).

Cord Connectors are Halogen and Silicon free.

Protection Class IP66 Suitability. Flammability UL 94X-2.

Listings/Certifications

UL Listing File E-41567, UL Recognition File E-41567.

CSA File LR27378C, VDE Marks Licence #136681.

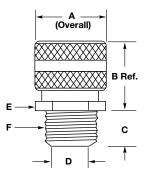


SECP29G

## **Straight Hubbell Connectors**

		Aluminun	n Inches (mn	٦)				Nylon Inc	hes (mm)				
F NPT		Α	В	С	D Throat		E	A	В	С	D Throat		Е
Inches	Form	Dia.	Ref.		Dia.	A/C*	A/F*	Dia.	Ref.		Dia.	A/C*	A/F*
1/4-18	1	.88" (22.4)	.90" (22.9)	.46" (11.7)	.32" (8.1)	.99" (25.1)	.88" (22.4)	1.00" (25.4)	1.10" (27.9)	.43" (10.9)	.33" (8.4)	.1.00" (25.4)	.93" (23.6)
<del>3</del> %-18	1	.88" (22.4)	.90" (22.9)	.46" (11.7)	.44" (11.2)	.99" (25.1)	.88" (22.4)	1.00" (25.4)	1.10" (27.9)	.43" (10.9)	.45" (11.4)	.1.00" (25.4)	.93" (23.6)
1/2-14	1	.88" (22.4)	.90" (22.9)	.46" (11.7)	.44" (11.2)	1.00" (25.4)	.88" (22.4)	1.00" (25.4)	1.10" (27.9)	.46" (11.7)	.45" (11.4)	.1.00" (25.4)	.93" (23.6)
1/2-14	2	1.13" (28.7)	1.10" (27.9)	.55" (14.0)	.64" (16.3)	1.11" (28.2)	1.00" (25.4)	1.32" (33.5)	1.50" (38.1)	.53" (13.5)	.58" (14.7)	1.25" (31.7)	1.12" (28.4)
1/2-14	3	1.38" (35.1)	1.50" (38.1)	.55" (14.0)	.64" (16.3)	1.40" (35.6)	1.25" (31.7)	_	_	_	_	_	_
3/4-14	2	1.13" (28.7)	1.10" (27.9)	.55" (14.0)	.64" (16.3)	1.29" (32.8)	1.13" (28.7)	_	_	_	_	_	_
3/4-14	3	1.38" (35.1)	1.50" (38.1)	.55" (14.0)	.82" (20.8)	1.40" (35.6)	1.25" (31.7)	1.56" (39.6)	1.60" (40.6)	.55" (14.0)	.77" (19.6)	1.44" (36.6)	1.31" (33.3)
1-11½	4	1.75" (44.4)	1.60" (40.6)	.71" (18.0)	1.02" (25.9)	1.81" (46.0)	1.62" (41.1)	1.88" (47.8)	1.75" (44.4)	.70" (17.8)	1.01" (25.7)	1.84" (46.7)	1.63" (41.4)
1-11½	5	2.31" (58.7)	1.70" (43.2)	.66" (16.8)	1.01" (25.7)	2.28" (57.9)	2.00" (50.8)	_	_	_	_	_	_
11/4-111/2	5	2.31" (58.7)	1.70" (43.2)	.74" (18.8)	1.26" (32.0)	2.28" (57.9)	2.12" (53.8)	_	_	_	_	_	_
1½-11½	5	2.31" (58.7)	1.70" (43.2)	.74" (18.8)	1.38" (35.1)	2.28" (57.9)	2.12" (53.8)	_	-	_	_	_	_
1½-11½	6	3.00" (76.2)	2.20" (55.9)	.75" (19.0)	1.50" (38.1)	2.97" (75.4)	2.75" (69.8)	_	-	_	_	_	_
2-11½	6	3.00" (76.2)	2.20" (55.9)	.80" (20.3)	1.92" (48.8)	3.24" (82.4)	3.00" (76.2)	_	-	_	_	_	_
2-11½	7	3.85" (97.8)	2.70" (68.6)	.88" (22.4)	1.94" (49.3)	4.05" (102.9)	3.75" (95.2)	_	_	_	_	_	_
2½-8	7	3.85" (97.8)	2.70" (68.6)	1.30" (33.0)	2.32" (58.9)	4.34" (110.2)	4.02" (102.1)	_	_	_	_	_	_
2½-8	8	4.75" (120.6)	2.70" (68.6)	1.25" (31.7)	2.38" (60.5)	4.86" (123.4)	4.50" (114.3)	_	_	_	_	_	_
3-8	7	3.85" (97.8)	2.70" (68.6)	1.30" (33.0)	2.54" (64.5)	4.34" (110.2)	4.02" (102.1)	_	_	_	_	_	_
3-8	8	4.50" (114.3)	2.70" (68.6)	1.38" (35.1)	3.00" (76.2)	4.86" (123.4)	4.50" (114.3)	_	_	_	_	_	_

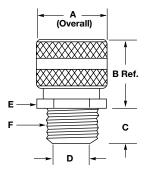
Note: \*A/C— Across Corners; A/F—Across Flats.



## **Straight Hubbell Connectors**

		Zinc-Pla	ted Steel	Inches (mn	n)				Stainless Steel Inches (mm)							
F			4	В	С	D	E			A	В	С	D		E	
NPT Inches	Form	A/C*	A/F*	Ref.		Throat Dia.	A/C*	A/F*	A/C*	A/F*	Ref.		Throat Dia.	A/C*	A/F*	
1⁄4- 18	1	=	=	_	_	_	_	_	1.01" (25.7)	.88" (22.4)	.90" (22.9)	.46" (11.7)	.38" (9.7)	.87" (22.1)	.75" (19.0)	
<b>%</b> -18	1	.98" (24.9)	.88" (22.4)	.90" (22.9)	.42" (10.7)	.45" (11.4)	.99" (25.1)	.88" (22.4)	1.01" (25.7)	.88" (22.4)	.90" (22.9)	.46" (11.7)	.45" (11.4)	.87" (22.1)	.75" (19.0)	
1/2-14	1	.98" (24.9)	.88" (22.4)	.90" (22.9)	.55" (14.0)	.45" (11.4)	1.00" (25.4)	.88" (22.4)	_	_	_	_	_	_	=	
1/2-14	2	1.27" (32.3)	1.13" (28.7)	1.20" (30.5)	.55" (14.0)	.64" (16.3)	1.10" (28.2)	1.00" (25.4)	1.30" (33.0)	1.13" (28.7)	1.10" (27.9)	.54" (13.7)	.63" (16.0)	1.16" (29.5)	1.00" (25.4)	
1/2-14	3	1.55" (39.4)	1.38" (35.1)	1.50" (38.1)	.55" (14.0)	.64" (16.3)	1.40" (35.6)	1.25" (31.7)	_	_	_	_	_	_	_	
34-14	2	1.27" (32.3)	1.13" (28.7)	1.20" (30.5)	.55" (14.0)	.64" (16.3)	1.29" (32.8)	1.13" (28.7)	_	_	_	_	_	_	_	
34-14	3	1.55" (39.4)	1.38" (35.1)	1.40" (35.6)	.55" (14.0)	.82" (20.8)	1.40" (35.6)	1.25" (31.7)	1.59" (40.4)	1.38" (35.1)	1.30" (33.0)	.56" (14.2)	.81" (20.6)	1.44" (36.6)	1.25" (31.7)	
1-11½	3	1.55" (39.4)	1.38" (35.1)	1.40" (35.6)	.70" (17.8)	.89" (22.6)	1.54" (39.1)	1.38" (35.1)	_	_	_	_	_	_	_	
1-11½	4	1.92" (48.8)	1.69" (42.9)	1.60" (40.6)	.70" (17.8)	1.02" (25.9)	1.95" (49.5)	1.69" (42.9)	2.02" (51.3)	1.75" (44.4)	1.40" (35.6)	.70" (17.8)	1.03" (26.2)	1.88" (47.8)	1.63" (41.4)	
1-11½	5	2.40" (61.0)	_	1.70" (43.2)	.70" (17.8)	1.02" (25.9)	2.46" (62.5)	2.15" (54.6)	_	_	_	_	_	_	_	
1¼-11½	5	2.40" (61.0)	_	1.70" (43.2)	.73" (18.5)	1.27" (32.3)	2.48" (63.0)	2.19" (55.6)	_	_	_	_	_	_	_	
1½-11½	5	2.40" (61.0)	-	1.70" (43.2)	.74" (18.8)	1.39" (35.3)	2.48" (63.0)	2.19" (55.6)	_	_	_	_	_	_	_	
1½-11½	6	3.06" (77.7)	-	2.20" (55.9)	.75" (19.0)	1.52" (38.6)	3.04" (77.2)	2.83" (71.9)	_	_	_	_	_	_	-	
2-11½	6	3.06" (77.7)	_	2.20" (55.9)	.78" (19.8)	1.92" (48.8)	3.32" (84.3)	3.07" (78.0)	-	_	_	_	-	_	_	
2-11½	7	3.95" (100.3)	_	2.70" (68.6)	.78" (19.8)	1.99" (50.5)	4.18" (106.2)	3.89" (98.8)	_	_	_	_	_	_	_	

Note: \*A/C— Across Corners; A/F—Across Flats.



## 45° Hubbell Connectors

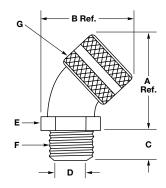
		Aluminu	m Inches	(mm)				Zinc Plated Steel Inches (mm)								
F		Α	В	С	D	Е	E		Α	В	С	D	E		G	
NPT Inches	Form	Dia.	Ref.		Throat Dia.	Across Corners	Across Flats	Dia.	Dia.	Ref.		Throat Dia.	Across Corners	Across Flats	Across Corners	Across Flats
1/2-14	2	2.00" (50.8)	1.90" (48.3)	.55" (14.0)	.56" (14.2)	1.27" (32.3)	1.10" (27.9)	1.13" (28.6)	1.97" (50.0)	1.90" (48.3)	.55" (14.0)	.57" (14.4)	1.24" (31.5)	1.06" (26.9)	1.27" (32.3)	1.13" (28.6)
34-14	3	2.30" (58.4)	2.50" (65.3)	.56" (14.2)	.75" (19.0)	1.48" (37.6)	1.28" (32.5)	1.38" (34.9)	_	_	_	_	_	_	_	_
1-11½	4	2.60" (66.0)	2.80" (71.1)	.70" (17.8)	1.00" (25.4)	1.69" (42.9)	1.50" (38.1)	1.75" (44.4)	_	_	_	_	_	=	_	_
1½-11½	5	3.90" (99.1)	3.90" (9.91)	.74" (18.8)	1.25" (31.7)	2.45" (62.2)	2.13" (54.0)	2.31" (58.7)	_	_	_	_	_	_	_	_
1½-11½	5	3.90" (99.1)	3.90" (99.1)	.74" (18.8)	1.50" (38.1)	2.45" (62.2)	2.13" (54.0)	2.31" (58.7)	_	_	_	_	_	=	_	_

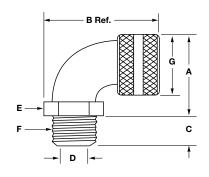
## 90° Hubbell Connectors

		Aluminu	ım Inches (	mm)					Zinc Pla	ted Steel I	nches (mr	n)				
F		Α	В	С	D	E		G	Α	В	С	D	E		G	
NPT Inches	Form	Dia.	Ref.		Throat Dia.	Across Corners	Across Flats	Dia.	Dia.	Ref.		Throat Dia.	Across Corners	Across Flats	Across Corners	Across Flats
<b>%</b> -18	1	1.27" (32.3)	2.00" (50.8)	.46" (11.7)	.44" (11.2)	1.15" (29.2)	1.10" (27.9)	.88" (22.2)	_	_	_	_	=	_	_	_
1/2-14	2	1.56" (39.6)	2.30" (58.4)	.50" (12.7)	.55" (13.9)	1.30" (33.0)	1.13" (28.7)	1.13" (28.6)	1.65" (41.9)	2.38" (60.5)	.55" (14.0)	.55" (13.8)	1.29" (32.8)	1.13" (28.7)	1.27" (32.3)	1.13" (28.6)
34-14	3	1.79" (45.5)	2.80" (71.1)	.56" (14.2)	.77" (19.4)	1.49" (37.8)	1.31" (33.3)	1.38" (34.9)	1.88" (47.8)	2.90" (73.7)	.56" (14.2)	.77" (19.4)	1.52" (38.6)	1.33" (33.8)	1.55" (39.2)	1.38" (34.9)
1-11½	4	2.08" (52.8)	3.20" (81.3)	.70" (17.8)	1.00" (25.4)	1.70" (43.2)	1.50" (38.1)	1.75" (44.4)	2.16" (54.9)	3.20" (81.3)	.70" (17.8)	1.00" (25.4)	1.72" (43.7)	1.50" (38.1)	1.92" (48.8)	1.69" (42.8)
11/4-111/2	5	3.18" (80.8)	4.30" (109.2)	.73" (18.5)	1.26" (32.0)	2.47" (62.7)	2.15" (54.6)	2.31" (58.7)	_	_	_	_	_	=	_	_
1½-11½	5	3.18" (80.8)	4.30" (109.2)	.75" (19.2)	1.50" (38.1)	2.47" (62.7)	2.15" (54.6)	2.31" (58.7)	_	_	_	_	_	=	_	_
2-11½	6	3.51" (89.2)	5.50" (139.7)	.80" (20.3)	1.92" (48.8)	2.98" (75.7)	2.78" (70.6)	3.00" (76.2)	_	_	_	_	_	_	_	_

## 90° Hubbell Connectors

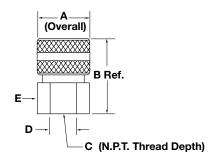
		Nylon Ir	nches (mm	)				
F		Α	В	С	D	Е		_G
NPT Inches	Form	Dia.	Ref.		Throat Dia.	Across Corners	Across Flats	Dia.
<b>%</b> -18	1	_	_	_	_	_	_	_
1/2-14	2	1.41"	2.50"	.55"	.58"	1.23"	1.12"	1.32"
		(35.8)	(63.5)	(14.0)	(14.6)	(31.2)	(28.2)	(33.4)
3/4-14	3	1.65"	2.81"	.56"	.77"	1.42"	1.29"	1.56"
		(41.9)	(71.4)	(14.2)	(19.4)	(36.1)	(32.8)	(39.6)
1-11½	4	1.99"	3.30"	.70"	1.01"	1.82"	1.60"	1.88"
		(50.5)	(83.8)	(17.8)	(25.7)	(46.2)	(40.6)	(47.6)

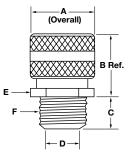




## **Female Hubbell Connectors**

		Aluminun	n Inches (mm)				
F		Α	В	С	D		E
NPT Inches	Form	Dia.	Ref.		Throat Dia.	Across Corners	Across Flats
<b>%</b> -18	1	.88" (22.4)	1.40" (35.6)	.56" (14.2)	.44" (11.2)	.94" (23.9)	.81" (20.6)
1/2-14	2	1.13" (28.7)	1.80" (45.7)	.56" (14.2)	.63" (16.0)	1.15" (29.2)	1.00" (25.4)
3/4-14	2	1.13" (28.7)	2.10" (53.3)	.75" (19.0)	.63" (16.0)	1.44" (36.6)	1.25" (31.7)
1-11½	4	1.75" (44.5)	2.30" (58.4)	.88" (22.4)	1.10" (27.9)	1.88" (47.8)	1.63" (41.4)
11/4-111/2	5	2.31" (58.7)	2.80" (71.1)	.95" (24.1)	1.43" (36.3)	2.64" (67.1)	2.29" (58.2)
1½-11½	5	2.31" (58.7)	2.80" (71.1)	.95" (24.1)	1.43" (36.3)	2.64" (67.1)	2.29" (58.2)





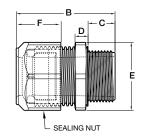
**Underground Feeder Connectors** 

		Alumin	um Inch	nes (mm)	)			Zinc-Plated Steel Inches (mm)						Nylon Inches (mm)						
F NPT		Α	В	С	D Throat	E		A	١	В	С	D Throat	E		A	В	С	D Throat	E	
Inches	Form	Dia.	Ref.		Dia.	A/C*	A/F*	A/C*	A/F*	Ref.		Dia.	A/C*	A/F*	Dia.	Ref.		Dia.	A/C*	A/F*
1/2-14	2	1.13" (28.7)	1.10" (27.9)	.55" (14.0)	.64" (16.3)	1.10" (27.9)	1.00" (25.4)	1.27" (32.3)	1.13" (28.7)	1.20" (30.5)	.55" (14.0)	.64" (16.3)	1.11" (28.2)	1.00" (25.4)	1.32" (33.5)	1.50" (38.1)	.55" (14.0)	.58" (14.7)	1.25" (31.7)	1.13" (28.7)
3/4-14	2	1.13" (28.7)	1.10" (27.9)	.55" (14.0)	.64" (16.3)	1.29" (32.8)	1.13" (25.4)	1.27" (32.3)	1.13" (28.7)	1.20" (30.5)	.55" (14.0)	.64" (16.3)	1.29" (32.8)	1.13" (28.7)	_	_	_	_	_	_
3/4-14	3	1.13" (28.7)	1.50" (38.1)	.55" (14.0)	.82" (20.8)	1.40" (35.6)	1.25" (31.7)	1.55" (39.4)	1.38" (35.1)	1.40" (35.6)	.56" (14.2)	.82" (20.8)	1.40" (35.6)	1.25" (31.7)	1.56" (39.6)	1.60" (40.6)	.56" (14.2)	.77" (19.6)	1.44" (36.6)	1.31" (33.3)

Note: \*A/C - Across Corners; A/F - Across Flats.

## Low Profile Non-Metallic NPT, PG and Metric Thread Connectors

	Nylon Inches (m	m)				
Hub Size	Α	В	С	D	E	F
% NPT	0.670" (17.0)	1.41" (35.8)	0.48" (12.4)	0.21" (5.3)	0.83" (21.0)	0.55" (14.0)
½ NPT	0.875" (22.2)	1.70" (43.2)	0.61" (15.5)	0.21" (5.3)	0.88" (24.8)	0.66" (16.8)
¾ NPT	1.068" (27.1)	2.00" (50.8)	0.62" (15.7)	0.25" (6.3)	1.30" (33.0)	0.85" (21.6)
1 NPT	1.375" (35.0)	2.41" (61.2)	0.76" (19.3)	0.30" (7.6)	1.73" (43.9)	1.05" (26.7)
PG7	0.492" (12.5)	1.16" (29.5)	0.32" (8.1)	0.21" (5.3)	0.63" (16.0)	0.48" (12.4)
PG9	0.599" (15.2)	1.25" (31.8)	0.32" (8.1)	0.21" (5.3)	0.83" (21.0)	0.55" (14.0)
PG11	0.733" (18.6)	1.48" (37.6)	0.38" (9.7)	0.21" (5.3)	0.94" (23.9)	0.70" (17.8)
PG13.5	0.804" (20.4)	1.53" (38.9)	0.41" (10.4)	0.21" (5.3)	0.98" (24.9)	0.66" (16.8)
PG16	0.888" (22.5)	1.68" (42.7)	0.44" (11.2)	0.25" (6.4)	1.06" (27.0)	0.76" (19.3)
PG21	1.15" (28.3)	1.89" (48.0)	0.52" (13.2)	0.25" (6.4)	1.30" (33.0)	.085" (21.6)
PG29	1.47" (37.30)	2.23" (56.6)	0.58" (14.7)	0.30" (7.6)	1.73" (43.9)	1.05" (26.7)
PG36	1.85" (47.0)	2.39" (60.7)	0.47" (11.9)	0.31" (7.9)	2.05" (52.7)	1.19" (30.2)
M12	0.473" (12.0)	1.16" (29.5)	0.32" (8.1)	0.21" (5.3)	0.63" (16.0)	0.49" (12.4)
M16	0.630" (16.0)	1.25" (31.8)	0.32" (8.1)	0.21" (5.3)	0.83" (21.0)	0.55" (14.0)
M20	0.787" (20.0)	1.53" (38.9)	0.41" (10.4)	0.21" (5.3)	0.98" (24.9)	0.66" (16.8)
M25	0.985" (25.0)	1.89" (48.0)	0.52" (13.2)	0.25" (6.3)	1.30" (33.0)	0.85" (21.6)
M32	1.260" (32.0)	2.23" (56.6)	0.58" (14.7)	0.30" (7.6)	1.73" (43.9)	1.05" (26.7)
M40	1.575" (40.0)	2.39" (60.7)	0.48" (12.2)	0.30" (7.6)	2.05" (52.1)	1.19" (30.2)





### 2 Conductors

Cord Ty	/ре	SVO, SV, SVT	SV, SVT SJ, SJO, SJT, SJTO				S, SO, ST, STO						
Cord Si	-	#18	#18	#16	#14	#18	#16	#14	#12	#10	#8		
Approx Inches		.25" (6.2)	.31" (7.8)	.33" (8.4)	.37" (9.3)	.38" (9.7)	.40" (10.2)	.54" (13.7)	.62" (15.6)	.68" (17.1)	.81" (20.6)		
Color		Black	Black	White	White	Blue	Blue	Brown	Brown	Yellow	Orchid		
NPT	Form	Catalog Numbe	r*										
1/4	1	HC1004	HC1004	HC1005	HC1005	HC1006	HC1006	_	_	_	_		
3/8	1	HC1010	HC1010	HC1011	HC1011	HC1012	HC1012	_	_	_	_		
1/2	1	HC1016	HC1016	HC1017	HC1017	HC1018	HC1018	_	_	_	_		
1/2	2	HC1022	HC1022	HC1022	HC1022	HC1023	HC1023	HC1024	HC1024	_	_		
1/2	3	_	_	_	_	HC1025	HC1025	HC1026	HC1026	HC1027	HC1028		
3/4	2	HC1032	HC1032	HC1032	HC1032	HC1033	HC1033	HC1034	HC1034	_	_		
3/4	3	_	_	_	_	HC1035	HC1035	HC1036	HC1036	HC1037	HC1038		
1	4	_	_	_	_	HC1039	HC1039	HC1040	HC1040	HC1041	HC1042		
1	5	_	_	_	_	_	_	_	_	_	HC1045		
11/4	5	_	_	_	_	_	_	_	_	_	HC1050		
1½	5	_	_	_	_	_	_	_	_	_	HC1055		
11/2	6	_	_	_	_	_	_	_	_	_	_		
2	6	_	_	_	_	_	_	_	_	_	_		
2	7	_	_	_	_	_	_	_	_	_	_		
2½	7	_	_	_	_	_	_	_	_	_	_		
3	7	_	_	_	_	_	_	_	_	_	_		

Note: \*Must add prefix, see Note 1; suffix, see Note 2, on page X-86. ‡F5 and larger will not be color coded.

#### **3 Conductors**

Cord T	ype	SVO, SV, SVT	SJ, SJO, S	JT, SJTO		S, SO, ST,	STO				
Cord S	ize	#18	#18	#16	#14	#18	#16	#14	#12	#10	#8
Approx Inches		.26" (6.5)	.33" (8.3)	.35" (8.9)	.39" (9.8)	.39" (9.9)	.42" (10.7)	.57" (14.4)	.65" (16.4)	.71" (18.0)	.85" (21.5)
Color		Black	White	White	Blue	Blue	Blue	Brown	Yellow	Yellow	Orchid
NPT	Form	Catalog Numbe	r*								
1/4	1	HC1004	HC1005	HC1005	HC1006	HC1006	HC1006	_	_	_	_
3/8	1	HC1010	HC1011	HC1011	HC1012	HC1012	HC1012	_	_	_	_
1/2	1	HC1016	HC1017	HC1017	HC1018	HC1018	HC1018	_	_	_	_
1/2	2	HC1022	HC1022	HC1022	HC1023	HC1023	HC1023	HC1024	_	_	_
1/2	3	_	_	_	HC1025	HC1025	HC1025	HC1026	HC1027	HC1027	HC1028
3/4	2	HC1032	HC1032	HC1032	HC1033	HC1033	HC1033	HC1034	_	_	_
3/4	3	_	_	_	HC1035	HC1035	HC1035	HC1036	HC1037	HC1037	HC1038
1	4	_	_	_	HC1039	HC1039	HC1039	HC1040	HC1041	HC1041	HC1042
1	5	_	_	_	_	_	_	_	_	_	HC1045
11/4	5	_	_	_	_	_	_	_	_	_	HC1050
11/2	5	_	_	_	_	_	_	_	_	_	HC1055
1½	6	_	_	_	_	_	_	_	_	_	_
2	6	_	_	_	_	_	_	_	_	_	_
2	7	-	_	_	_	_	_	_	_	_	_
2½	7	_	_	_	_	_	_	_	_	_	_
3	7	_	_	_	_	_	_	_	_	_	_

Note: \*Must add prefix, see Note 1; suffix, see Note 2, on page X-95. ‡F5 and larger will not be color coded.

### 2 Conductors

Cord Typ	ре	SVO, SV, SVT	SJ, SJO, S	JT, SJTO		S, SO, ST, STO						
Cord Siz	e	#6	#4	#3	#2	#1	#1/0	#2/0	#3/0	#4/0	#250	
Approx. Inches (r		.94" (23.8)	1.08" (27.4)	1.17" (29.7)	1.27" (33.3)	1.44" (36.6)	1.52" (38.6)	1.65" (41.9)	1.77" (45.0)	1.92" (48.8)	2.16" (51.9)	
Color		Gray‡	Pink‡	‡	‡	‡	‡	‡	‡	‡	‡	
NPT	Form	n Catalog Numbe	r*									
1/4	1	_	_	_	_	_	_	_	-	-	-	
3/8	1	_	_	_	_	_	_	_	_	_	_	
1/2	1	-	-	-	-	-	-	-	-	_	-	
1/2	2	-	_	_	_	_	_	_	-	_	_	
1/2	3	_	-	_	_	_	_	_	_	_	-	
3/4	2	_	_	_	_	_	_	_	_	_	_	
3/4	3	_	_	_	_	_	_	_	_	_	_	
1	4	HC1043	HC1044	_	_	_	_	_	_	_	_	
1	5	HC1046	HC1047	HC1048	HC1049	_	_	_	_	_	_	
11⁄4	5	HC1051	HC1052	HC1053	HC1054	_	_	_	_	_	_	
1½	5	HC1056	HC1057	HC1058	HC1059	_	_	_	_	_	_	
1½	6	_	_	_	HC1060	HC1061	HC1062	HC1063	HC1064	_	-	
2	6	-	_	_	HC1065	HC1066	HC1067	HC1068	HC1069	_	_	
2	7	_	_	_	_	_	_	_	HC1070	HC1071	HC1073	
2½	7	-	_	_	_	_	_	_	HC1076	HC1077	HC1079	
3	7	_	_	_	-	_	_	-	HC1086	HC1087	HC1089	

Note: \*Must add prefix, see Note 1; suffix, see Note 2, on page X-86. ‡F5 and larger will not be color coded.

#### 3 Conductors

CordTyp	ре	SVO, SV, SVT	SJ, SJO, S	JT, SJTO		S, SO, ST,	STO				
Cord Siz	ze	#6	#4	#3	#2	#1	#1/0	#2/0	#3/0	#4/0	#250
Approx. Inches (		1.00" (25.4)	1.17" (29.7)	1.24" (31.5)	1.34" (34.0)	1.51" (38.4)	1.65" (41.9)	1.75" (44.5)	1.80" (48.0)	2.07" (52.6)	2.39" (60.7)
Color		Gray‡	‡	‡	‡	‡	‡	‡	‡	‡	‡
NPT	Forn	n Catalog Numbe	r*								
1/4	1	_	-	_	-	_	-	_	_	_	-
3/8	1	_	_	_	_	_	_	_	-	_	-
1/2	1	-	_	_	_	-	_	_	-	_	-
1/2	2	_	-	_	-	_	-	_	_	_	-
1/2	3	_	_	_	_	_	_	_	_	_	_
3/4	2	_	-	_	-	_	_	_	_	_	-
3/4	3	_	_	_	_	_	_	_	_	_	_
1	4	HC1044	-	_	-	_	_	_	_	_	-
1	5	HC1047	HC1048	HC1048	HC1049	_	_	_	_	_	-
11⁄4	5	HC1052	HC1053	HC1053	HC1054	_	-	_	_	_	-
1½	5	HC1057	HC1058	HC1058	HC1059	_	-	_	_	_	_
1½	6	_	_	_	HC1060	HC1062	HC1063	HC1064	_	_	_
2	6	-	-	_	HC1065	HC1067	HC1068	HC1069	-	_	-
2	7	_	-	_	-	_	-	HC1070	HC1071	HC1073	HC1075
2½	7	-	_	-	_	_	_	HC1076	HC1077	HC1079	HC1081
3	7	_	_	_	_	_	_	HC1086	HC1087	HC1089	HC1091

Note: \*Must add prefix, see Note 1; suffix, see Note 2, on page X-86. ‡F5 and larger will not be color coded.

### **4 Conductors**

Cord Typ	ре	SJ, SJO, SJ	IT, SJTO		S, SO, ST, S	TO				
Cord Siz	ze	#18	#16	#14	#18	#16	#14	#12	#10	#8
Approx. Inches (r		.36" (9.0)	.39" (9.8)	.43" (10.8)	.42" (10.7)	.45" (11.4)	.61" (15.5)	.70" (17.8)	.77" (19.4)	.97" (24.6)
Color		White	Blue	Blue	Blue	Blue	Brown	Yellow	Orchid	Gray‡
NPT	Forn	n Catalog Num	nber*							
1/4	1	HC1005	HC1006	HC1006	HC1006	_	_	_	_	_
3/8	1	HC1011	HC1012	HC1012	HC1012	_	_	_	_	_
1/2	1	HC1017	HC1018	HC1018	HC1018	_	_	_	_	_
1/2	2	HC1022	HC1023	HC1023	HC1023	HC1023	HC1024	_	_	_
1/2	3	_	HC1025	HC1025	HC1025	HC1025	HC1026	HC1027	HC1028	_
3/4	2	_	HC1033	HC1033	HC1033	HC1033	HC1034	_	_	_
3/4	3	_	HC1035	HC1035	HC1035	HC1035	HC1036	HC1037	HC1038	_
1	4	_	HC1039	HC1039	HC1039	HC1039	HC1040	HC1041	HC1042	HC1043
1	5	_	_	_	_	_	_	_	_	HC1046
11/4	5	_	_	_	_	_	_	_	_	HC1051
1½	5	_	_	_	_	_	_	_	_	HC1056
1½	6	_	_	_	_	_	_	_	_	_
2	6	_	_	_	_	_	_	_	_	_
2	7	_	_	_	_	_	-	_	_	_
2½	7	_	_	_	_	_	_	_	_	_
3	7	_	_	_	_	_	_	_	_	_

Note: \*Must add prefix, see Note 1; suffix, see Note 2, on page X-86. ‡F5 and larger will not be color coded.

#### **5 Conductors**

	uuot	.0.0							
Cord Typ	ре	S, SO, ST, S	STO						
Cord Size	е	#18	#16	#14	#12	#10	#8	#6	
Approx.		.50"	.54"	.70"	.76"	.83"	1.06"	1.18"	
Inches (mm)		(12.7)	(13.7)	(17.7)	(19.3)	(21.1)	(26.9)	(30.0)	
Color		Blue	Brown	Yellow	Orchid‡	Orchid‡	Pink‡	‡	
NPT	Forn	n Catalog Num	nber*						
1/2	2	HC1023	HC1024	_	_	_	_	_	
1/2	3	HC1025	HC1026	HC1027	HC1028	HC1028	_	_	
3/4	2	HC1033	HC1034	_	_	_	_	_	
3/4	3	HC1035	HC1036	HC1037	HC1038	HC1038	_	_	
1	4	HC1039	HC1040	HC1041	HC1042	HC1042	HC1044	_	
1	5	_	_	_	HC1045	HC1045	HC1047	HC1048	
11/4	5	_	_	_	HC1050	HC1050	HC1052	HC1053	
1½	5	_	_	-	HC1055	HC1055	HC1057	HC1058	

Note: \*Must add prefix, see Note 1; suffix, see Note 2, on page X-86. ‡F5 and larger will not be color coded.

#### **4 Conductors**

Cord Type		SJ, SJO, SJ	IT, SJTO		S, SO, ST, S	TO				
Cord Size		#6	#4	#3	#2	#1	#1/0	#2/0	#3/0	#4/0
Approx. Dia. Inches (mm)		.94" (23.8)	1.08" (27.4)	1.17" (29.7)	1.27" (33.3)	1.44" (36.6)	1.52" (38.6)	1.65" (41.9)	1.77" (45.0)	1.92" (48.8)
Color		Pink‡	‡	‡	‡	‡	‡	‡	‡	‡
NPT	Form	Catalog Num	ıber*							
1/4	1	-	_	_	_	_	_	-	_	_
3/8	1	_	_	_	-	-	_	-	_	_
1/2	1	_	_	-	-	-	_	-	-	_
1/2	2	_	_	-	-	-	_	-	_	_
1/2	3	_	_	_	_	-	_	_	_	_
3/4	2	_	_	_	_	_	_	_	_	_
3/4	3	_	_	_	_	_	_	_	_	_
1	4	HC1044	_	_	_	_	_	_	_	_
1	5	HC1047	HC1049	HC1049	_	_	_	-	_	_
11⁄4	5	HC1052	HC1054	HC1054	_	_	_	-	_	_
1½	5	HC1057	HC1059	HC1059	-	-	_	-	_	_
1½	6	_	HC1060	HC1060	HC1061	HC1063	HC1064	-	_	_
2	6	-	HC1064	HC1065	HC1066	HC1068	HC1069	-	_	_
2	7	-	-	_	-	-	HC1070	HC1071	HC1073	HC1074
21/2	7	_	_	-	-	-	HC1076	HC1077	HC1079	HC1080
3	7	_	_	-	_	_	HC1086	HC1087	HC1089	HC1090

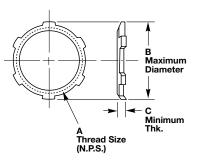
Note: \*Must add prefix, see Note 1; suffix, see Note 2, below. ‡F5 and larger will not be color coded.

#### Note:

- **1.** Add the proper prefix to the HC number to identify the type of connector desired:
  - SHC = Straight Hubbell Connector
  - NHC = 90° Hubbell Connector
  - FHC = Female Hubbell Connector
  - VHC = 45° Hubbell Connector
- 2. Add the proper suffix to identify material desired:
   Aluminum = No suffix
   Zinc-Plated Steel = ZP
   Corrosion Resistant Nylon = CR
   Stainless Steel = SS
- 3. This chart is a general guide to assist in the selection of Hubbell Cord Connectors for various cord sizes. The Hubbell Cord Connector catalog numbers selected, have been inserted into spaces which in our judgment represent the best cord connector which will fit the listed cord size. The diameters of the cords are approximate and may vary depending on the manufacturer. It is suggested that the appropriate cord manufacturer's dimension chart be consulted for exact dimensions.
- **4.** Cable jacket may have to be stripped to allow conductors to pass through connector body.

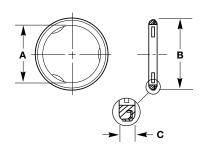
### **NPT Thread Locknuts**

Zinc-Pla	ated Steel					
NPT Hub Size	A Inside Diameter Inches	B Outside Inches	Dia. (mm)	C Thickne Inches	ess (mm)	Steel Catalog Number
1/2	1/2"-14	1.14"	(29.0)	.09"	(2.3)	00322001LPK50
3/4	3/4"-14	1.43"	(36.3)	.11"	(2.8)	00322002LPK50
1	1"-11½	1.77"	(45.0)	.13"	(3.3)	00322003LPK50
11/4	11/4"-111/2	2.28"	(57.9)	.13"	(3.3)	00322004LPK50
1½	1½"-11½	2.60"	(66.0)	.13"	(3.3)	00322005LPK50



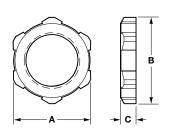
## Metal Clad Sealing O-Rings - Sizes 1/2 - 4

Zinc-Pla	ated Steel w	ith Neopre	ene Ring				
NPT Hub Size	A Inside Di Inches	iameter (mm)	B Outside Inches		C Thickne Inches	ess (mm)	Catalog Number
1/2	.80"	(20.3)	1.08"	(27.4)	.16"	(3.2)	20509001
3/4	1.00"	(25.4)	1.34"	(34.0)	.16"	(3.2)	20509002
1	1.25"	(31.6)	1.63"	(41.4)	.16"	(3.2)	20509003
11/4	1.61"	(40.9)	2.00"	(50.8)	.16"	(3.2)	20509004
1½	1.84"	(46.7)	2.36"	(59.9)	.16"	(3.2)	20509005
2	2.31"	(58.7)	2.83"	(71.9)	.16"	(3.2)	20509006
Chrome	Plated Ste	el with Ned	prene Ring	9			
2½	2.91"	(73.9)	3.44"	(87.4)	.24"	(6.1)	20509007
3	3.52"	(89.4)	4.08"	(103.6)	.24"	(6.1)	20509008



#### **Nylon PG Thread Locknuts**

PG Thread	Α		В		С		
Size	Inches	(mm)	Inches	(mm)	Inches	(mm)	Catalog Number
PG7	.75"	(19.1)	.80"	(20.3)	.22"	(5.6)	LNP7BPK100
PG9	.86"	(21.8)	.91"	(23.2)	.22"	(5.6)	LNP9BPK100
PG11	.94"	(23.9)	1.03"	(26.2)	.22"	(5.6)	LNP11BPK100
PG13.5	1.06"	(26.9)	1.14"	(29.0)	.24"	(6.1)	LNP13BPK100
PG16	1.18"	(30.0)	1.30"	(33.0)	.25"	(6.1)	LNP16BPK100
PG21	1.41"	(35.8)	1.54"	(39.1)	.25"	(6.1)	LNP21BPK100
PG29	1.81"	(46.0)	2.00"	(50.8)	.25"	(6.1)	LNP29BPK25
PG36	2.24"	(56.9)	2.50"	(63.5)	.25"	(6.1)	LNP36BPK25



## **Nylon Metric Thread Locknuts**

INVIOLITIME	Tylon Wether Thread Lockhats									
PG Thread Size	A Inches	(mm)	B Inches	(mm)	C Inches	(mm)	Catalog Number			
M12	.75"	(19.1)	.82"	(20.8)	.22"	(5.6)	LNM12BPK100			
M16	.87"	(22.09)	.98"	(25.0)	.22"	(5.6)	LNM16BPK100			
M20	1.06"	(27.0)	1.18"	(30.0)	.25"	(6.4)	LNM20BPK100			
M25	1.38"	(35.1)	1.54"	(39.1)	.28"	(7.1)	LNM25BPK100			
M32	1.61"	(40.9)	1.80"	(45.7)	.28"	(7.1)	LNM32BPK100			
M40	1.97"	(50.0)	2.18"	(55.4)	.28"	(7.1)	LNM40BPK100			

Dimensions shown are approximate and are subject to change without notice.

#### **Hubbell Juniors®**

Material	Operating Temperature Range
Nylon (connectors and GOTCHA® rings)	-40°F to +225°F (-40°C to +107°C)
Neoprene (bushings)	-30°F to +240°F (-34°C to +115°C)

Due to the limiting factors of nylon and neoprene, any complete liquidtight Hubbell Junior will continuously perform in the range of -30°F to +225°F (-34°C to +107°C).

Snap-In continuously performs -40°F to +225°F (-40°C to +107°C).

#### Flammability

Hubbell Juniors have a UL 94X-2 rating.

#### Certifications

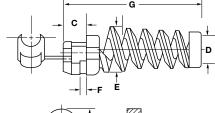
Product	Agency	
Liquidtight and Liquidtight with Spiral	UL Listed.	
	CSA Certified.	
Snap-In	UL Recognized.	
	CSA Certified.	

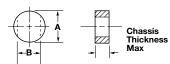
#### **Knockout Holes**

NPT Hub Size	Knockout Hole Recommended Min. to Max. inches (mm)	
1/4	.54"57"	(13.7-14.5)
3/8	.67"70"	(17.0-17.8)
1/2	.86"91"	(21.8-23.1)

#### Snap-In

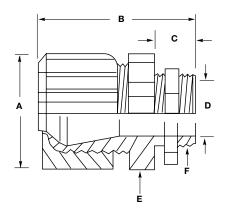
Diameter	For Chassis Thickness	Required Hole Size			nensional cifications			
Range Inches (mm)	(Max.) Inches (mm)	A Inches (mm)	B Inches (mm)	C Inches (mm)	D Inches (mm)	E Inches (mm)	F Inches (mm)	G Inches (mm)
.22"27"	.10"	.50"	.45"	.28"	.28"	.54"	.12"	1.84"
(5.6-6.9)	(2.5)	(12.7)	(11.4)	(7.1)	(7.1)	(13.7)	(3.0)	(44.2)
.28"32"	.10"	.50"	.47"	.28"	.33"	.59"	.12"	1.84"
(7.1-8.1)	(2.5)	(12.7)	(11.9)	(7.1)	(8.4)	(15.0)	(3.0)	(44.2)
.30"36"	.13"	.63"	.55"	.36"	.37"	.65"	.14"	2.18"
(7.6-9.1)	(3.3)	(16.0)	(14.0)	(9.1)	(9.4)	(16.5)	(3.6)	(55.4)
.32"43"	.13"	.75"	.66"	.45"	.44"	.75"	.14"	2.60"
(8.1-10.9)	(3.3)	(19.0)	(16.8)	(11.4)	(11.2)	(19.1)	(3.6)	(66.0)





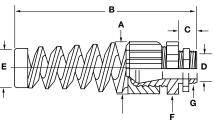
## Liquidtight

		D			E		
F NPT Inches	A Dia. Inches (mm)	B Ref. Inches (mm)	C Inches (mm)	Throat Dia. Inches (mm)	Across Corners Inches (mm)	Across Flats Inches (mm)	
1/4-18	.65" (16.5)	1.30" (33.0)	.40" (10.2)	.29" (7.4)	.65" (16.5)	.60" (15.2)	
<sup>3</sup> %-18	.81" (20.6)	1.44" (36.6)	.41" (10.4)	.36" (9.1)	.81" (20.6)	.75" (19.1)	
1/2-14	1.00" (25.4)	1.56" (39.6)	.46" (11.7)	.45" (11.4)	.99" (25.1)	.92" (23.4)	



## Liquidtight with Spiral

				D		F		
G NPT Inches	A Dia. Inches (mm)	B Ref. Inches (mm)	C Inches (mm)	Throat Dia. Inches (mm)	E Inches (mm)	Across Corners Inches (mm)	Across Flats Inches (mm)	
1/4-18	.65"	2.55"	.40"	.29"	.27"	.65"	.60"	
	(16.5)	(64.8)	(10.2)	(7.4)	(6.9)	(16.5)	(15.2)	
<sup>3</sup> / <sub>8</sub> -18	.81"	3.10"	.41"	.36"	.35"	.81"	.75"	
	(20.6)	(78.7)	(10.4)	(9.1)	(8.9)	(20.6)	(19.1)	
1/2-14	1.00"	3.72"	.46"	.45"	.45"	.99"	.92"	
	(25.4)	(94.5)	(11.7)	(11.4)	(11.4)	(25.1)	(23.4)	



Dimensions shown are approximate and are subject to change without notice.

#### **Features and Benefits**

## PolyTuff® I and PolyTuff® II Non-Metallic Liquidtight Conduit

All non-metallic construction ends fatigue and separation problems. They can be cut cleanly with a knife or PVC cutter so there are no jagged metal edges.





### PolyTuff® I Conduit, Gray

- Rigid PVC core bonded to flexible PVC jacket
- Approved for outdoor use and direct burial
- UL Listed and CSA Certified



#### PolyTuff® II Tubing, Black

- PVC core with corrugated walls bonded to PVC jacket
- Handles twists, turns, bends, switchbacks and straightaways with ease
- UL Recognized and CSA Certified

PolyT	uff®	I	Conduit

**IP66** SUITABILITY





Trade Size (metric designator)	Feet (m)	Catalog Number
<del>3</del> % (12)	100 (30.5)	G1038
1/2 (16)	100 (30.5)	G1050
3/4 (21)	100 (30.5)	G1075
1 (27)	100 (30.5)	G1100
1¼ (35)	100 (30.5)	G1125
1½ (41)	50 (15.2)	G1150
2 (53)	50 (15.2)	G1200

Note: See pages X-58 and X-59, X-90 and X-91 for approved fittings.

See pages X-92 and X-93 for technical information and dimensional drawings.







rolytuii ii lubilig	******	
Trade Size (metric designator)	Feet (m)	Catalog Number
1/4 (10)	100 (30.5)	B2025
3⁄8 (12)	100 (30.5)	B2038
1/2 (16)	100 (30.5)	B2050
3/4 (21)	100 (30.5)	B2075
1 (27)	100 (30.5)	B2100
11/4 (35)	100 (30.5)	B2125
1½ (41)	50 (15.2)	B2150
2 (53)	50 (15.2)	B2200

IP66

Note: See page X-90 for approved fittings.

See pages X-92 and X-93 for technical information and dimensional drawings.



## PolyTuff® Non-Metallic Liquidtight Fittings

P075NGYA

UL Listed to Type 4, 4X, 12 and 13



Straight with Male Non-Metallic Liquidtight Fittings

Trade Size (metric designator)	Black Catalog Number	Gray Catalog Number
1/4 (10)	F2025	_
3 <sub>8</sub> (12)	P038NBKA	P038NGYA
½ (16)	P050NBKA	P050NGYA
3/4 (21)	P075NBKA	P075NGYA
1 (27)	P100NBKA	P100NGYA
11/4 (35)	P125NBK	P125NGY
1½ (41)	P150NBK	P150NGY
2 (53)	P200NBK	P200NGY

Note: Fittings are to be used with PolyTuff I and PolyTuff II.

See pages X-94 and X-95 for technical information and dimensional drawings.

%" Liquidtight conduit fitting have ½ NPT male threads.



**PS0509NGY** SwivelLok® Multi-Position

### SwivelLok® Multi-Position with Male Non-Metallic Liquidtight Fittings

Trade Size (metric designator)	Black Catalog Number	Gray Catalog Number
<sup>3</sup> / <sub>8</sub> (12)	PS0389NBK	PS0389NGY
1/2 (16)	PS0509NBK	PS0509NGY
<sup>3</sup> / <sub>4</sub> (21)	PS0759NBK	PS0759NGY
1 (27)	PS1009NBK	PS1009NGY

Note: Fittings are to be used with PolyTuff I and PolyTuff II.

See pages X-94 and X-95 for technical information and dimensional drawings.

 $\mbox{\%}"$  Liquidtight conduit fitting have  $\mbox{1/2}$  NPT male threads.



P0759NGY

### Fixed 90°Fittings for Non-Metallic Conduit

Trade Size (metric designator)	Black Catalog Number	Gray Catalog Number
3% (12)	P0389NBK	P0389NGY
1/2 (16)	P0509NBK	P0509NGY
3/4 (21)	P0759NBK	P0759NGY
1 (27)	P1009NBK	P1009NGY
11/4 (35)	P1259NBK	P1259NGY

Note: Fittings are to be used with PolyTuff I and PolyTuff II.

See pages X-94 and X-95 for technical information and dimensional drawings.

%" Liquidtight conduit fitting have ½ NPT male threads.



PS05GYKIT

### SwivelLok® Flexible Conduit Kit

Trade Size (metric designator)	Fitting and Conduit	Catalog Number
1/2 (16)	2 PS0509NGY, 6' G1050	PS05GYKIT
<sup>3</sup> / <sub>4</sub> (21)	2 PS0759NGY, 6' G1075	PS07GYKIT

Note: See pages X-94 and X-95 for technical information and dimensional drawings.



## **Metallic Liquidtight Conduit Fittings**

### **Straight Conduit Fitting**

Trade Size		
(metric designator)	Insulated	Non-Insulated
3/8 (12)	H0381	H038
1/2 (16)	H0501	H050
<sup>3</sup> / <sub>4</sub> (21)	H0751	H075
1 (27)	H1001	H100
1¼ (35)	H1251	H125
1½ (41)	H1501	H150
2 (53)	H2001	H200
2½ (63)	H2501	H250
3 (78)	H3001	H300
3½ (91)	H3501	H350
4 (103)	H4001	H400



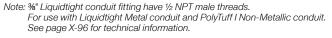
Note: %" Liquidtight conduit fitting have 1/2 NPT male threads.

For use with Liquidtight Metal conduit and PolyTuff I Non-Metallic conduit.

See page X-96 for technical information.

#### 45° Conduit Fitting

Trade Size			
(metric designator)	Insulated	Non-Insulated	
<del>3/8</del> (12)	H03841	H0384	
1/2 (16)	H05041	H0504	
3/4 (21)	H07541	H0754	
1 (27)	H10041	H1004	
11/4 (35)	H12541	H1254	
1½ (41)	H15041	H1504	
2 (53)	H20041	H2004	





### 90° Conduit Fitting

Trade Size		
(metric designator)	Insulated	Non-Insulated
<del>3/8</del> (12)	H03891	H0389
1/2 (16)	H05091	H0509
3/4 (21)	H07591	H0759
1 (27)	H10091	H1009
11/4 (35)	H12591	H1259
1½ (41)	H15091	H1509
2 (53)	H20091	H2009
2½ (63)	H25091	H2509
3 (78)	H30091	H3009
4 (103)	H40091	H4009

Note: %" Liquidtight conduit fitting have ½ NPT male threads.
For use with Liquidtight Metal conduit and PolyTuff I Non-Metallic conduit.
See page X-96 for technical information.



## PolyTuff® I Conduit

0tiTB	
Operating Temperature Range	
Wet environment	$0^{\circ}$ F to +140 $^{\circ}$ F (-18 $^{\circ}$ C to +60 $^{\circ}$ C).
Oil environment	0°F to +158°F (-18°C to +70°C).
Dry environment	0°F to +176°F (-18°C to +80°C).
Certifications	
UL Listed	UL Standard 1660. Sunlight resistant approved for outdoor use, direct burial.
CSA Certified	Meets requirements of NEC.
Voltage Rating	
Maximum	600V.
Material	
Conduit	Co-extruded rigid and flexible PVC.

## PolyTuff® II Tubing

Operating Temperature Range		
Operating environment	$0^{\circ}$ F to +140°F (-18°C to +60°C).	
Certifications		
UL Recognized CSA Certified		
Voltage Rating		
Maximum	Same as wire insulation rating.	
Material		
Tubing	Co-extruded rigid and flexible PVC.	

## PolyTuff® I Conduit

Trade Size (metric designator)	Conduit ID/OI Inches	O (mm)	Bend Ra Inches	dius (mm)
<sup>3</sup> / <sub>8</sub> (12)	.49"/.70"	(12.6/17.8)	2.00"	(50.8)
1/2 (16)	.63"/.83"	(16.1/21.1)	3.00"	(76.2)
<sup>3</sup> / <sub>4</sub> (21)	.83"/1.04"	(21.1/26.4)	4.00"	(101.6)
1 (27)	1.05"/1.30"	(26.0/33.1)	5.00"	(217.0)
11/4 (35)	1.40"/1.65"	(35.4/41.8)	6.30"	(158.8)
1½ (41)	1.59"/1.88"	(40.3/47.8)	7.50"	(190.5)
2 (53)	2.03"/2.36"	(51.6/59.9)	10.00"	(254.0)

## PolyTuff® II Tubing

Trade Size (metric designator)	Conduit ID/OI	O (mm)	Bend Ra Inches	dius (mm)	
1/4 (10)	.36"/.57"	(9.3/14.5)	1.50"	(38.1)	
3% (12)	.49"/.70"	(12.6/17.8)	2.00"	(50.8)	
1/2 (16)	.63"/.83"	(16.1/21.1)	2.00"	(50.8)	
3/4 (21)	.83"/1.04"	(21.1/26.4)	3.00"	(76.2)	
1 (27)	1.05"/1.30"	(26.0/33.1)	3.00"	(76.2)	
11/4 (35)	1.40"/1.65"	(35.4/41.8)	5.00"	(127.0)	
1½ (41)	1.59"/1.88"	(40.3/47.8)	5.00"	(127.0)	
2 (53)	2.03"/2.36"	(51.6/59.9)	5.00"	(127.0)	

## PolyTuff® I and II Conduit/Tubing; PVC Chemical Resistance

Chemical C	onc.*	Temp. 70°F 21°C	150°F 66°C	Chemical C	Conc.*	Temp. 70°F 21°C	150°F 66°C	Chemical Conc.*	Temp. 70°F 21°C	150°l 66°C
Acetate Solvents		D	D	Coconut Oil		С	D	Lubricating Oils	Α	Α
Acetic Acid		В	С	Corn Oil		Α	В	Magnesium Chloride	Α	Α
Acetic Acid (Glacial)		С	D	Cottonseed Oil		С	D	Magnesium Hydroxide	Α	Α
Acetone		D	D	Creosote		D	D	Magnesium Sulfate	Α	Α
Acrylontrile		Α	В	Cresol		С	D	Malathion 50 in Aromatics	D	D
Alcohols (Aliphatic)		С	С	Crysylic Acid		D	D	Malic Acid	Α	Α
Aluminum Chloride		Α	А	Cyclohexane		В	С	Methyl Acetate	D	D
Aluminum Sulfate (Alums)	)	Α	Α	DDT Weed Killer		Α	С	Methyl Alcohol	С	С
Ammonia (Anhydrous Liq	uids)	D	D	Dibutyl Phthalate		D	D	Methyl Bromide	D	D
Ammonia (Aqueous)		Α	Α	Diesel Oils		С	D	Methyl Ethyl Ketone	D	D
Ammoniated Latex		Α	С	Diethylene Glycol		В	С	Methylene Chloride	D	D
Ammonium Chloride		Α	Α	Diethyl Ether		Α	С	Mineral Oil		
Ammonium Hydroxide		Α	Α	Di-isodecyl Phthalate		D	D	Monochlorobenezene	Α	Α
Amyl Acetate		D	D	Dioctyl Phthalate		D	D	Muriatic Acid (see Hydrochloric A	cid)	
Aniline Oils		D	D	Dow General Weed Killer	(Phenol)	D	D	Naphtha	, C	D
Aromatic Hydrocarbons		D	D	Dow General Weed Killer	٠,	В	C	Naphthalene	Ď	D
Asphalt		D	D	Ethyl Alcohol	( /	C	C	Nitric Acid 10%	Ā	В
ASTM Fuel A		C	C	Ethylene Dichloride		D	D	Nitric Acid 35%	A	C
ASTM Fuel B		D	D	Ethylene Glycol		В	С	Nitric Acid 70%	D	D
ASTM #1 Oil		В	C	Ferric Chloride		A	A	Oleic Acid	A	C
ASTM #3 Oil		C	D	Ferric Sulfate		A	A	Oleum	D	D
Barium Chloride		A	A	Ferrous Chloride		A	A	Oxalic Acid	A	A
Barium Sulfide		A	A	Ferrous Sulfate		A	A	Pentachlorophenol in Oil	В	C
Barium Hydroxide		A	A	Formaldehyde		D	D	Pentane	С	D
Benzene (Benzol)			D	Fuel Oil		В	С	Perchloroethylene	В	C
Benzene (Benzol) Benzine (Petroleum Ether	-1	С	С	Fuer Oil Furfural		С	C	Petroleum Ether	С	C
Black Liquor	)	A	A	Gallic Acid		A	A	Phenol	A	A
•			A				D		A	A
Bordeaux Mixture		A		Gasoline (Hi Test)		C	A	Phosphoric Acid 10%		В
Boric Acid		A D	A D	Glycerine		A	C	Pitch 50%	A C	D D
Butyl Acetate				Grease		A		Potassium Hydroxide		
Butyl Alcohol		В	C	Green Sulfate Liquor	0 - 1 4	A	A	Sodium Cyanide	Α	A D
Calcium Hydroxide		A	A	Heptachlor in Petroleum	Solveni		C D	Stoddard Solvent	D	D D
Calcium Hypochlorite		A	A	Heptane		С		Styrene	D	
Carbolic Acid (Phenol)		В	C	Hexane		C	D	Sulfur Dioxide (liquid)	D	D
Carbon Dioxide		Α	A	Hydrobromic Acid	100/	A	A	Sulfuric Acid 50%	Α	В
Carbon Disulfide		D	D	Hydrochloric Acid	10%	A	A	Sulfuric Acid 98%	D	D
Carbon Tetrachloride		D	D	Hydrochloric Acid	40%	С	С	Sulfurous Acid	В	С
Carbonic Acid		Α	A	Hydrofluoric Acid	70%	D	D	Tall Oil	D	D
Casein		Α	С	Hydrofluorosilicic Acid		Α	A	Tannic Acid	Α	Α
Caustic Soda		Α	В	Hydrofluorosilicic Acid	10%	Α	A	Toluene	D	D
Chlorine Gas (wet)		D	D	Hydrogen Peroxide		Α	В	Trichlorethylene	D	D
Chlorine Gas (dry)		D	D	Iso-Octane		С	С	Triethanol Amine	С	D
Chlorine (water solution)		С	D	Isopropyl Acetate		D	D	Tricresyl Phosphate (Skydrol)	D	D
Chlorobenzene		D	D	Isopropyl Acid		В	С	Turpentine	С	D
Chlorinated Hydrocarbon	าร	D	D	Jet Fuels (JP-3, and 5)		С	D	Vinegar	Α	В
Chromic Acid (		В	С	Kerosene		С	С	Vinyl Chloride	D	D
Citric Acid		Α	Α	Ketones		D	D	Water	Α	Α
Coal Tar		D	D	Linseed Oil		Α	Α	White Liquor	Α	Α
Note: *Conc. = Concentration	on.							Xvlene	D	D
(All ratings apply to co	oncentrat	ted or s	aturated so	olutions unless otherwise specifi	ied.)			Zinc Chloride	A	A
0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	_4!			mation supplied by the raw mate	: /			Zinc Sulfate	A	Α

Use as a general guide only – samples should be tested by user under actual conditions.

## **Rating Code**

#### A-Excellent service

No harmful effect to reduce service life. Suitable for continuous service.

#### B-Good service life.

Moderate to minor effect. Good for intermittent service. Generally suitable for continuous service.

#### C-Fair or limited service.

Depends on operating conditions. Generally suitable for intermittent service. Not recommended for continuous service.

### D-Unsatisfactory service.

Not recommended.

## PolyTuff® Fittings

Operating Temperature*	
Nylon (Body, Nut, Gripping Ring and Locknut) Neoprene (Sealing Ring)	-40°F to +225°F (-40°C to +107°C). -30°F to +240°F (-34°C to +116°C).
Flammability	
Fire Gas Toxicity Product Testing	Nylon PolyTuff Fittings have a UL 94X-2 rating.
Certifications	
UL Listed CSA Certified	UL50 Type 4X, 12 and 13. PolyTuff I Fittings, PolyTuff II Fittings.

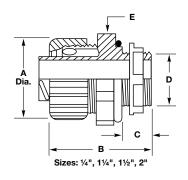
Liquidtight Fittings		
Operating Temperature**		
Steel/Malleable Iron (Nut, Body, Ferrule) Nylon (Gland Ring)	-60°F to $+1000$ °F ( $-51$ °C to $+538$ °C). -40°F to $+225$ °F ( $-40$ °C to $+107$ °C).	
Hazardous Locations - NEC Reference		
Class I, Div. 2 - 501-10(A)(3)B Class II, Div. 1 - 502-10(A)(2) Class II, Div. 2 - 502-10(A)(3) Class III, Div. 1 - 503-10(A)(2) Class III, Div. 2 - 503-10(B)		
Certifications		
UL Listed to UL 514B CSA Certified		

Note: \*Due to the limiting factors of nylon and neoprene, PolyTuff Fittings will continuously perform in the range –30°F to +225°F (–34°C to +107°C).

\*\*Due to the limiting factors of nylon, metallic liquidtight flexible conduit fittings will continuously perform in the range of –40°F to +225°F (–40°C to +107°C).

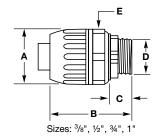
## Straight with Male Non-Metallic Liquidtight Fittings

Trade				D		E
Size (md**)	А	В	С	Throat Dia.	Across Corners	Across Flats
1/ <sub>4</sub>	.93"	1.45"	.39"	.32"		.86" (Dia.)
(10)	(23.6)	(36.8)	(9.9)	(8.1)		(21.8)
3/8	1.14"	1.63"	.57"	.42"	1.41"	1.30"
(12)	(29.0)	(41.4)	(14.5)	(10.7)	(35.8)	(33.0)
½	1.30"	2.14"	.57"	.55"	1.41"	1.30"
(16)	(33.0)	(54.4)	(14.5)	(14.0)	(35.8)	(33.0)
<sup>3</sup> / <sub>4</sub> (21)	1.53"	2.22"	.58"	.74"	1.85"	1.53"
	(38.9)	(56.4)	(14.7)	(18.8)	(47.0)	(38.9)
1 (27)	1.80"	2.32"	.72"	.96"	1.94"	1.80"
	(45.7)	(58.9)	(18.3)	(24.4)	(49.3)	(45.7)
1¼	2.20"	2.15"	.74"	1.30"	2.38"	2.18"
(35)	(55.9)	(54.6)	(18.8)	(33.0)	(60.5)	(55.4)
1½	2.49"	2.35"	.76"	1.46"	2.63"	2.43"
(41)	(63.2)	(59.7)	(19.3)	(37.1)	(66.8)	(61.7)
2	3.05"	2.51"	.79"	1.90"	3.13"	2.93"
(53)	(77.4)	(63.6)	(20.1)	(48.3)	(79.5)	(74.4)



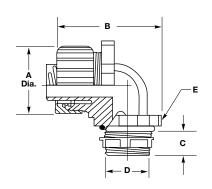
## 90° with Male Non-Metallic Liquidtight Fittings

Trade				D		E	
Size (md**)	А	В	С	Throat Dia.	Across Corners	Across Flats	
1/4 (10)	.93" (23.6)	1.88" (47.8)	.39" (9.9)	.32" (8.1)		86"(Dia.) 21.8)	
1¼ (35)	2.21" (56.1)	3.57" (90.7)	.74" (18.9)	1.30" (33.0)	2.38" (60.5)	2.18" (55.4)	



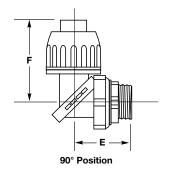
## SwivelLok® Multi-Position Liquidtight Fittings

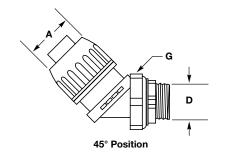
Trade								G
Size (md**)	Α	В	С	D	E	F	Across Corners	Across Flats
3/8	1.30"	3.27"	.57"	.55"	1.43"	2.00"	1.41"	1.30"
(12)	(33.0)	(83.1)	(14.5)	(14.0)	(36.3)	(50.8)	(35.8)	(33.0)
½	1.30"	3.27"	.57"	.55"	1.43"	2.00"	1.41"	1.30"
(16)	(33.0)	(83.1)	(14.5)	(14.0)	(36.3)	(50.8)	(35.8)	(33.0)
<sup>3</sup> / <sub>4</sub> (21)	1.53"	3.66"	.58"	.74"	1.59"	2.23"	1.65"	1.53"
	(38.9)	(93.0)	(15.7)	(18.8)	(40.4)	(56.6)	(41.9)	(38.9)
1	1.80"	4.00"	.72"	.96"	1.84"	2.30"	1.94"	1.80"
(27)	(45.7)	(101.6)	(18.3)	(24.4)	(46.7)	(58.4)	(49.3)	(45.7)

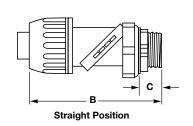


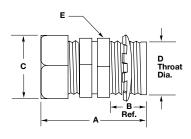
Note: \*A/C = Across Corners, A/F = Across Flats.

\*\*md = metric designator.



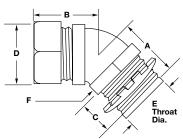






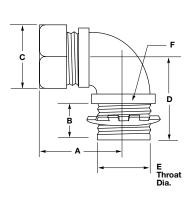
### Straight with Male Metallic Metal Fitting

Trade Size	Α			С	D		E
(md**)	Ref.	В	A/C*	A/F*	Throat Dia.	A/C*	A/F*
3/8	1.43"	.59"	1.20"	1.06"	.61"	1.07"	.93"
(12)	(36.3)	(15.0)	(30.0)	(26.9)	(15.5)	(27.2)	(23.6)
1/2	1.43"	.59"	1.34"	1.19"	.61"	1.22"	1.06"
(16)	(36.3)	(15.0)	(34.0)	(30.2)	(15.5)	(31.0)	(26.9)
3/4	1.56"	.59"	1.55"	1.37"	.84"	1.43"	1.25"
(21)	(39.6)	(15.0)	(39.0)	(34.8)	(21.3)	(36.3)	(31.8)
1	1.68"	.66"	1.95"	1.69"	1.06"	1.73"	1.56"
(27)	(42.7)	(16.8)	(50.0)	(42.9)	(26.9)	(43.9)	(39.6)
11/4	2.03"	.63"	2.39"	2.06"	1.37"	2.36"	2.08"
(35)	(51.6)	(16.8)	(61.0)	(52.3)	(34.8)	(59.9)	(52.8)
11/2	2.21"	.63"	2.72"	2.38"	1.53"	2.79"	2.48"
(41)	(56.1)	(16.8)	(69.0)	(60.5)	(38.9)	(70.9)	(63.0)
2	2.28"	.69"	3.08"	2.87"	2.06"	3.32"	2.90"
(53)	(57.9)	(17.5)	(78.0)	(72.9)	(52.3)	(84.3)	(73.7)
21/2	3.56"	1.06"	3.92"	3.62"	2.42"	3.85"	3.60"
(63)	(90.4)	(26.9)	(100.0)	(91.9)	(61.5)	(97.8)	(91.4)
3	3.81"	1.06"	4.70"	4.31"	3.01"	4.65"	4.33"
(78)	(96.8)	(26.9)	(119.0)	(109.5)	(76.5)	(118.1)	(110.0)
31/2	3.81"	1.06"	5.29"	4.81"	3.49"	5.18"	4.82"
(91)	(96.8)	(26.9)	(134.0)	(122.2)	(88.6)	(131.6)	(122.4)
4	3.81"	1.06"	5.75"	5.31"	3.96"	5.75"	5.39"
(103)	(96.8)	(26.9)	(146.0)	(134.9)	(100.6)	(146.1)	(136.9)



### 45° with Male Metallic Metal Fitting

	ade Size	Α	В	С		D	E		F	
(m	d**)				A/C*	A/F*	Throat Dia.	A/C*	A/F*	
3/8		1.19"	1.28"	.59"	1.20"	1.06"	.60"	1.16"	1.02"	
(12	2)	(30.2)	(32.5)	(15.0)	(30.5)	(26.9)	(15.2)	(29.5)	(25.9)	
1/2		1.19"	1.28"	.59"	1.34"	1.19"	.61"	1.21"	1.06"	
(16	3)	(30.2)	(32.5)	(15.0)	(34.0)	(30.2)	(15.2)	(30.7)	(26.9)	
3/4		1.19"	1.43"	.59"	1.55"	1.45"	.84"	1.50"	1.32"	
(2-	1)	(30.2)	(36.3)	(15.0)	(39.4)	(36.8)	(21.3)	(38.1)	(33.5)	
1		1.38"	1.53"	.66"	1.95"	1.69"	1.05"	1.82"	1.59"	
(27	7)	(35.1)	(38.9)	(16.8)	(49.5)	(42.9)	(26.7)	(46.2)	(40.4)	
11/4	4	1.42"	1.69"	.63"	2.39"	2.06"	1.37"	2.32"	2.03"	
(38	5)	(36.1)	(42.9)	(16.0)	(60.7)	(52.3)	(34.8)	(58.9)	(5.16)	
11/	2	1.66"	2.00"	.66"	2.72"	2.38"	1.60"	2.62"	2.29"	
(41	1)	(42.2)	(50.8)	(16.8)	(69.1)	(60.5)	(40.6)	(66.5)	(58.2)	
2		1.69"	2.25"	.66"	3.08"	2.88"	2.05"	3.21"	2.80"	
(50	3)	(42.9)	(57.2)	(16.8)	(78.2)	(73.2)	(52.1)	(81.5)	(71.1)	



#### 90° with Male Metallic Metal Fitting

Trade Size	Α	В		С	D	E		F
(md**)			A/C*	A/F*	Ref.	Throat Dia.	A/C*	A/F*
	1.31"	.59"	1.20"	1.06"	1.44"	.60"	1.13"	.99"
(12)	(33.3)	(15.0)	(30.5)	(26.9)	(36.6)	(15.2)	(29.0)	(25.1)
1/2	1.31"	.59"	1.34"	1.12"	1.44"	.61"	1.12"	1.00"
(16)	(33.3)	(15.0)	(34.0)	(28.4)	(36.6)	(15.5)	(28.0)	(25.4)
3/4	1.44"	.59"	1.55"	1.45"	1.63"	.83"	1.48"	1.29"
(21)	(36.6)	(15.0)	(39.4)	(36.8)	(41.4)	(21.1)	(38.0)	(32.8)
1	1.78"	.59"	1.95"	1.60"	2.19"	1.05"	1.80"	1.57"
(27)	(45.2)	(15.0)	(49.5)	(40.6)	(55.6)	(26.7)	(46.0)	(39.9)
11/4	1.97"	.63"	2.39"	2.06"	2.50"	1.36"	2.32"	2.02"
(35)	(50.0)	(16.0)	(60.7)	(52.3)	(63.5)	(34.5)	(59.0)	(51.3)
1½	2.19"	.63"	2.72"	2.38"	2.69"	1.61"	2.58"	2.25"
(41)	(55.6)	(16.0)	(69.1)	(60.5)	(68.3)	(40.9)	(66.0)	(57.2)
2"	2.53"	.66"	3.08"	2.87"	3.25"	2.05"	3.14"	2.75"
(53)	(64.3)	(16.8)	(78.2)	(72.9)	(82.6)	(52.1)	(80.0)	(69.9)
21/2	3.44"	1.00"	3.92"	3.63"	4.25"	2.42"	3.78"	3.50"
(63)	(87.4)	(25.4)	(99.6)	(92.2)	(108.0)	(61.5)	(96.0)	(88.9)
3	3.75"	1.00"	4.70"	4.31"	4.87"	3.01"	4.64"	4.30"
(78)	(95.3)	(25.4)	(119.4)	(109.5)	(123.7)	(76.5)	(118.0)	(109.2)
4	4.25"	1.00"	5.75"	5.31"	5.63"	3.96"	5.76"	5.38"
(103)	(108.0)	(25.4)	(146.1)	(134.9)	(143.0)	(100.6)	(146.0)	(136.7)

Note: \*A/C = Across Corners, A/F = Across Flats.

\*\*md = metric designator.

# SECTION Y

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### Products at a Glance



#### **Jacks and Connectors**

- NEXTSPEED® Category 6 system is designed to deliver headroom beyond 500 MHz
- Category 5e supports 10/100/1000BASE-T applications with usable bandwidth of 190 MHz in the channel
- F-Type connectors distribute high quality video signal to the workstation
- RCA connectors distribute component and composite audio and video signals from device to device



#### Modular Snap Fit Jacks

- Customize the jack selections and look
- Quick and secure snap-in design
- Hi impact-resistant thermoplastic frame
- Audio/Video connectors are available in standard bulkhead or recessed



#### **Network Enclosures**

- Flush or surface mount enclosure (hardware provided)
- Hinged cover can be mounted to swing from either side
- Integral trim ring hides rough-in hole in sheet rock providing a finished appearance
- Horizontal and vertical module mounting holes for maximum flexibility



#### In-Wall AV Delivery and HDMI Products

- 18 Gauge white powder coated rugged steel base
- 2-Gang enclosure with two 1½ and 1¼ inch KOs
- Stud or sheetrock mounting integrated
- Supplied ABS trim ring quickly cleans up sheetrock rough-in
- Optional screw on cover reduces tampering

• Zero-crosstalk contact structure provides

Integrated port and panel labeling, as well

• Labeling, termination and aesthetics shared

across all performance categories, sizes

• Rear cable manager bars maintain

the highest performance while maintaining

• cULus 1863 Listed

true balance

termination integrity

and configurations



#### Patch Panels and Wall Mount Brackets Network and Audio/Video Modules

- netSELECT® modular components enable the designer to select performance requirements specifically for the application
- Modules snap horizontally or vertically into the enclosures for maximum flexibility and optimum space usage
- netSELECT® video modules support bidirectional signal by splitting to 4, 6, or 8 separate work areas



## Molded-In Voice/Data/Video

as port icon attachment

- Decorator frames provide a stylized look for that finishing touch
- Elongated strap for better wall box mounting
- High impact-resistant thermoplastic frame
- UL Listed 1863 Communication Circuit Accessory and CSA Certified





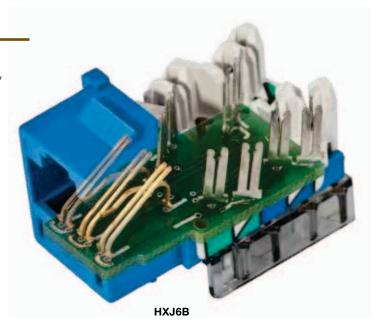
#### **Features and Benefits**

#### Hubbell Xcelerator Jacks, Category 6, 5e and USOC

The NEXTSPEED® Category 6 system is designed to deliver headroom beyond 500 MHz for dependable Multi-gigabit Ethernet applications. NEXTSPEED's extended bandwidth provides reliability with zero bit error rate performance for today's high speed digital communications. The Category 5e supports 10/100/1000BASE-T applications with usable bandwidth of 190 MHz in the channel.

Hubbell's work area solutions and modular connectivity have many innovative features that integrate into a wide range of Hubbell products—floor boxes, patch panels, conference table boxes, fire-rated poke-throughs and wallplates.

- TIA-568.2-D Category 6 component
- IEC 60603-7-4 Category 6 component
- Qualified to 150% of IEEE 802,3bt current level
- IEEE 802.3an 10GBASE-T





#### Housing Design

- One-piece, engineered thermoplastic housing is impact-resistant for heavyduty industrial environments
- Blades are recessed for protection against bending and breaking
- Closure cap is included for environmental seal when device is not in use



#### **Labor Savings**

• Exclusive 1-Punch Tool, terminates within seconds



#### **Universal Wiring**

• Two distinct labels eliminate wiring confusion, T568B or T568A



#### **IDC Lacing**

• IDC towers have a blade feature to assist pair splitting during termination



#### **Specifications**

Mating cycles: 2500

Manufacturing: 100% factory tested





## **Enterprise Grade Jacks**



### NEXTSPEED® Category 6 Jacks

NEXTOFIED Category Coacks						
Color	Single Pack	25-Pack				
Black	HXJ6BK	HXJ6BK25				
Blue	HXJ6B	HXJ6B25				
Electric Ivory	HXJ6EI	HXJ6EI25				
Gold	-	HXJ6GL25				
Gray	HXJ6GY	HXJ6GY25				
Green	HXJ6GN	HXJ6GN25				
Office White	HXJ6OW	HXJ6OW25				
Orange	HXJ6OR	HXJ6OR25				
Purple	-	HXJ6P25				
Red	HXJ6R	HXJ6R25				
White	HXJ6W	HXJ6W25				
Yellow	HXJ6Y	HXJ6Y25				

Note: Also available in 100 packs.



### **NEXTSPEED®** Category 5e Jacks

Single Pack	25-Pack	
HXJ5EBK	HXJ5EBK25	
HXJ5EB	HXJ5EB25	
HXJ5EEI	HXJ5EEI25	
_	HXJ5EGL25	
HXJ5EGY	HXJ5EGY25	
<b>HXJ5EGN</b>	HXJ5EGN25	
HXJ5EOW	HXJ5EOW25	
HXJ5EOR	HXJ5EOR25	
_	HXJ5EP25	
HXJ5ER	HXJ5ER25	
HXJ5EW	HXJ5EW25	
HXJ5EY	HXJ5EY25	



#### **USOC Jacks, RJ-25**

occo cacho, no zo	_
Single Pack	
HXJUBK HXJUB HXJUEI	
HXJUGY HXJUGN HXJUOW HXJUOR	
- HXJUR HXJUW HXJUY	
HXJUGY HXJUGN HXJUOW HXJUOR - HXJUR HXJUW	





### netSELECT® Jacks

	Categor	y 6 Jack	Category	5e Jack	USOC Jack
Color	(single)	(25 pack)	(single)	(25 pack)	(single)
Black	NSJ6BK	NSJ6BK25	NSJ5EBK	NSJ5EBK25	NSJUBK
Blue	NSJ6B	NSJ6B25	NSJ5EB	NSJ5EB25	NSJUB
Gray	NSJ6GY	NSJ6GY25	NSJ5EGY	NSJ5EGY25	NSJUGY
Green	NSJ6GN	NSJ6GN25	NSJ5EGN	NSJ5EGN25	NSJUGN
lvory	NSJ6I	NSJ6I25	NSJ5EI	NSJ5EI25	NSJUI
Light Almond	NSJ6LA	NSJ6LA25	NSJ5ELA	NSJ5ELA25	NSJULA
Orange	NSJ6OR	NSJ6OR25	NSJ5EOR	NSJ5EOR25	NSJUOR
Red	NSJ6R	NSJ6R25	NSJ5ER	NSJ5ER25	NSJUR
White	NSJ6W	NSJ6W25	NSJ5EW	NSJ5EW25	NSJUW
Yellow	NSJ6Y	NSJ6Y25	NSJ5EY	NSJ5EY25	NSJUY



### Jack Icons, XJ Series

100-Pack, snaps onto jack nose

, ,	,		
			8
	Blank	Computer	Telephone
Color	Catalog Number	Catalog Number	Catalog Number
Black	IBK100	IBK100C	IBK100T
Blue	IB100	IB100C	IB100T
Brown	IBN100	IBN100C	IBN100T
Electric Ivory	IEI100	IEI100C	IEI100T
Gray	IGY100	IGY100C	IGY100T
Green	IGN100	IGN100C	IGN100T
Orange	IOR100	IOR100C	IOR100T
Purple	IP100	IP100C	IP100T
Red	IR100	IR100C	IR100T
White	IW100	IW100C	IW100T
Yellow	IY100	IY100C	IY100T

Note: Cannot be used with SJ jack series.

Custom Icon numbering and labeling available. Contact Customer Service for details.



### SecureIT™ RJ-45 Port Blocker

Description	Catalog Number		
Locking RJ-45 port blocker	RJ45PB50		
N E D			

Note: Fits any RJ-45 port.



## **Jack Dust Covers, XJ Series**

Description	Catalog Number
Polypropylene, clear, 25-pack	HXJDC25

Note: Mounts within the icon slots located above the RJ45 opening. Cannot be used with SJ jack series.



## **Digital AV Connections**









## **RJ-45 Couplers**

Female to female couplers					
Housing Color	Category 6, Pass-Thru	Category 5e, Pass-Thru	Category 5e, Cross Over 10/100BASE-T	Category 6, Shielded Pass-Thru	
Black	SFC6BK	SFC5EBK	_	Lead free SFSC6	
Gray	=	-	SF5ECOGY	tinned shield	
White	SFC6W	SFC5EW	_		









#### **USB Connectors**

Pass-thru, female to female couplers					
Housing Color	USB 3.0, A to A	USB 3.0, A to B	USB 2.0, A to A	USB 2.0, A to B	
Black	SFUSBAA3BK	SFUSBAB3BK	_	_	
Blue	-	_	SFUSBAAB	SFUSBABB	
Office White	-	-	SFUSBAAOW	SFUSBABOW	
White	-	-	SFUSBAAW	SFUSBABW	











### **HDMI Connectors for IMB and ISFB Series**

Color	HDMI Feed-Thru	HDMI Feed-Thru Coupler	HDMI Feed-Thru 3-Inch Tail	
Black White	SFHC14BK SFHC14W	HDMIC14	HDMIT14	

### **HDMI Decorator Frames**

Color	1-Port	2-Port
Black	NS801BK	NS802BK
Gray	NS801GY	NS802GY
lvory	NS801I	NS802I
Light Almond	NS801LA	NS802LA
White	NS801W	NS802W



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Black, non-plenum, #24 AWG						
Length (ft)	HDMI Device Patch Cords	In-Wall Cords (Male w/ Screw to Male w/ Screw)	Patch Cords (Male to Male w/ Secure Screw)	Coupler Cords (Male to Female)		
3	HDPC03BK	_	_	_		
6	HDPC06BK	<del>-</del>	-	_		
10	-	HDH10BK	HDL10BK	HDC10BK		
15	_	HDH15BK	HDL15BK	HDC15BK		
20	_	HDH20BK	HDL20BK	HDC20BK		
25	-	HDH25BK	HDL25BK	HDC25BK		
30	_	HDH30BK	HDL30BK	HDC30BK		



### **Video Connections**













### **F-Type Connectors**

Pass-thru, F/F coupler				
	Nickel	Nickel		
Color	2GHz	netSELECT F-Type Coupler Bulkhead, Female to Female		
Almond	SFFALX	_		
Black	SFFBX	NSF70BK		
Gray	SFFGX	NSF70GY		
lvory	SFFEX	NSF70I		
Office White	SFFX	NSF70LA		
White	SFFWX	NSF70W		

old		

3GHz	2GHz	Recessed	RCA to F-Connector
SFF3GAL	SFFGAL	_	_
SFF3GBK	SFFGBK	SFGRFBK	SFRFGBK
SFF3GGY	SFFGGY	SFGRFGY	SFRFGGY
SFF3GEI	SFFGEI	SFGRFEI	SFRFGEI
SFF3GOW	SFFGOW	SFGRFOW	SFRFGOW
SFF3GW	SFFGW	SFGRFW	SFRFGW





## **F-Connector Plugs**

25-pack		
Termination Type	Cable Type	Catalog Number.
Compression	RG6	FRG625

#### **Blank Connectors**

10-pack		
Color	Blank Connector	Smooth Blank Connector
Almond Black Gray Ivory Light Almond Office White White	SFBAL10 SFBB10 SFBG10 SFBE10 - SFB10 SFBW10	SFSBAL10 SFSBBK10 SFSBGY10 SFSBEI10 SFSBLA10 - SFSBW10













#### **Screw Terminal**

	HD 9-Pin	HD 15-Pin	HD 15-Pin, Front Mount
10-Pack	9ST10	15ST10	SF15ST

## **Gender Changers**

Female to female couplers				
	15-Pin, 90°	HD 9-Pin	HD 15-Pin	
Single Pack	15901	-	-	
10-Pack	-	9GC10	15GC10	

#### **S-Video Connectors**

Transmits video information over a cable by dividing the signal into two separate signals (chrominance) for color and (luminance) for brightness. Applications include cable, satellite, DVD, camera, camcorder, projector, home theater, entertainment systems, security, and surveillance.









S-Video 110 Punch-Down

SFSV110BK



S-Video F/F Coupler SFSVBK

Color

Black



### **AV Connections**



### **RCA Connectors, Solder Termination**

	Insulator Color						
Housing Color	Black	Blue	Green	Orange	Red	White	Yellow
Almond	-	SFRCBAL	SFRCGNAL	SFRCORAL	SFRCRAL	SFRCWAL	SFRCYAL
Black	SFRCBKBK	SFRCBBK	SFRCGNBK	SFRCORBK	SFRCRBK	SFRCWBK	SFRCYBK
Gray	SFRCBKGY	SFRCBGY	SFRCGNGY	SFRCORGY	SFRCRGY	SFRCWGY	SFRCYGY
lvory	SFRCBKEI	SFRCBEI	SFRCGNEI	SFRCOREI	SFRCREI	SFRCWEI	SFRCYEI
Office White	-	SFRCBOW	SFRCGNOW	SFRCOROW	SFRCR	SFRCW	SFRCY
White	SFRCBKW	SFRCBW	SFRCGNW	SFRCORW	SFRCRW	SFRCWW	SFRCYW















## RCA Connectors, Pass-Thru, Recessed

	Insulator Color						
Housing Color	Black	Blue	Green	Orange	Red	White	Yellow
Almond	SFRCBKRAL	SFRCBRAL	SFRCGNRAL	SFRCORRAL	SFRCRRAL	SFRCWRAL	SFRCYRAL
Black	SFRCBKRBK	SFRCBRBK	SFRCGNRBK	SFRCORRBK	SFRCRRBK	SFRCWRBK	SFRCYRBK
Gray	SFRCBKRGY	SFRCBRGY	SFRCGNRGY	SFRCORRGY	SFRCRRGY	SFRCWRGY	SFRCYRGY
lvory	SFRCBKREI	SFRCBREI	SFRCGNREI	SFRCORREI	SFRCRREI	SFRCWREI	SFRCYREI
Office White	SFRCBKROW	SFRCBROW	SFRCGNROW	SFRCORROW	SFRCRROW	SFRCWROW	SFRCYROW
White	SFRCBKRW	SFRCBRW	SFRCGNRW	SFRCORRW	SFRCRRW	SFRCWRW	SFRCYRW















## RCA Connectors, Pass-Thru, Gold, Female to Female Coupler

	Insulator Color						
Housing Color	Black	Blue	Green	Orange	Red	White	Yellow
Almond	SFRCBKFFAL	SFRCBFFAL	SFRCGNFFAL	SFRCORFFAL	SFRCRFFAL	SFRCWFFAL	SFRCYFFAL
Black	SFRCBKFFBK	SFRCBFFBK	SFRCGNFFBK	SFRCORFFBK	SFRCRFFBK	SFRCWFFBK	SFRCYFFBK
Gray	SFRCBKFFGY	SFRCBFFGY	SFRCGNFFGY	SFRCORFFGY	SFRCRFFGY	SFRCWFFGY	SFRCYFFGY
lvory	SFRCBKFFEI	SFRCBFFEI	SFRCGNFFEI	SFRCORFFEI	SFRCRFFEI	SFRCWFFEI	SFRCYFFEI
Office White	SFRCBKFF	SFRCBFFOW	SFRCGNFFOW	SFRCORFFOW	SFRCRFF	SFRCWFF	SFRCYFF
White	SFRCBKFFW	SFRCBFFW	SFRCGNFFW	SFRCORFFW	SFRCRFFW	SFRCWFFW	SFRCYFFW



### **Audio Connections**









#### 3.5mm Stereo Jacks

Color	3.5mm to Solder	3.5mm to Screw Terminal	3.5mm Pass-Thru, F/F Coupler	3.5mm Pass-Thru, Gold, F/F Coupler	
Almond	SF35SJAL	SF35STAL	SF35FFAL	SF35GFFAL	
Black	SF35SJBK	SF35STBK	SF35FFBK	SF35GFFBK	
Gray	SF35SJGY	SF35STGY	SF35FFGY	SF35GFFGY	
lvory	SF35SJEI	SF35STEI	SF35FFEI	SF35GFFEI	
Office White	SF35SJ	SF35STOW	SF35FFOW	SF35GFFOW	
White	SF35SJW	SF35STW	SF35FFW	SF35GFFW	



### 1/4" Stereo Jack

Solder	
Color	Catalog Number
Almond	SF14SJAL
Black	SF14SJBK
Gray	SF14SJGY
lvory	SF14SJEI
Office White	SF14SJOW
White	SF14SJW





#### **BNC Connectors**

Color	Nickel Finish	Gold Finish
Black	SFBBK	SFBGBK
Gray	SFBGY	SFBGGY
lvory	SFBEI	SFBGEI
Light Almond	SFBLA	SFBGLA
Office White	SFBOW	SFBGOW
White	SFBW	SFBGW





## Speaker Banana Plugs

10-pack	SPPBK10	SPPR10		
	Black	Red		
Screw termination, gold				



Screw termination, gold				
Color	Black	Red		
Almond Black Gray Ivory Office White White	SFSPGBKAL SFSPGBKBK SFSPGBKGY SFSPGBKEI SFSPGBK SFSPGBKW	SFSPGRAL SFSPGRBK SFSPGRGY SFSPGREI SFSPGR SFSPGRW		



## **RCA Connectors, 110 Punch-Down**

Extend up to 75ft (23m) over single 4-pair UTP cable; housing color is black

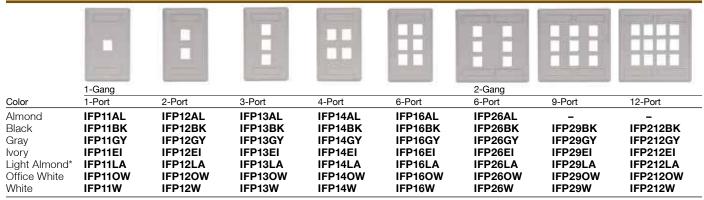
riodoling dolor to black	
Insulator Color	Catalog Number
Blue	SFRC110B
Green	SFRC110GN
Red	SFRC110R
White	SFRC110W
Yellow	SFRC110Y

## 3.5mm to 110 Termination Stereo Jacks

Black	SF35110BK	
Color	3.5mm to 110 Termination	
Extend up to 75ft (23m) over single 4-pair UTP cable		

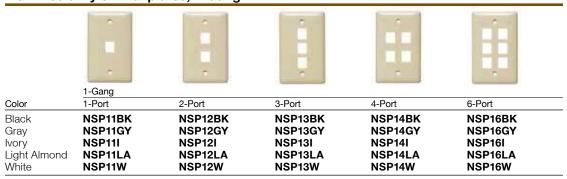
#### **Hubbell iSTATION Wallplates**

#### IFP Wallplates with Label Fields, 1 and 2-Gang

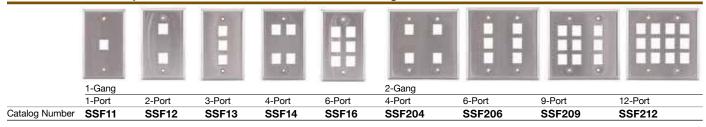


Note: \*Light Almond wallplates match Office White non-metallic raceway, boxes, jacks and connectors.

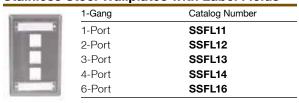
#### Multimedia Nylon Wallplates, 1-Gang



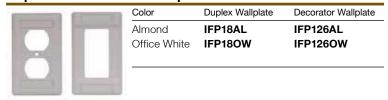
#### Stainless Steel Wallplates without Label Fields, 1 and 2-Gang



#### Stainless Steel Wallplates with Label Fields



#### **Duplex and Decorator Wallplates with Label Fields**



#### Stainless Steel Wall Mount Phone Plates, 1-Gang

630 Stainless steel, 1-gang wall phone plate. Jack Format Includes Gray Jack Catalog Number Flush 6-position USOC, RJ25 **SPUF** Flush 8-position Cat. 5e, RJ45 SP5EF Flush 8-position Cat. 6, RJ45 SP6F Recessed 6-position USOC, RJ25 **SPUR** Recessed 8-position Cat. 5e, RJ45 SP5ER Recessed 8-position Cat. 6, RJ45 SP6R

Opening

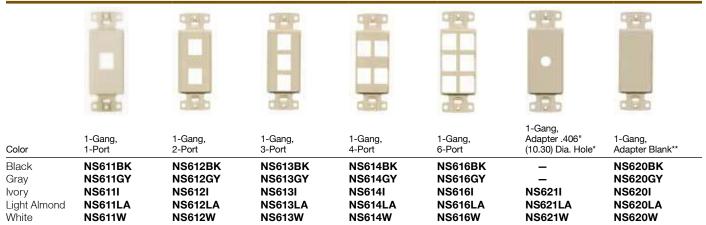
Hole size for mounting
all Hubbell Jacks.

**SPUF** 

**SPUR** 

#### **Hubbell iSTATION Outlet Frames and Secure-IT Plates**

#### **Decorator Frames, Unloaded**



Note: \*For use with rotary dimmers or to pull through AV or telephone cable.

\*\*To fill an extra decorator opening or to create customized openings.

### Decorator HD15/9-Pin or HDMI Frames, Unloaded



Note: \*Light Almond frames match Office White non-metallic raceway, boxes, jacks and connectors.

### **Duplex Outlet Frames, Unloaded**



#### **Secure-IT Plates**





Secure-IT Plates protect mated and unmated connections from physical damage and unauthorized tampering. Available in Tamper-Resistant and Weatherproof versions.



TPF1W

## **Tamper-Resistant Plates**

Tumper Hee	Tampor Trociotant Flatos			
Color	1-Gang/4-Port			
Black	TPF1BK			
Gray	TPF1GY			
Office White	TPF1OW			
White	TPF1W			



NEMA 3R Weatherproof Plates

Color	1-Gang/4-Port	
Gray	TWPF1GY	

## AV 110 Everywhere™ Analog AV Over UTP

# Tamper-Resistant Receptacle with 5V DC Power Output

Description	Color	Catalog Number
USB charger	Black	AVPS15BK
TR receptacle,	lvory	AVPS15I
(1) USB port 3A,	Gray	AVPS15GY
switched 5V DC output,	Office White	AVPS15LA
15A, 125V AC	White	AVPS15W
decorator duplex		







## USB 2.0 High Speed 110 Extenders, 100ft

Description	Color	1.5 Unit Module
4-pair UTP cable installation, up to 100ft (305m)	Black Ivory Gray Office White White	IMU11015BK IMU11015EI IMU11015GY IMU11015OW IMU11015W

Note: Product consists of send and receive pair.

#### **HDMI 1080P 110 UTP Extenders**

(2) 4-pair UTP cable installation, 5V DC, up to 147ft (45m)				
Color	Decorator	2 Unit Module		
Black	ISFH110BK	IMH110ST2BK		
lvory	ISFH110EI	IMH110ST2EI		
Gray	ISFH110GY	IMH110ST2GY		
Office White	ISFH110OW	IMH110ST2OW		
White	ISFH110W	IMH110ST2W		

Note: Product consists of send and receive pair.







### VGA and 3.5mm HD AV Extender

Extend up to 75ft (23m) over two 4-pair UTP cables, 1.5 unit			
Color	Catalog Number		
Black	IM15311015BK		
Gray	IM15311015GY		
lvory	IM15311015EI		
Office White	IM15311015OW		
White	IM15311015W		

Note: Product consists of send and receive pair.

#### RCA Component with Audio 110 Audio/Video Modules

Extend up to 75ft (23m) over (2) 4-pair UTP cables, 1.5 unit				
Color	RCA Component Video, Left/Right Audio	RCA Component Video, 3.5mm Audio		
Black	IMCAR11015BK	IMC3511015BK		
Gray	IMCAR11015GY	IMC3511015GY		
Ivory	IMCAR11015EI	IMC3511015EI		
Office White	IMCAR11015OW	IMC3511015OW		
White	IMCAR11015W	IMC3511015W		







#### RCA 110 Audio/Video Modules

Extend up to 100ft (30.5m) over (1) 4-pair UTP cables, 1 unit			
	75ft (23m) max.		
Color	RCA Component Video, HD		
Black	IMCR1101BK		
Gray	IMCR1101GY		
lvory IMCR1101EI			
Office White	IMCR1101OW		
White	IMCR1101W		

RCA Left/Right Audio
IMAR1101BK
IMAR1101GY
IMAR1101EI
IMAR1101OW
IMAR1101W



## **AV Modules**









#### Solder Audio/Video Modules

	1.5 Unit	1 Unit			
Color	RCA Component Video with Left/Right Audio or RGBHV	RCA Component Video	RCA Composite Video with Left/Right Audio	RCA Composite Video, 3.5mm Stereo Audio Jack	
Black	IMCRS15BK	IMCRS1BK	IM3RS1BK	IMRSJ1BK	
Gray	IMCRS15GY	IMCRS1GY	IM3RS1GY	IMRSJ1GY	
ory	IMCRS15EI	IMCRS1EI	IM3RS1EI	IMRSJ1EI	
Office White	IMCRS15OW	IMCRS1OW	IM3RS1OW	IMRSJ10W	
White	IMCRS15W	IMCRS1W	IM3RS1W	IMRSJ1W	









#### Gold Pass-Through Audio/Video Modules

Female to female coupler, 1 unit				Speaker post
Color	RCA Component Video	RCA Composite Video with Left/Right Audio	RCA Left/Right Audio with 3.5mm Stereo Audio Jack	Black and Red, Screw Termination
Black	IMCRF1BK	IM3RF1BK	IM35AR1BK	IMSP1BK
Gray	IMCRF1GY	IM3RF1GY	IM35AR1GY	IMSP1GY
lvory	IMCRF1EI	IM3RF1EI	IM35AR1EI	IMSP1EI
Office White	IMCRF1OW	IM3RF1OW	IM35AR1OW	IMSP10W
White	IMCRF1W	IM3RF1W	IM35AR1W	IMSP1W





## **Speaker Banana Plugs**

Screw termination, gold			
	Black	Red	
10-pack	SPPBK10	SPPR10	

Y-12



## Wallplate Frames, Delivery Bezels, Modules and Gangable AV Wallboxes









### **Hubbell iSTATION Modular Wallplate Frames**

Single-service,	low voltage				
Color	1-Gang	2-Gang	3-Gang	4-Gang	
Black	IMF1BK	IMF2BK	IMF3BK	IMF4BK	
Gray	IMF1GY	IMF2GY	IMF3GY	IMF4GY	
lvory	IMF1EI	IMF2EI	IMF3EI	IMF4EI	
Office White	IMF1OW	IMF2OW	IMF3OW	IMF4OW	
White	IMF1W	IMF2W	IMF3W	IMF4W	
Multi-service, p	oower and low voltage				
Color	1-Gang Decorator 1-Gang iSTATION	2-Gang Decorator	1-Gang Decorator 2-Gang iSTATION	1-Gang Decorator 3-Gang iSTATION	2-Gang Decorator 2-Gang iSTATION
Black	IMFP1D1BK	IMFP2BK	IMFP1D2BK	IMFP1D3BK	IMFP2D2BK
Gray	IMFP1D1GY	IMFP2GY	IMFP1D2GY	IMFP1D3GY	IMFP2D2GY
lvory	IMFP1D1EI	IMFP2EI	IMFP1D2EI	IMFP1D3EI	IMFP2D2EI
Office White	IMFP1D1OW	IMFP2OW	IMFP1D2OW	IMFP1D3OW	IMFP2D2OW
White	IMFP1D1W	IMFP2W	IMFP1D2W	IMFP1D3W	IMFP2D2W

#### **Hubbell iSTATION Stainless Steel Plates**

1-Gang	2-Gang	3-Gang	4-Gang	
IMSS1	IMSS2	IMSS3	IMSS4	



## **Delivery Bezels and Modules**

Color	Raceway Bezel	Hubbell iSTATION Bezel for Third-Party Raceway	Furniture Boxes
Black	_	_	HBLIMFBK
Gray	KPIMBZGY	HWAPLGY	HBLIMFGY
lvory	-	-	HBLIMFI
Office White	KPIMBZOW	HWAPLOW	-
White	-	HWAPLW	HBLIMFWA

#### **Third-Party Raceway Modules**

Unloaded, 2	2-port, 10-pack
Color	Catalog Number
Black	HWM2KBK10
Gray	HWM2KGY10
lvory*	HWM2KI10
White	HWM2KW10

Note: \*Equivalent to Hubbell Office White.

#### Two and Three Gangable AV Wallboxes

Box	Dimensions	Top Knockouts	Bottom Knockouts	Back Knockouts	Catalog Number
2-Gang, 2" KO, 54in <sup>3</sup> capacity	H: 4.21" W: 4.06" D: 4.0"	(2) ½" (2) ½" – ¾" TKO*	(1) 1", 1¼", 1½" & 2"	(2) ½" – ¾" TKO	HBL985
3-Gang, 2" KO, 79in <sup>3</sup> capacity	H: 4.21" W: 5.87" D: 4.0"	(3) ½" (3) ½" – ¾" TKO*	(1) ½" (1) ½" – ¾" TKO* (1) 1", 1¼", 1½" & 2"	(3) ½" – ¾" TKO	HBL986



Note: \*TKO (Tangential Knockout).

## **Low Voltage AV Wallbox Partitions**

Compatible With	Description	Quantity	Catalog Number
HBL985 and HBL986	Solid divider	1	HBL989
	With pass-thru capability	1	HBL989AVD



#### **Modules and Frames**



#### HD15/9-Pin or HDMI Modules

	1 Unit	1.5 Unit		2 Unit
Color	HD15/9-Pin or HDMI	Angled, HD15/9-Pin or HDMI	HD15/9-Pin or HDMI with 3.5mm Stereo Jack*	HD15/9-Pin or HDMI with 3.5mm SJ+AV Conn
Black	IMBDS1BK	IMBDSA15BK	IMB15315BK	IMB153X2BK
Gray	IMBDS1GY	IMBDSA15GY	IMB15315GY	IMB153X2GY
lvory	IMBDS1EI	IMBDSA15EI	IMB15315EI	IMB153X2EI
Office White	IMBDS10W	IMBDSA150W	IMB15315OW	IMB153X2OW
White	IMBDS1W	IMBDSA15W	IMB15315W	IMB153X2W

Note: \*Screw termination or solder



DVI Blank, Unloaded, 1.5 Unit					
Color	1-Pack	10-Pack			
Black	IMBDVI15BK	IMBDVI1015BK			
Gray	IMBDVI15GY	IMBDVI1015GY			
lvory	IMBDVI15EI	IMBDVI1015EI			
Light Almond	IMBDVI15LA	IMBDVI1015LA			
Office White	IMBDVI15OW	IMBDVI1015OW			
White	IMBDVI15W	IMBDVI1015W			













#### **Modules**

	1 Unit		1.5 Unit	1.5 Unit				
Color	Flat, 1-Port	Flat, 2-Port	Angled, 1-Port	Angled, 2-Port	Recessed, Angled, 1-Port	Recessed, Angled, 2-Port		
Black	IM1K1BK	IM2K1BK	IM1KA15BK	IM2KA15BK	IM1IA15BK	IM2IA15BK		
Gray	IM1K1GY	IM2K1GY	IM1KA15GY	IM2KA15GY	IM1IA15GY	IM2IA15GY		
Ivory	IM1K1EI	IM2K1EI	IM1KA15EI	IM2KA15EI	IM1IA15EI	IM2IA15EI		
Office White White	IM1K1OW	IM2K1OW	IM1KA15OW	IM2KA15OW	IM1IA15OW	IM2IA15OW		
	IM1K1W	IM2K1W	IM1KA15W	IM2KA15W	IM1IA15W	IM2IA15W		











#### **Blank Modules**

Color	0.5 Unit	1 Unit	1.5 Unit
Black	IMB05BK	IMB1BK	IMB15BK
Gray	IMB05GY	IMB1GY	IMB15GY
lvory	IMB05EI	IMB1EI	IMB15EI
Office White	IMB05OW	IMB1OW	IMB15OW
White	IMB05W	IMB1W	IMB15W

### **SC Angled Modules**

1.5 Unit, 1 Duplex	2 Unit, 2 Duplex
IM1SCA15BK	IM2SCA2BK
IM1SCA15GY	IM2SCA2GY
IM1SCA15EI IM1SCA15OW	IM2SCA2EI IM2SCA2OW
IM1SCA15OW	IM2SCA2OW

#### **Hubbell iSTATION Audio/Video Modules**

XLR, speakON® and ¼ inch modules applications include video distribution, desktop and laptop computers, monitors, cameras, microphones and projectors, home theater and entertainment. Note: Order IMAVB15 series blank modules with AV connectors for Hubbell iSTATION applications.













AV Blank 1.5 Unit, 10-Pack

10-Pack XLRST10

XLR Screw Terminal,

XLR Solder-Type, 10-Pack

XLR<sub>10</sub>

speakON® Conn. Solder-Type, 10-Pack

**SC10** 

USB Feed-Thru A-to-B, 10-Pack USB<sub>10</sub>

1/4" Stereo Jack Solder-Type, 10-Pack

Black **IMAVB15BK IMAVB15GY** Gray IMAVB15EI Ivory Office White **IMAVB150W IMAVB15W** White

Note: \*Not UL Listed.

speakON® is a registered trademark of Neutrik® AG.

**14S10** 

Color



#### **Hubbell iSTATION Surface Mount Boxes**

Ideal for open office MUTOA cabling, compact surface mount environments and retrofits to support data, voice and multimedia applications. Features adjustable furniture latches to provide an additional mounting option to common ANSI/TIA standard furniture openings and solutions requiring fiber. Box bases feature fiber storage posts that can store one meter fiber cable after termination.

Can be mounted with supplied surface mounting screws or double-sided adhesive tape and mounted to NEMA electric boxes or relay racks.

#### **Features**

- Low-profile design
- Accepts XJ jacks, audio video and fiber connectors
- Provided with double-sided tape and mounting screws for easy installation
- UL and cULus listed
- Constructed with a high-impact resistant, flame-retardant polymer
- ANSI/TIA-606B compliant



ISB12OW











#### ISB Surface Mount Boxes

Color	1-Port	2-Port	4-Port	6-Port	12-Port	
Black	ISB1BK	ISB2BK	ISB4BK	ISB6BK	ISB12BK	
Electric Ivory	ISB1EI	ISB2EI	ISB4EI	ISB6EI	ISB12EI	
Gray	ISB1GY	ISB2GY	ISB4GY	ISB6GY	ISB12GY	
Office White	ISB1OW	ISB2OW	ISB4OW	ISB6OW	ISB12OW	
White	ISB1W	ISB2W	ISB4W	ISB6W	ISB12W	

#### **UL Plenum Rated ISB Surface Mount Boxes**

Color	1-Port	2-Port
Black	ISB1BKP	ISB2BKP
lvory	ISB1EIP	ISB2EIP
Gray	ISB1GYP	ISB2GYP
Office White	ISB1OWP	ISB2OWP
White	ISB1WP	ISB2WP

Note: ISB surface mount boxes are not compatible with SJ shielded jacks.



#### **Non-Metallic Raceway Compatibility Chart**

Series	PP	PL	PW	PB
ISB1	✓			<b>√</b> *
ISB2	✓			<b>√</b> *
ISB4	✓	✓	1	<b>√</b> *
ISB6	✓	✓	✓	✓*
ISB12	✓	✓	✓	✓*

Note: \*Use PB3REDA transition fitting.

See section T for Raceway product information.

PP1 = PREMISETRAK Latching Raceway PL1 = LANTRAK® Latching Raceway

PW2= WALLTRAK® Latching Raceway

PB2 = BASETRAK® Non-Latching Raceway PB3 = BASETRAK Non-Latching Raceway

PS3 = SUPER BASETRAK® Non-Latching Raceway



### **Universal Patch Panels and Wall Mount Brackets**



















## Consolidation Point Block, Category 6 and Category 5e

Description	Catalog Number
Category 6, 12-Port, Universal, 89D.	HP612
Category 5e, 12-Port, Universal, 89D.	HP5E12

#### **Universal Patch Panel, Category 5e**

Description	Catalog Number
24-Port, 1.75" H.	HP5E24
48-Port, 3.50" H.	HP5E48
96-Port, 7.0" H.	HP5E96

## **Universal Patch Panel, Category 6**

Description	Catalog Number
24-Port, 1.75" H.	HP624
48-Port, 3.50" H.	HP648
96-Port, 7.0" H.	HP696

#### Jack Panel, Unloaded

Description	Catalog Number
Wall Mount, 12-Port, Black.	HPJ1289
Rack Mount, 24-Port, 1.75" H, Black.	NSPJ24
Rack Mount, 48-Port, 3.5" H, Black.	NSPJ48

### Rear Cable Management Bar\*

Description	Catalog Number
Screws to the rear flange of a 19-inch rack.	CMBR
HPW panel mount.	HPRCMB
Note: *Not UL Listed.	

## Wall Mount Brackets, Bottom-Hinged

Rack Units	Width Inches (mm)	Depth Inches (mm)	Height Inches (mm)	Catalog Number
1	19" (483)	4" (102)	1.75" (45)	HPWWB1U4
2	19" (483)	4" (102)	3.50" (89)	HPWWB2U4
		8" (203)	3.50" (89)	HPWWB2U8
4	19" (483)	4" (102)	7.00" (178)	HPWWB4U4
		8" (203)	7.00" (178)	HPWWB4U8
6	19" (483)	4" (102)	10.50" (267)	HPWWB6U4
		8" (203)	10.50" (267)	HPWWB6U8
		18" (457)	10.50" (267)	HPWWB6U18

### Wall Mount Brackets, Side-Hinged

Includes assembled side-hinged wall bracket.						
Rack Units	Width Inches (mm)	Depth Inches (mm)	Height Inches (mm)	Catalog Number		
2	19" (483)	4" 102)	3.50" (89)	BRMCCMB19X35X4		
4	19" (483)	4" (102)	7.00" (178)	BRMCCMB19X7X4		
2	19" (483)	8" (203)	3.50" (89)	BRMCCMB19X35X8		
4	19" (483)	8" (203)	7.00" (178)	BRMCCMB19X7X8		

#### **Features and Benefits**

### **NSC Patch Cords**

- Conductor: #24 AWG UTP
- Jacket: Flame-Retardant PVC-CM Rated
- Plug Body: Polycarbonate UL 94V-0
- Plug Boot: PVC
- Contact Plating: 50 micro-inch Gold





### **Housing Design**

- Category 6 performance
- Slim snagless boot for high density ports
- PoE ready



#### Performance, Mechanical

- Cable to plug tensile strength: 20+ lbs.
- Mating cycles: 2000+

## **NSC Patch Cords, Category 6**

Length	Color				
(ft)	Black	Blue	Gray	White	
1'	NSC6BK01	NSC6B01	NSC6GY01	NSC6W01	
3'	NSC6BK03	NSC6B03	NSC6GY03	NSC6W03	
5'	NSC6BK05	NSC6B05	NSC6GY05	NSC6W05	
7'	NSC6BK07	NSC6B07	NSC6GY07	NSC6W07	
10'	NSC6BK10	NSC6B10	NSC6GY10	NSC6W10	
15'	NSC6BK15	NSC6B15	NSC6GY15	NSC6W15	



#### **NSC Patch Cords, Category 5e**

Length (ft)	Color				
	Black	Blue	Gray	White	
1'	NSC5EBK01	NSC5EB01	NSC5EGY01	NSC5EW01	
3'	NSC5EBK03	NSC5EB03	NSC5EGY03	NSC5EW03	
5'	NSC5EBK05	NSC5EB05	NSC5EGY05	NSC5EW05	
7'	NSC5EBK07	NSC5EB07	NSC5EGY07	NSC5EW07	
10'	NSC5EBK10	NSC5EB10	NSC5EGY10	NSC5EW10	
15'	NSC5EBK15	NSC5EB15	NSC5EGY15	NSC5EW15	



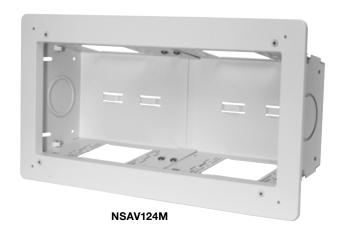


#### **Features and Benefits**

#### **AV In-Wall Enclosure**

Hubbell's netSELECT® Flat Panel Television (FPTV) connection enclosure delivers high-density connectivity and power in the wall. This allows flat panel displays and interactive "smart" boards to sit flush against walls with no dangling cords. It quickly installs to studs or sheetrock without additional components or hardware.

- 18 Gauge white powder coated rugged steel base
- 2 and 4-gang enclosure with two 1½ and 1¼ inch KOs
- Optional screw on cover reduces tampering
- cULus 1863 Listed





#### Box Design

- Flush against walls installation
- Sheet metal base white powder coat finish
- Accepts standard electrical boxes
- Integrated cable management



#### Mounting

- Multiple device mounting options
- 1½" And 1¼" conduit knockouts
- Easily mounts to studs or sheetrock
- Easily replaceable receptacle
- Trim ring covers rough-in



## **FPTV Connection Enclosure**

	Height	Width	Depth		
Description	Inches (mm)	Inches (mm)	Inches (mm)	Color	Catalog Number
2-gang in-wall enclosure.	8.16" (207)	7.92" (201)	3.37" (86)	White	NSAV62M
4-gang in-wall enclosure.	14.80" (376)	7.92" (201)	3.37" (86)	White	NSAV124M
Steel cover for NSAV6 series.	7.2" (183)	7.2" (183)	0.05" (1)	White	NSAV6C
Steel cover for NSAV12 series.	13.80" (351)	7.2" (183)	0.05" (1)	White	NSAV12C
Block wall adapter.					NSAV6BW
New work stud brackets.					NSAV6NW

#### Accessories

HDMI snap fit.

F-connector snap fit.

USB A-to-B snap fit.

Cat 6 snap fit jack.

7 10 0 0 0 0 0 1 1 0 0		
Power Kits		
Description	Color	Catalog Number
Standard power kit.	White	NSOKPTR
Surge protected power kit.	Blue	NSOKPS
Unloaded Wallplates and Frames		
1-gang blank wallplate.	White	NP14W
1-gang decorator wallplate.	White	NP26W
1-gang Hubbell iSTATION wallplate.	White	IMF1W
1-gang 4-port wallplate.	White	NSP14W
AV Connectors and Wallplates		
1-port HDMI frame.	White	NS801W
2-port HDMI frame.	White	NS802W

White

White

White

White



NSJ6W

NP26W

Note: See pages Y-4 to Y-8 for snap fit multimedia jacks and AV connectors.

SFHC14W

NSF70W

NSJ6W

**SFUSBABW** 

#### **HDMI Products**

#### **AV Ceiling Enclosure**

The AV Ceiling Enclosure is designed to work with active AV devices to integrate AV distribution, data connections and power in one location, providing a direct connection to a projector or a display device. An additional AV/data kit can be added or customized to address all connector, mounting and patching needs, reducing multiple pieces on site.

- Manage multiple applications inside one enclosure
- Flush mounted, white enclosure for consistent look when mounted in the ceiling
- Loaded with two Hubbell 20A duplex receptacles and a 2-gang back box
- All steel rugged construction provides the ultimate strength for installation



AVCE1H

Description	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)	Color	Catalog Number
AV Ceiling Enclosure	12" (305)	24" (610)	8" (203)	White	AVCE1H

Note: Enclosure includes two 20 amp duplex receptacles and 2-gang back box.

#### **HDMI Decorator Frames**

netSELECT® HDMI Decorator Frames deliver uncompromising digital audio and video wherever you need it. Unleash the full potential of your high definition display and audio installations.

- Third party tested for 1080p resolutions
- UL Listed Communications Circuit Accessory and CSA Certified







### Frame Design

- High impact thermoplastic frame
- Connector flush to frame face



#### Connector

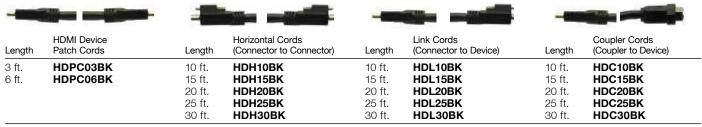
- Thumbscrew prevents accidental disconnection only when used with Hubbell's HDMI patch cords
- Connector sized to fit 1 inch conduit
- 4 inch flexible extension reduces bend radius issues in confined spaces

#### **HDMI Products**

Description	Color	1-Gang, 1-Port	1-Gang, 2-Port	
HDMI,	Black	NS801BK	NS802BK	
Decorator Frame,	Gray	NS801GY	NS802GY	
Female to Female	lvory	NS801I	NS802I	
	Light Almond	NS801LA	NS802LA	
	Office White	NS801OW	NS802OW	
	White	NS801W	NS802W	



#### **HDMI Patch Cords, #24 AWG**



Note: Black and Non-Plenum only.

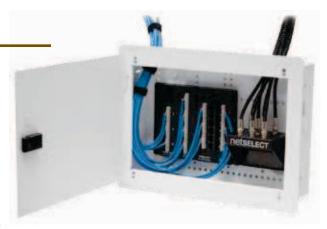
## **Advantages and Wiring Layout**

### Connect Your Home to Internet, Voice and Video Services

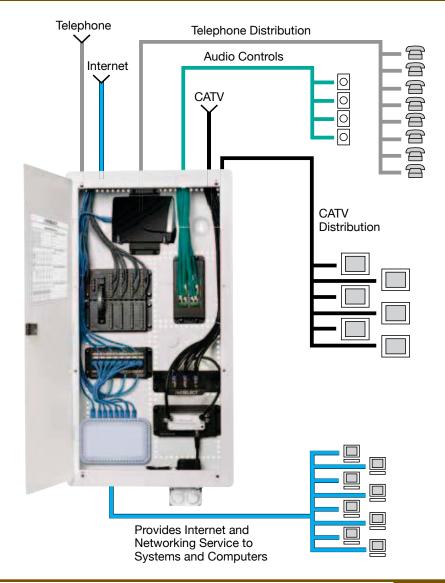
netSELECT® is an innovative network solution that's perfect for any home or small office. Specifically positioned as the voice/data segment for the Residential brand, the netSELECT® System satisfies the need for a dependable, flexible system that can accommodate all of today's fast-changing voice, data and video requirements.

This cost-effective solution incorporates all the quality you'd expect from Hubbell. Built-in flexibility makes it easy to upgrade and keep pace with evolving technologies.

- Share single analog, cable or DSL internet connection
- Local file access
- Shared peripherals
- Multiple telephone distribution
- Call handling (PBX)
- Video distribution
- Play games that allow multi-users
- Control home automation systems



### Today's Communications Entail A Lot More Than Just Talking. netSELECT® Keeps You Connected—Internet, Voice, Data and Entertainment





#### **Network Enclosures**

#### **Features**

- Flush or surface mount enclosure (hardware provided)
- Hinged cover can be mounted to swing from either side
- Integral trim ring hides rough-in hole in sheet rock providing a finished appearance (except NSOBOX48)
- Horizontal and vertical module mounting holes for maximum flexibility
- Unique 89D bracket mounting holes allow easy mounting of 66 blocks and peripherals
- Provisions to mount optional duplex power and lock kit available
- Integral cable management slots and tie-wraps provided to help dress cable runs
- Additional nylon push pins provided to assist module mounting
- Material: 20-18 gauge steel
- Finish: white, powder coat
- cULus Listed 1863

#### **Network Enclosures**

#### **Pre-Configured Network System**

Description Catalog Number Pre-Configured Network System NSOBNK14

Basic home network kit includes:

One box with hinged cover NSOBOX14,

One primary 8-port telephone module NSOPTM8,

One four way coaxial splitter module NSOVM4



NSOBX10

### 10 Inch Network Enclosure for MDU and Modular Applications

Description	Height Inches (mm)	Width Inches (mm)	Depth Inches (mm)	No. of Module Placement	Catalog Number
With hinged cover	11.55" (293)	15.65" (398)	4.08" (104)	3	NSOBX10
With panel cover	11.07" (281)	_	4.08" (104)	3	NSOBX10BC
10"H box only	10.07" (256)	14.38" (365)	3.96" (101)	3	NSOBX10B
Hinged door	11.55" (293	15.65" (398)	0.58" (15)	_	NSOBX10D
Panel cover	11.07" (281)	15.50" (594)	0.20" (5)	_	NSOBX10C



With hinged cover	15.55" (395)	15.65" (398)	4.08" (104)	5	NSOBOX14
With panel cover	15.10" (384)	15.54" (395)	4.08" (104)	5	NSOBOX14BC
14"H box only	14.00" (356)	14.38" (365)	3.96" (101)	5	NSOBOX14B
Hinged door	15.55" (395)	15.65" (398)	0.33" (8)	-	NSOBOX14D
Vented door (louver)	15.55" (395)	15.65" (398)	0.52" (15)	-	NSOBOX14DL
Panel cover	15.11" (384)	15.54" (395)	0.20" (5)	-	NSOBOX14C
2"D extension bracket with ventilation and WiFi KOs	15.30" (389)	15.57" (395)	2.00" (51)	-	NSOBOX14X2



NSOBOX14

#### 28 Inch Network Enclosure

With hinged cover	29.55" (751)	_	_	11	NSOBOX28
With panel cover	29.13" (740)	15.54" (395)	4.08" (104)	11	NSOBOX28BC
28"H box only	28.00" (711)	14.38" (365)	3.96" (101)	11	NSOBOX28B
Hinged door	29.55" (751	15.65" (398)	0.33" (8)	_	NSOBOX28D
Vented door* (louver)	29.55" (751	15.65" (398)	0.52" (15)	-	NSOBOX28DL
Panel cover	29.29" (744)	15.54" (395)	0.20" (5)	_	NSOBOX28C
2"D extension bracket with ventilation and WiFi KOs	29.3" (744)	15.57" (395)	2.00" (51)	=	NSOBOX28X2



NSOBOX28

#### 48 Inch Network Enclosure

With hinged cover	48.94" (1243)	14.94" (379)	4.07" (103)	21	NSOBOX48*
Trim ring					NSOBOX48R

Note: \*Door covers rough-in, no trim ring provided.



#### **Network Modules**

#### **Features**

netSELECT® Modular Components enable the designer to select performance requirements specifically for the application. Modules snap horizontally or vertically into the enclosures for maximum flexibility and optimum space usage.

- Dimensions: 6.47 in. W x 2.95 in. H, except NSOMTM24 6.47 in. W x 6.00 in. H
- Meets FCC Part 68 standard
- Material: High impact plastic
- cULus Listed 1863
- All data and phone modules 568A wired



NSOTVDM6

#### **Combination Modules**

Description	Units	Catalog Number
6-port telephone panel and 6-port coaxial splitter with optional 6-port Category 5e panel provides voice, video, and data distribution in a space efficient package perfect for use with NSOBOX10 and NS790xx plates to quickly establish a comprehensive home network.	;	
6-port telephone and video	3	NSOTVM6
6-port telephone, video and Category 5e	3	NSOTVDM6
6-port Category 5e data upgrade kit	3	NSODK6



NSOPTM8

#### **Primary Telephone Module**

Description	Units	Catalog Number
8-port phone outlets with up to (4) incoming lines for voice, fax or modem	1	NSOPTM8
applications in a protected PCB module; pre-mounted push pins snap the		
module quickly into place; RJ31X interface jack included for security system		
connection; RJ45 jack interfaces with optional NSOETM8 telephone		
expansion module for additional extensions.		



NSOETM8

### **Expansion Telephone Module**

Description	Units	Catalog Number
8-port adds an additional (8) phone outlets with up to (4) incoming lines when used with the primary telephone module; pre-mounted push pins snap the module quickly into place; includes RJ45 jumper cord to connect with NSOPTM8 primary telephone module.	1	NSOETM8



NSODM8

#### **Data Modules**

Description	Units	Catalog Number
Category 5e data module, 8-port supports Gigabit Ethernet for up to (8) Category 5e data lines with front 110 punch-down terminations in a protected PCB module; pre-mounted push pins snap the module quickly into place.	1	NSODM8
Category 6 data module, 8-port supports enhanced transmission speeds beyond Gigabit Ethernet; future-proof for tomorrow's applications.	1	NSODM8C6



NSOMTM24

#### **Patchable Telecom Module**

Description	Units	Catalog Number
Terminates lines via modular plug to accommodate flexibility, by changing plug locations; reconfigure where phone lines go at the panel level; allows data lines to be converted to voice, with the move of a patch cord; includes nine RJ45 jumper cords.	2	NSOMTM24



NSOMTM12

#### **Multi-Provider Patchable Telcom Module**

Description	Units	Catalog Number
12-port telephone module distributes 4 incoming lines out to 12 locations through RJ-45 jacks; allows data lines to be converted to voice with the move	1	NSOMTM12
of a patch cord; RJ31X interface jack is included for security system connection.		



#### **Audio/Video Modules**

#### **Features**

netSELECT® Video Modules support bidirectional signal by splitting to 4, 6, or 8 separate work areas. Pre-mounted push pins snap the module quickly into place.

- Dimensions for VAMP, AM8 and BM: 6.47 in. W x 2.95 in. H
- Dimensions for video splitters: 6.47 in. W x 2.09 in. H x 3.20 in. D
- Material: High impact plastic
- cULus Listed 1863

#### 4-Way Coaxial Splitter Modules

Units	Catalog Number
1	NSOVM4
1	NSOVM42G
	Units 1



NSOVM4

#### 6-Way Coaxial Splitter Modules

One incoming line, six outgoing.		
Description	Units	Catalog Number
1GHz, basic unit	1	NSOVM6
2.3GHz, enhanced capability	1	NSOVM62G



NSOVM6

#### 8-Way Coaxial Splitter Modules

One incoming line, eight outgoing.		
Description	Units	Catalog Number
1GHz, basic unit	1	NSOVM8
2.3GHz, enhanced capability	1	NSOVM82G



Fixed Video Amplifier Module

120 Volt rated		
Description	Units	Catalog Number
Provides 10dB video signal amplification for incoming cable feeds recommended for use when more than four outputs are installed or when signal level is low; provides 10dB forward path gain and supports current digital cable systems and modems with a passive return; pre-mounted push pins snap the module quickly into place; includes RG-59 cable jumper to connect amplifier to passive video splitter.	1	NSOVAMP



NSOVM8

**NSOVAMP** 

#### **Eight Room Audio Module**

Description	Units	Catalog Number
Distributes audio from an amplifier to matching volume controllers; supports up to eight rooms of audio; power handling – 200W RMS@20° C; requires impedance matching volume controls (see page Y-24).	1	NSOAM8



NSOAM8

#### **Blank Module Plate**

Description	Units	Catalog Number
Allows mounting of active components (i.e. switches, routers) or other devices (66 blocks, audio components) onto a modular platform; can be custom drilled or used with two self-adhesive VELCRO® strips included to mount components onto module; pre-mounted push pins snap the module quickly into place.	1	NSOBM



VELCRO® is a registered trademark of Velcro Industries B.V.



#### **Accessories**

#### **Features**

netSELECT® Accessories enhance system capabilities. Volume controls expand home audio applications. Cabinet mounted receptacle kits provide convenience power to the enclosure.

- Audio controls available in slide or rotary
- Receptacles available in surge and standard kits



**NSOSAVC** 



**NSORAVC** 



**NSOKPS** 









#### **Accessories**

Description	Color	Catalog Number
Slide Audio Volume Controller, Decorator Styling, Power handling - 70W RMS@20° C. Impedance matching for up to 8 pairs of speakers. Includes both ivory and white slides and frames.	lvory/White	NSOSAVC
Rotary Audio Volume Controller Power handling - 70W RMS@20° C. Impedance matching for up to 8 pairs of speakers. Includes both ivory and white knobs and frames.	Ivory/White	NSORAVC
Standard Power Kit, Includes tamper-resistant duplex receptacle 15A 125V NEMA 5-15R, electrical steel box and wallplate.		NSOKPTR

Surge Suppression Power Kit, Includes surge receptacle 15A 125V NEMA 5-15R, 240 Joules/15,000A protection per mode, electrical steel box and wallplate.

Chromed Steel Lock Kit, Includes two keys. Eliminates unwanted tampering.

Panel Bracket Adapter,
For use with Adapter Panels shown below, and FSP series modules. Snap mounts into structured cabling enclosures.

F-Connector Adapter Panel,
with Six Populated Coaxial Connectors.

FSPFP6X

Jacks Adapter Panel, with Six Blank Openings for jacks and snap fits.

FSPHD6X

**NSOKPS** 

FLOCK1

**NSOFSB** 



#### Molded-In Voice/Data/Video

#### **Features**

Designed to complement decorator styling, these jacks offer voice and Cat. 5e devices to fit within a decorator wallplate.

- High impact-resistant thermoplastic frame
- Meets FCC part 68
- cULus Listed 1863 Communication Circuit Accessory and CSA Certified

#### Molded-In Voice/Low-Speed Data









Description	Decorator Frame, One RJ11 Jack, 6-Position, 4-Conductor
Color	Screw Terminations
Black	NS770BK
Prown	NG770

Decorator Frame, One RJ11 Jack, 6-Position, 6-Conductor Screw Terminations

Decorator Frame, Duplex RJ11 Jacks, 6-Position, 6-Conductor Screw Terminations

Decorator Frame, One Cat. 5e 110 Punch-Down, One RJ11 Jack, 6-Position, 4-Conductor

Color	Screw Termin
Black	NS770BK
Brown	NS770
Gray	NS770GY
lvory	NS770I
Light Almond	NS770LA
White	NS770W

NS771 NS771LA

– – – NS772I NS772LA NS772W 110 Punch-Down/Screw Terminations
NS784BK
NS784
NS784GY
NS784I
NS784LA
NS784W

#### **Features**

Coaxial video and combination jacks complement multimedia needs in a 1-gang decorator opening.

- High impact-resistant thermoplastic frame
- Jacks meet FCC part 68
- UL Listed 1863 Communication Circuit Accessory and CSA Certified

#### Molded-In Voice/Low-Speed Data







Description	Decorator Frame, Single F-Type Coupler Bulkhead, Female to Female
Color	Screw Terminations

One RJ11 Jack, 6-Position, 4-Conductor, One F-Type Coupler Bulkhead, Female to Female Screw Terminations

Decorator Frame,

One Cat. 5e 110 Punch-Down, One F-Type Coupler Bulkhead, Female to Female 110 Punch-Down Terminations

Color	Screw Termin
Black	_
Brown	_
Gray	_
Light Almond	NS780LA
White	NS780W

– NS783LA NS783W NS785BK NS785 NS785GY NS785LA NS785W



#### **Molded-In Plates**

#### **Features**

Brown

Ivory Light Almond

White

Designed for voice, these devices provide an economical alternative to wall phone outlet placement.

- High impact-resistant thermoplastic wallplate
- Convenient screw down terminals
- Meets FCC part 68
- cULus Listed 1863 Communication Circuit Accessory and CSA Certified

#### **Molded-In Plates for Voice**













1-Gana Plata Description Color

NS730

NS730I

NS730LA

NS730W

One RJ11 Jack, 6-Position, 4-Cond Screw Terminations	
	Mid-Size

1-Gang Plate, One RJ11 Jack, 6-Position, 6-Conductor, Screw Terminations Standard

NS732

NS732I

NS732LA

NS732W

1-Gang Plate, Duplex RJ11 Jacks, 6-Position, 4-Conductor, Screw Terminations

Standard Mid-Size  NS745I		
Standard	Mid-Size	
_	_	
_	NS745I	
_	_	
_	NS745W	

#### Molded-In Plates for Voice and CATV/Satellite





NS735

NS735I

NS735LA

NS735W



Standard

NS747I

NS747LA

NS747W







Mid-Size

NS751I

NS751LA

NS751W





1-G One Fem One 6-Po

Standard

ang Plate,	i-Gang i
F-Type Coupler Bulkhead,	One F-Ty
nale to Female,	Bulkhead
RJ11 Jack,	One RJ1
osition, 6-Conductor	6-Positio

1-Gang Plate	,
One F-Type C	Coupler
Bulkhead, Fe	male to Female
One RJ11 Jac	ck,
6-Position, 4-	Conductor

1-Gang Plate, One F-Type Coupler Bulkhead, Female to Female

Standard

NS750I

NS750LA

**NS750W** 

1-Gang Plate, Duplex F-Type Coupler Bulkhead, Female to Female

Standard NS752I

NS752LA

NS752W

lvory Light Almond	NS748I NS748LA
White	NS748W
	<u>_</u>

Description

Color



Mid-Size

NS755I



1-Gang Plate, One Cat. 5e 110 Punch-Down One RJ11 Jack, 6-Position, 4-Conductor One F-Type Coupler Bulkhead
Female to Female
Standard

Color	Standard
Black	NS790BK
Brown	NS790
Gray	NS790GY
vory	NS790I
_ight Almond	NS790LA
Nhite	NS790W



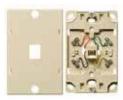
#### **Telephone Wall Jacks**

#### **Features**

Designed for voice applications, these jacks provide an economical alternative to basic wall mount and performance needs.

- Available in high impact-resistant thermoplastic or stainless steel
- Meets FCC part 68
- cULus Listed 1863 Communication Circuit Accessory and CSA Certified

#### **Telephone Wall Jacks**



Wall Phone Jack, 6-Position, 4-Conductor, Screw Terminations

lvory NS722I White NS722W



Wall Phone Jack, 6-Position, 4-Conductor, Description Screw Terminations

Stainless Steel NS726SS

#### **Features**

Description

Description

Telephone surface mount jacks are available in 4 or 6-conductor configurations for voice. Alternatively, multimedia surface mount boxes can be custom loaded for computer and media use.

- High impact-resistant thermoplastic
- Mounts using screws or double sided tape (both included)
- Meets FCC part 68
- UL Listed 1863 Communication Circuit Accessory and CSA Certified

#### **Telephone Surface Mount Jacks**



Telephone Surface Mount Jack, 6-Position, 4-Conductor, Screw Terminations

Black —
Gray —
Ivory NS760I
Office White —
White NS760W



Multimedia 1-Port Surface Mount Box, Jack Not Included

ISB1BK\* ISB1GY\* ISB1EI\* ISB1OW\* ISB1W\*



Multimedia 2-Port Surface Mount Box, Jacks Not Included

ISB2BK\* ISB2GY\* ISB2EI\* ISB2OW\* ISB2W\*

Note: \*cULus Listed 1863 - Communication Circuit Accessory. See pages Y-4 to Y-8 for snap fit multimedia jacks and AV connectors.

#### **Standard UTP Wiring Conventions**

#### **Horizontal UTP Cable and Patch Cords**

- Solid copper 4-pair #24 or better AWG UTP is specified for distribution cabling. Stranded UTP is specified for patch cords for flexibility. Shielded cable is not commonly used in the U.S. splices and bridge taps are not permitted.
- Cable, connectors and patch cords shall be marked with the performance category.
   Always match performance categories of cables and components throughout the infrastructure.
- All cable, cords and connecting hardware shall meet performance requirements of ANSI/TIA/EIA-568-C.1 and 568-C.2. Hubbell assures this compliance with all products and cable partners.

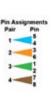
#### **COLOR CODING:**



#### **Recognized Connector and Wiring Configurations**

- 8-position modular jack/plug.
- 8-position modular panel/plug.
- T568A wiring or T568B wiring options.
- Cat. 5e or Cat. 6 recommended.



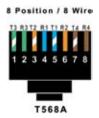






#### **RJ45 - TIA-568 Conventions**

Two wiring standards were adopted. Both configurations provide equivalent transmission performance.



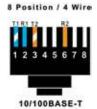
- Preferred method
- Directly compatible with 2-pair voice and Token Ring systems utilizing 6-position connectors



- · Optional method
- AT&T's standard
- Directly compatible with AT&T phone systems

#### **LAN Wiring Conventions**

Local Area Network standards designed to operate over UTP specify pin/pair assignments on modular connectors for various signal transmission protocols. While TIA/EIA-568A and 568B conventions support all of these designations, there are some cases where the user chooses to cable only the number of pairs required to support these applications.



- 10 Mbps Ethernet over UTP
- 100 Mbps Ethernet



 4/16 Mbps Token Ring over copper



 100 Mbps FDDI over copper (pending)



 1000 Mbps/10Gb Ethernet over UTP

· Uses all four pairs

# SECTION Z

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#### Products at a Glance



#### **Decorator Switches**

- Smooth, quiet rocker
- Self-grounding feature is standard
- Nightlight version is available
- Ultrasonically welded cover and base
- Operating temperature: -20°C to 60°C
- UL Listed, CSA Certified



#### **Decorator Duplex Receptacles**

- Self-grounding feature is standard
- Tamper and weather resistant availability
- Multiple-drive Slot/Phillips/Robertson head screws
- Nightlight version is available
- Hi-visibility yellow base for easy installation
- Operating temperature: -20°C to 60°C
- UL Listed, CSA Certified



#### Modular Snap Fit Jacks

- Customize the jack selections and look
- Molded-In voice/low-speed data, modular snap fit
- AV connectors, standard bulkhead
- AV connectors, recessed



#### **GFCI Receptacles**

- Patented AUTOGUARD® self test technology includes disconnecting power to the receptacle if critical components are damaged and GFCI protection is lost
- Internal back wiring clamp and guide for quick and secure termination
- Night light option includes light sensor controls for automatic ON and OFF, custom dual lens for optimum light output



#### Passive Infrared Wall Switches and Timers

- Passive infrared technology
- Photocell (WS2000 series)
- No neutral required
- Steel mounting strap
- Compatible with most LED and CFL
- CEC Title 24 and Ashrae 90.1 compliant
- cULus



#### **USB Charger Receptacles**

- Two USB ports 5 Amp, 5V DC
- Patented Hubbell Tamper-Resistant technology uses cam action shutters
- Standard and Hospital grade
- cULus listed to UL498 and UL1310

#### 4 Port and 2 Port USB Outlets

- Switch activated port door; when open enables power; when closed, all power is switched OFF, for a "zero" no-load draw
- Shallow depth design for two port



#### **Power Delivery**

- Hubbell Pop-Up receptacles for countertops provide a power source ideal for kitchen or bath counters and islands
- Round non-metallic floor boxes for concrete floors
- Height adjustable wood floor boxes
- Drop-In floor boxes are perfect for quick and easy installations
- Under cabinet/counter power distribution boxes can also be placed under counter islands or kitchen cabinets
- JLOAD® multimedia outlet Isolates low voltage and power in the same box



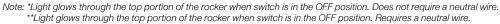
#### **Decorator Quiet Rocker Switches**

### Decorator Products - Smart Style, Good Looks

Residential Decorator Switches and Receptacles provide solid, dependable performance and more. Indeed, they are fashion statements, masterfully complementing the look and feel of any room in any home.

#### Single Pole Decorator Quiet Rocker Switches

Description	Single Pole	Single Pole, Illuminated	Single Pole, Pilot Light	Single Pole with Nightlight	Single Pole with ON/OFF Marking
Termination	Self-Grounding, Push, Back and Side Wire	Self-Grounding, Push, Back and Side Wire	Self-Grounding, Push, Back and Side Wire	Self-Grounding, Push, Back and Side Wire	Self-Grounding, Push, Back and Side Wire
Rating	15A 120-277V AC	15A 120V AC	15A 120V AC	20A 120-277V AC	15A 120-277V AC
Black	RSD115BK	_	_	DS120NLBK**	_
Brown	RSD115	_	_	DS120NLBR**	_
Gray	RSD115GY	_	_	DS120NLGY**	_
Ivory	RSD115I	RSD115ILI*	RSD115PLI**	DS120NLIV**	RSD115IM
Light Almond	RSD115LA	RSD115ILLA*	RSD115PLLA**	DS120NLLA**	RSD115LAM
White	RSD115W	RSD115ILW*	RSD115PLW**	DS120NLWH**	RSD115WM





RSD115W



RSD115PLW

#### **Double Pole, Three Way and Four Way Decorator Quiet Rocker Switches**

Description	Double Pole	Three Way	Three Way, Illuminated	Four Way
		Self-Grounding,	Self-Grounding,	
	Self-Grounding,	Push, Back and	Push, Back and	Self-Grounding,
Termination	Back and Side Wire	Side Wire	Side Wire	Back and Side Wire
Rating	15A 120-277V AC	15A 120-277V AC	15A 120V AC	15A 120-277V AC
Black	RSD215BK	RSD315BK	_	RSD415BK
Brown	RSD215	RSD315	<del>-</del>	RSD415
Gray	RSD215GY	RSD315GY	_	RSD415GY
lvory	RSD215I	RSD315I	RSD315ILI*	RSD415I
Light Almond	RSD215LA	RSD315LA	RSD315ILLA*	RSD415LA
White	RSD215W	RSD315W	RSD315ILW*	RSD415W

Note: \*Light glows through the top portion of the rocker when switch is in the OFF position. Does not require a neutral wire.

DS120NLWH

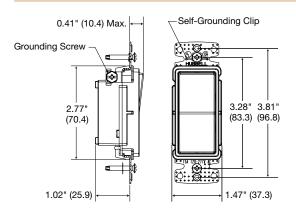


RSD115WM

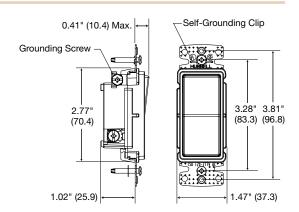


RSD215W

#### **Dimensions**



Single Pole Decorator Switch



**Three Way Decorator Switch** 



#### **Decorator Combination Quiet Rocker Switches/Devices**

#### **Features**

- Low profile, less than 1 inch deep
- Self-grounding feature is standard

- Operating temperature: -20°C to 60°C
- UL Listed, CSA Certified





RCD309I\*\*

RCD309LA\*\*

RCD309W\*\*

Note: See page Tech-10 for Tamper-Resistant description.

RCD109I\*\*

RCD109LA\*\*

RCD109W\*\*

lvory Light Almond

White



RCD108W

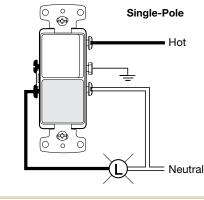
RCD111W

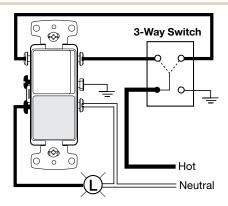
RCD101W

RCD109W

#### **Pilot Light Wiring Diagram**







DD100NLIV\*\*

DD100NLLA\*\*

DD100NLWH\*\*

Dimensions in Inches (mm)

<sup>\*\*</sup>Requires neutral wire.



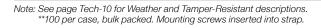
### Decorator Weather Resistant, Tamper-Resistant, Standard and Single Receptacles

#### **Decorator Duplex Receptacles, 2 Pole, 3 Wire**

	* **	*		
Description	Weather and Tamper-Resistant	Tamper-Resistant	Standard	Standard
Termination	Self-Grounding, Push and Side Wire	Self-Grounding, Push and Side Wire	Self-Grounding, Push and Side Wire	Push and Side Wire
Rating	15A 125V NEMA 5-15R	15A 125V NEMA 5-15R	15A 125V NEMA 5-15R	15A 125V NEMA 5-15R
Black Brown Gray Ivory Light Almond White	RRD15SBKWRTR RRD15SWRTR RRD15SGYWRTR RRD15SIWRTR RRD15SLAWRTR RRD15SLAWRTR	RRD15SBKTR RRD15STR RRD15SGYTR RRD15SITR RRD15SLATR RRD15SWTR	RRD15SBK RRD15S RRD15SGY RRD15SI RRD15SLA RRD15SW	RRD15BK RRD15 RRD15GY RRD15I RRD15LA RRD15W
Description	* Tamper-Resistant, Nightlight Receptacle	* Tamper-Resistant	* Tamper-Resistant, Without Ears**	
Termination	Self-Grounding, Two Nightlight Sources for 0.5 Lumens Total, Back and Side Wired	Self-Grounding, Eight Push Wire Holes Only #14 AWG	Self-Grounding, Push and Side Wire	
Rating	15A 125V NEMA 5-15R	15A 125V NEMA 5-15R	15A 125V NEMA 5-15R	
Black Brown Gray Ivory Light Almond	– – – DR15NLIV DR15NLLA	RRD15EBKTR RRD15ETR RRD15EGYTR RRD15EITR RRD15ELATR	RRD15KBKTR RRD15KTR RRD15KGYTR RRD15KITR RRD15KLATR	

RRD15EWTR

RRD15KWTR



DR15NLWH

White



RRD15SWTR



RRD15SW







RRD151W



#### Decorator Single Receptacles, 2 Pole, 3 Wire

	/TR	TR		
Description	Tamper-Resistant	Tamper-Resistant	Standard	
Termination	Self-Grounding, Side Wire	Self-Grounding, Side Wire	Self-Grounding, Side Wire	
Rating	15A 125V NEMA 5-15R	20A 125V NEMA 5-20R	20A 125V NEMA 5-20R	
Black Brown Gray Ivory Light Almond White	RRD151BKTR RRD151TR RRD151GYTR RRD151ITR RRD151LATR RRD151WTR	RRD201BKTR RRD201TR RRD201GYTR RRD201ITR RRD201LATR RRD201WTR	RRD201BK RRD201 RRD201GY RRD201I RRD201LA RRD201W	
Description	Standard	Standard		
Termination	Self-Grounding, Side Wire	Self-Grounding, Side Wire		
Rating	15A 250V NEMA 6-15R	20A 250V NEMA 6-20R		
Black Brown Gray Ivory Light Almond White	RRD155BK RRD155 RRD155GY RRD155I RRD155LA RRD155W	RRD205BK RRD205 RRD205GY RRD205I RRD205LA RRD205W		

Note: See page Tech-10 for Tamper-Resistant description.

#### **Features and Benefits**

#### **USB Charger Receptacles and Outlets**

More Ways to Charge Faster with Hubbell's line of USB Chargers, available in Type-C, Combination Type A&C or the legacy Type A, all with a USB high power output of 5 Amp 5 Volt DC. Hubbell's USB Charger Duplex Receptacle provides both USB and electrical power in a standard single gang opening. Designed to provide maximum charging for portable electronics, the USB ports are capable of charging two tablets simultaneously.

The 4 Port and 2 Port Charger Outlet feature a USB port door, which when open enables power. When closed, all power is switched OFF. This eliminates all current flow for a "zero" no-load draw. Buildings looking to provide 100% green efficiency in power delivery will maximize LEED and energy efficient design.

#### **Common Features**

- Green LED indicator to show USB power available
- USB stainless steel ports rated for minimum 10,000 insertions and removals
- Complies with battery charging specification BC1.2
- Designed for commercial, industrial and home use
- Compatible with USB 1.1/2.0/3.0 devices, including Apple<sup>®</sup> products





USB4W



#### Type-C USB Charger

- Two Type-C port configurations
- High power 5 Amp, 5 Volt DC USB output



#### 4 Port USB Charger

- 4 Port outlet, 5 Amp, 5V DC, Type A, class 2.0
- Switch activated port door; when open enables power. When closed, all power is switched off, for a "zero" no-load draw



#### Type A&C USB Charger

- One Type A and one Type-C port configurations
- High power 5 Amp, 5 Volt DC USB output



#### 2 Port USB Charger

- 2 Port outlet, 3 Amp, 5V DC, Type A, class 2.0
- Switch activated port door; when open enables power. When closed, all power is switched off, for a "zero" no-load draw
- Shallow depth design



#### Type A USB Charger

- Two Type A port configurations
- High power 5 Amp, 5 Volt DC USB output



#### Switch Combo Outlets

- Two USB ports 2.1 Amp, 5Volt DC, Type A, class 2.0
- Isolated 15 Amp, 120V AC single pole/ 3-way switch

Apple® is a registered trademark of Apple Inc.



### **USB Charger Receptacles and Outlets**



USB Charger Type-C		NEMA 5-15R UL/CSA	NEMA 5-20R UL/CSA	
Description	Color	15A 125V	20A 125V	
USB Charger Outlet:	Black	USB15C5BK	USB20C5BK	
two Type-C port configurations,	Brown	USB15C5	USB20C5	
high power 5 Amp, 5 Volt USB output,	Gray	USB15C5GY	USB20C5GY	
USB ports rated 10,000 cycles,	lvory	USB15C5I	USB20C5I	
Commercial Grade Tamper-Resistant duplex receptacle.	Light Almond	USB15C5LA	USB20C5LA	
Available in Hospital grade, see section A or L.	White	USB15C5W	USB20C5W	



USB15C5W

#### **USB Charger Combination Type A&C**

Description	Color	15A 125V	20A 125V
USB Charger Outlet:	Black	USB15AC5BK	USB20AC5BK
one Type A and one Type-C port configurations,	Brown	USB15AC5	USB20AC5
high power 5 Amp, 5 Volt USB output,	Gray	USB15AC5GY	USB20AC5GY
USB ports rated 10,000 cycles,	lvory	USB15AC5I	USB20AC5I
Commercial Grade Tamper-Resistant duplex receptacle.	Light Almond	USB15AC5LA	USB20AC5LA
Available in Hospital grade, see section A or L.	White	USB15AC5W	USB20AC5W



USB15AC5W

### **USB Charger Type A**

Description	Color	15A 125V	20A 125V
USB Charger Outlet:	Black	USB15A5BK	USB20A5BK
two Type A port configurations,	Brown	USB15A5	USB20A5
high power 5 Amp, 5 Volt USB output,	Gray	USB15A5GY	USB20A5GY
USB ports rated 10,000 cycles,	lvory	USB15A5I	USB20A5I
Commercial Grade Tamper-Resistant duplex receptacle.	Light Almond	USB15A5LA	USB20A5LA
Available in Hospital grade, see section A or L.	White	USB15A5W	USB20A5W



USB20A5W

Note: See page Tech-10 for Tamper-Resistant description.

#### **USB Charger Outlets**

USB Charger Outlets		Intertek	
Description	Color	4 Port Outlet, 5 Amp, 5 Volt DC	2 Port Outlet, Shallow Profile, 3 Amp, 5 Volt DC
USB Charger 2 or 4 Port Outlets, USB Type 2.0 Ports, decorator.	Black Brown Gray Ivory Light Almond White	USB4BK USB4 USB4GY USB4I USB4LA USB4W	USB2BK USB2 USB2GY USB2I USB2LA USB2W



USB4W

# **Switch Combo Outlets**

Description	Color	Catalog Number
Switch Combo Outlet,	Black	USB102BK
two USB type 2.0 ports, 2.1 Amp,	Brown	USB102
5 Volt DC, Style Line® decorator	Gray	USB102GY
	lvory	USB102I
	Light Almond	USB102LA
	White	USB102W





USB102W

c (UL) us



#### **GFCI Receptacles with Auto Grounding**

#### **Features**

- Patented AUTOGUARD® self test technology includes disconnecting power to the receptacle if critical components are damaged and GFCI protection is lost
- Internal back wiring clamp and guide for quick and secure termination
- Night light option includes light sensor controls for automatic ON and OFF, custom dual lens for optimum light output











#### **Tamper-Resistant**

Rating	Color	Standard	Night Light Two LED Night Lights	Alarm	Combination Switch 15A 120V Switch	Standard 3-Pack Three Devices per Pack
DG	Almond	GFTRST15AL	GFTRST15ALNL	GFTRST15ALB	_	_
( [] []w)	Black	GFTRST15BK	GFTRST15BKNL	GFTRST15BKB	_	_
	Brown	GFTRST15	GFTRST15NL	GFTRST15B	_	_
15A 125V NEMA 5-15R	Gray	GFTRST15GY	GFTRST15GYNL	GFTRST15GYB	_	_
UL CSA 0.5 HP	lvory	GFTRST15I	GFTRST15INL	GFTRST15IB	GFSPST15I	GFTRST15I3
	Light Almond	GFTRST15LA	GFTRST15LANL	GFTRST15LAB	GFSPST15LA	GFTRST15LA3
	Red	GFTRST15R	GFTRST15RNL	GFTRST15RB	_	_
	White	GFTRST15W	GFTRST15WNL	GFTRST15WB	GFSPST15W	GFTRST15W3
OG	Almond	GFTRST20AL	GFTRST20ALNL	GFTRST20ALB	_	_
( [] [bw)	Black	GFTRST20BK	GFTRST20BKNL	GFTRST20BKB	_	_
	Brown	GFTRST20	GFTRST20NL	GFTRST20B	_	_
20A 125V NEMA 5-20R	Gray	GFTRST20GY	GFTRST20GYNL	GFTRST20GYB	_	_
UL CSA 1 HP	lvory	GFTRST20I	GFTRST20INL	GFTRST20IB	_	GFTRST2013
	Light Almond	GFTRST20LA	GFTRST20LANL	GFTRST20LAB	_	GFTRST20LA3
	Red	GFTRST20R	GFTRST20RNL	GFTRST20RB	_	_
	White	GFTRST20W	GFTRST20WNL	GFTRST20WB	_	GFTRST20W3









# Tamper-Resistant Weather Resistant

Rating	Color	Standard	Isolated Ground
□G □G	Almond	GFTWRST15AL	GFTWRST15ALIG
( [] []w)	Black	GFTWRST15BK	GFTWRST15BKIG
	Brown	GFTWRST15	GFTWRST15IG
15A 125V NEMA 5-15R UI CSA	Gray	GFTWRST15GY	GFTWRST15GYIG
0.5 HP	lvory	GFTWRST15I	GFTWRST15IIG
	Light Almond	GFTWRST15LA	GFTWRST15LAIG
	Red	GFTWRST15R	GFTWRST15RIG
	White	GFTWRST15W	GFTWRST15WIG
DG	Almond	GFTWRST20AL	GFTWRST20ALIG
( [] [}w)	Black	GFTWRST20BK	GFTWRST20BKIG
20A 125V	Brown	GFTWRST20	GFTWRST20IG
NEMA 5-20R UL CSA	Gray	GFTWRST20GY	GFTWRST20GYIG
1 HP	lvory	GFTWRST20I	GFTWRST20IIG
	Light Almond	GFTWRST20LA	GFTWRST20LAIG
	Red	GFTWRST20R	GFTWRST20RIG
	White	GFTWRST20W	GFTWRST20WIG

Note: See page Tech-10 for Weather and Tamper-Resistant descriptions. See section K for complete Hubbell GFCI offering.



#### **Recessed Receptacles and AV Wallboxes**

Hubbell has solutions for residential environments where wire management is a concern. Products sit flush against the wall and are available in multiple colors, creating an aesthetically pleasing look. Large connectors and cables are held securely and bundled together neatly. Wires are concealed behind the wall and out of view. Snap Fit options are used for customizing your connections.

#### **Features**

#### Receptacles

- Snap Fit is configurable to accommodate multiple connectors such as: HDMI, AV and Voice/Low-speed data
- Feed-through options allows you to make direct connections

#### **Boxes**

• Available in plastic or metal boxes to accommodate local building requirements



Recessed Receptacle with Feed-Through

Metal Wallbox with Divider









**Feed-Through Plates** 





Ivory	NSAV1I*	NSAV2I*
Color	1-Gang	2-Gang

NSAV1W\*

Note: \*Not UL Listed.

White



Color

Ivory

White

Light Almond

- 25	
RR151	OL

1-Gang

RR1510I

**RR1510LA** 

RR1510W

RR1512I

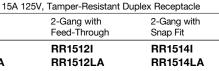
2-Gang with

RR1512I

**RR1512LA** 

RR1512W

Feed-Through



RR1514W









NSAV2W\*

Two and Three Gangable AV Wallboxes

		Dimensions	i				
Box	Height	Width	Depth	Top Knockouts	Bottom Knockouts	Back Knockouts	Catalog Number
2-Gang, 2" KO, 54 in <sup>3</sup> capacity	4.21" (107)	4.06" (103)	4.0" (102)	(2) ½" (2) ½" – ¾" TKO*	(1) 1", 11/4", 11/2" and 2"	(2) ½" – ¾" TKO	HBL985
3-Gang, 2" KO, 79 in <sup>3</sup> capacity	4.21" (107)	5.87" (149)	4.0" (102)	(3) ½" (3) ½" – ¾" TKO*	(1) ½", (1) ½" – ¾" TKO* (1) 1", 1½", 1½" and 2"	(3) ½" – ¾" TKO	HBL986

Note: \*TKO (Tangential Knockout).

#### Wallbox

Description	Color	Catalog Number
2-Gang, nail-on box, thermoplastic	Blue	RR1500

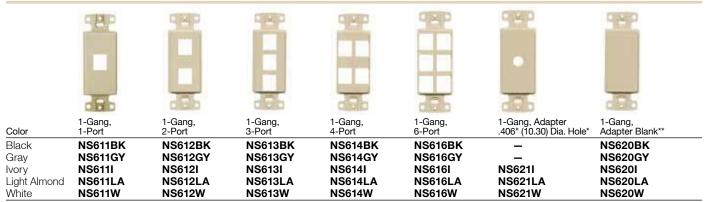
#### **Low Voltage AV Wallbox Partitions**

Compatible With	Description	Quantity	Catalog Number
HBL985 and HBL986	Solid divider	1	HBL989
	With pass-through capability	1	HBL989AVD



#### **Decorator Frames and Modular Snap Fit Jacks**

#### **Decorator Frames**



Note: \*For use with rotary dimmers or to pull through AV or telephone cable.
\*\*To fill an extra decorator opening or to create customized openings.

#### Molded-In Voice/Low-Speed Data - Modular Snap Fit



Category 6 Jack

	Category	Jack
Color	(single)	(25 pack)
Black	NSJ6BK	NSJ6BK25
Blue	NSJ6B	NSJ6B25
Gray	NSJ6GY	NSJ6GY25
Green	NSJ6GN	NSJ6GN25
lvory	NSJ6I	NSJ6125
Light Almond	NSJ6LA	NSJ6LA25
Orange	NSJ6OR	NSJ6OR25
Red	NSJ6R	NSJ6R25
White	NSJ6W	NSJ6W25



Category 5e Jack

(single)	(25 pack)
NSJ5EBK	NSJ5EBK25
NSJ5EB	NSJ5EB25
NSJ5EGY	NSJ5EGY25
NSJ5EGN	NSJ5EGN25
NSJ5EI	NSJ5EI25
<b>NSJ5ELA</b>	NSJ5ELA25
<b>NSJ5EOR</b>	NSJ5EOR25
NSJ5ER	NSJ5ER25
<b>NSJ5EW</b>	NSJ5EW25
NSJ5EY	NSJ5EY25



USOC Jack

OSOO Jack	
(single)	
NSJUBK	
NSJUB	
NSJUGY	
NSJUGN	
NSJUI	
NSJULA	
NSJUOR	
NSJUR	
NSJUW	
NSJUY	

**HDMI 1.4 Connectors** 



HDMI Keystone Feed-Through for IMB and ISFB Series

Black	SFHC14BK
White	SFHC14W

#### Audio/Video Connectors - Standard Bulkhead



**NSJ6Y** 

Yellow

Color

Black

Gray

Ivory

White

Light Almond

Nickel F-Type Coupler Bulkhead, Female to Female NSF70BK

NSF70GY

NSF70LA

NSF70W

NSF70I



**SFFGBK SFFGGY** SFFGEL

**SFFGLA** 

**SFFGW** 

NSJ6Y25





**RCA Gold** Pass Through. Female to Female, Red Interior





RCA Gold Pass Through. Female to Female, White Interior





RCA Gold Pass Through. Female to Female, Yellow Interior





Color

RCA Gold Pass Through. Female to Female, Blue Interior





RCA Gold Pass Through, Female to Female, Green Interior

SFRCGNFFBK SFRCGNFFGY SFRCGNFFEI SFRCGNFFLA SFRCGNFFW

Audio/Video Connectors - Recessed



Gold F-Type Coupler Bulkhead,



**SFGRFW** 



RCA Gold Pass Through, Female to Female, Red Interior

**SFRCRRBK** SFRCRRGY **SFRCRREI** SFRCRRI A **SFRCRRW** 



RCA Gold Pass Through, Female to Female, White Interior

**SFRCWRBK SFRCWRGY SFRCWREI** SFRCWRI A **SFRCWRW** 



RCA Gold Pass Through, Female to Female, Yellow Interior

**SFRCYRBK SFRCYRGY SFRCYREI** SFRCYRI A **SFRCYRW** 



RCA Gold Pass Through, Female to Female, Blue Interior

**SFRCBRBK** SFRCBRGY **SFRCBREI** SFRCBRI A **SFRCBRW** 



RCA Gold Pass Through, Female to Female, Green Interior

**SFRCGNRBK** SFRCGNRGY **SFRCGNREI** SFRCGNRI A **SFRCGNRW** 



Blank Insert SFSBBK10\* SFSBGY10\* SFSBEI10\* SESBI A10\*

SFSBW10\*

Note: \*Sold in a package of 10. Order 1 to receive a bag of 10 blanks.

Dimensions in Inches (mm)



Color

Black

Gray

Ivory

Light Almond



#### Molded-In Voice/Data/Video

#### **Features**

Designed to complement decorator styling, these jacks offer voice and Cat. 5e devices to fit within a decorator wallplate.

- High impact-resistant thermoplastic frame
- Meets FCC part 68
- UL Listed 1863 Communication Circuit Accessory and CSA Certified

#### Molded-In Voice/Low-Speed Data

Description	Decorator Frame, One RJ11 Jack, 6-Position, 4-Conductor	Decorator Frame, One RJ11 Jack, 6-Position, 6-Conductor	Decorator Frame, Duplex RJ11 Jacks, 6-Position, 6-Conductor	Decorator Frame, One Cat. 5e One RJ11 Jack, 6-Position, 4-Conductor
Termination	Screw Terminations	Screw Terminations	Screw Terminations	110 Punch-Down
Color				
Black	NS770BK	_	_	NS784BK
Brown	NS770	NS771	_	NS784
Gray	NS770GY	_	_	NS784GY
lvory	NS770I	NS771I	NS772I	NS784I
Light Almond	NS770LA	NS771LA	NS772LA	NS784LA
White	NS770W	NS771W	NS772W	NS784W

#### **Features**

Coaxial video and combination jacks complement multimedia needs in a 1-gang decorator opening.

- High impact-resistant thermoplastic frame
- Jacks meet FCC part 68
- UL Listed 1863 Communication Circuit Accessory and CSA Certified

#### Molded-In Voice/Low-Speed Data

Description	Decorator Frame, Single F-Type Coupler Bulkhead, Female to Female	Decorator Frame, One RJ11 Jack, 6-Position, 4-Conductor, One F-Type Coupler Bulkhead, Female to Female	Decorator Frame, One Cat. 5e One F-Type Coupler Bulkhead, Female to Female	
Termination	Screw Terminations	Screw Terminations	110 Punch-Down	
Color				
Black Brown Gray Ivory Light Almond	- - - NS780I NS780LA	_ _ _ NS783I NS783LA	NS785BK NS785 NS785GY NS785I NS785LA	

NS783W

Dimensions in Inches (mm)

NS785W

White

NS780W



#### **Plastic and Metal Wallplates**

#### More Style In a Snap

Snap-on wallplates offer a clean, elegant look that can be installed in seconds. Screw the mounting plate onto the device and press the snap-on cover into place. Snaps securely hold the cover to the sub-plate.

- Clean, elegant look
- No visible screws
- Snap-on cover plate completely covers sub-plate eliminating dirt build-up around the edges
- Snap-on cover plate hides any paint or scratches on sub-plate caused during installation
- Appearance is consistent with other Hubbell wallplates
- Meets UL and CSA standards



#### **Snap-On Wallplates**



#### Decorator, Screw-On, Standard, Nylon Wallplates

	1-Gang,	2-Gang,	3-Gang,	4-Gang,	5-Gang,	6-Gang,
Color	1-Decorator	2-Decorator	3-Decorator	4-Decorator	5-Decorator	6-Decorator
Black	NP26BK	NP262BK	NP263BK	NP264BK	NP265BK	NP266BK
Brown	NP26	NP262	NP263	NP264	NP265	NP266
Gray	NP26GY	NP262GY	NP263GY	NP264GY	NP265GY	NP266GY
lvory	NP26I	NP262I	NP263I	NP264I	NP265I	NP266I
Light Almond	NP26LA	NP262LA	NP263LA	NP264LA	NP265LA	NP266LA
White	NP26W	NP262W	NP263W	NP264W	NP265W	NP266W

#### Decorator, Screw-On, Mid-Size, Nylon Wallplates

Color	1-Gang, 1-Decorator	2-Gang, 2-Decorator	3-Gang, 3-Decorator	4-Gang, 4-Decorator	5-Gang, 5-Decorator	6-Gang, 6-Decorator	
Black	NPJ26BK	NPJ262BK	NPJ263BK	NPJ264BK	_	_	
Brown	NPJ26	NPJ262	NPJ263	NPJ264	_	_	
Gray	NPJ26GY	NPJ262GY	NPJ263GY	NPJ264GY	_	_	
lvory	NPJ26I	NPJ262I	NPJ263I	NPJ264I	_	_	
Light Almond	NPJ26LA	NPJ262LA	NPJ263LA	NPJ264LA	_	_	
White	NPJ26W	NPJ262W	NPJ263W	NPJ264W	_	_	

#### Decorator, Screw-On, Mid-Size, Metal Wallplates

Material	1-Gang, 1-Decorator	2-Gang, 2-Decorator	3-Gang, 3-Decorator	4-Gang, 4-Decorator	5-Gang, 5-Decorator	6-Gang, 6-Decorator	
Brass	SB26	SB262	_	_	_	_	
Brass Plated	SBP26	SBP262	SBP263	_	_	_	
Chrome	SCH26	SCH262	_	_	_	_	
S/S 302/304	SS26	SS262	SS263	SS264	SS265	SS266	
S/S 430	SS26L	SS262L	_	_	_	_	

Note: See section O for complete selection of wallplates.



#### **Combination Wallplates**

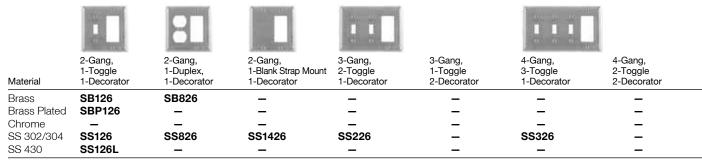
#### Combination, Nylon, Standard Wallplates



#### Combination, Nylon, Mid-Size Wallplates

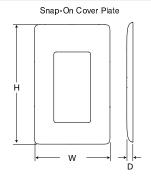
Color	2-Gang, 1-Toggle 1-Decorator	2-Gang, 1-Duplex, 1-Decorator	2-Gang, 1-Blank Box Mount 1-Decorator	3-Gang, 2-Toggle 1-Decorator	3-Gang, 1-Toggle 2-Decorator	4-Gang, 3-Toggle 1-Decorator	4-Gang, 2-Toggle 2-Decorator
Black	NPJ126BK	NPJ826BK	_	NPJ226BK	_	_	_
Brown	NPJ126	NPJ826	NPJ1326	NPJ226	_	_	_
Gray	NPJ126GY	NPJ826GY	_	NPJ226GY	_	_	_
lvory	NPJ126I	NPJ826I	NPJ1326I	NPJ226I	_	_	_
Light Almond	NPJ126LA	NPJ826LA	NPJ1326LA	NPJ226LA	_	_	_
White	NPJ126W	NPJ826W	NPJ1326W	NPJ226W	_	_	_

#### Combination, Standard, Metal Wallplates

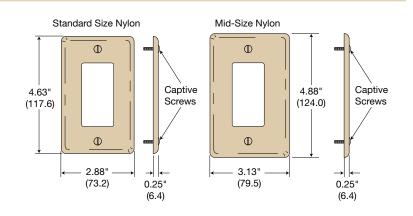


Note: See section O for complete selection of wallplates.

#### **Dimensions**



Gang	Height (H)	Width (W)	Depth (D)
1	4.75" (120.6)	3.00" (76.2)	.25" (6.2)
2	4.75" (120.6)	4.81" (122.2)	.25" (6.2)
3	4.75" (120.6)	6.62" (168.2)	.25" (6.2)
4	4.75" (120.6)	8.44" (214.3)	.25" (6.2)





#### **Toggle Switches**

#### **Features**

Standard toggle switches provide the basic ON/OFF control for home lighting and appliances.

- Tough thermoplastic with ultrasonically welded cover and base
- Elongated strap for easier wall box mounting
- Quiet snap action mechanism
- Multiple-drive Slot/Phillips/Robertson head screws
- Hi-visibility yellow base for easy installation
- Operating temperature: -20°C to 60°C
- UL Listed, CSA Certified



**RS115W** 

RS115ILW\*

#### **Single Pole Toggle Switches**

Description	Single Pole	Single Pole	Single Pole, Illuminated	
Termination	Grounding, Push and Side Wire	Self-Grounding, Push and Side Wire	Self-Grounding, Push and Side Wire	
Rating	15A 120V AC	15A 120V AC	15A 120V AC	
Color				
Clear		-	RS115ILC	
Black	RS115BK	_ P04450	=	
Brown	RS115	RS115S		
lvory	RS115I	RS115SI	RS115ILI*	
Light Almond	RS115LA	RS115SLA	RS115ILLA*	

**RS115SW** 

Note: \*Frame is clear and illuminates, toggle is colored. Does not require a neutral wire.

#### **Three and Four Way Toggle Switches**

**RS115W** 

Description	Three Way	Three Way	Three Way, Illuminated	Four Way
Termination	Grounding, Push and Side Wire	Self-Grounding, Push and Side Wire	Self-Grounding, Push and Side Wire	Self-Grounding, Side Wire
Rating	15A 120V AC	15A 120V AC	15A 120V AC	15A 120V AC
Color				
Clear	– RS315BK	_	RS315ILC	_
Black Brown	RS315	_ RS315S	<u>-</u>	_ RS415
lvory	RS315I	RS315SI	RS315ILI*	RS415I
Light Almond	RS315LA	RS315SLA	RS315ILLA*	RS415LA
White	RS315W	RS315SW	RS315ILW*	RS415W

Note: \*Frame is clear and illuminates, toggle is colored. Does not require a neutral wire.



#### **Combination Switches/Devices**

#### **Features**

Mini-toggles provide for multiple switches in a compact single gang. Maximize control while maintaining function and appearance.

- Low profile, less than 1 inch
- Self-grounding feature is standard
- Combination devices provide compact switches in a single-gang opening
- Smooth toggle action
- Multiple-drive Slot/Phillips/Robertson head screws
- Hi-visibility yellow base for easy installation
- Operating temperature: -20°C to 60°C
- UL Listed, CSA Certified



RC108I

#### **Combination Toggle Switches/Devices**

Description	Two (2) Single Pole Switches	Single Pole Switch, Tamper-Resistant, 2 Pole, 3 Wire, Receptacle	Single Pole Switch, 2 Pole, 3 Wire, Receptacle	Single Pole Switch, Pilot Light, Clear Lens, Amber Neon Bulb*
Termination	Self-Grounding, Side Wire	Self-Grounding, Side Wire	Self-Grounding, Side Wire	Self-Grounding, Side Wire
Rating	15A 120V AC	15A 120V (switch) 15A 125V (recept.) NEMA 5-15R	15A 120V (switch) 15A 125V (recept.) NEMA 5-15R	15A 120V AC
Color				HOO
Brown	RC101	RC108TR	RC108	RC109
lvory	RC101I	RC108ITR	RC108I	RC109I
Light Almond	RC101LA	RC108LATR	RC108LA	RC109LA

**RC108W** 

RC108WTR

**RC101W** 

White

#### Combination Toggle Switches/Devices

Single Pole and Three Way Switch	Two (2) Three Way Switches	Three Way Switch, Tamper-Resistant, 2 Pole, 3 Wire, Receptacle	Three Way Switch, 2 Pole, 3 Wire, Receptacle	Three Way Switch, Pilot Light, Clear Lens, Amber Neon Bulb*
Self-Grounding, Side Wire	Self-Grounding, Side Wire	Self-Grounding, Side Wire	Self-Grounding, Side Wire	Self-Grounding, Side Wire
15A 120V AC	15A 120V AC	15A 120V (switch) 15A 125V (recept.) NEMA 5-15R	15A 120V (switch) 15A 125V (recept.) NEMA 5-15R	15A 120V AC
		De la constantina della constantina della consta	De la constantina della constantina della consta	
RC103	RC303	RC308TR	RC308	RC309
			RC308I	RC309I
RC103LA	RC303LA	RC308LATR	_	_
	Three Way Switch Self-Grounding, Side Wire  15A 120V AC	Three Way Switch Self-Grounding, Side Wire  Self-Grounding, Side Wire  15A 120V AC  15A 120V AC  RC103 RC1031 RC303 RC303I	Single Pole and Three Way Switch Switches Pole, 3 Wire, Receptacle  Self-Grounding, Side Wire Self-Grounding, Side Wire  15A 120V AC 15A 120V AC 15A 120V AC 15A 125V (recept.)  RC103 RC303 RC303I RC308ITR	Single Pole and Three Way Switch Self-Grounding, Side Wire Self-Grounding, Side Wire Self-Grounding, Side Wire Self-Grounding, Side Wire Self-Grounding, Side Wire Self-Grounding, Side Wire Self-Grounding, Side Wire 15A 120V (switch) 15A 120V AC 15A 120V AC 15A 120V AC  Self-Grounding, Side Wire 15A 120V (switch) 15A 125V (recept.) NEMA 5-15R  RC103 RC103 RC303 RC303 RC3081 RC308ITR RC308ITR Three Way Switch, 2 Pole, 3 Wire, Receptacle Self-Grounding, Side Wire Self-Grounding, Side

Note: See page Tech-10 for Tamper-Resistant description.
\*Neutral required for pilot light, see page Z-4 for wiring diagram.

Dimensions in Inches (mm)

**RC109W** 

Note: See page Tech-10 for Tamper-Resistant description. \*Neutral required for pilot light, see page Z-4 for wiring diagram.



#### **XClamp and Duplex Receptacles**

#### **Features**

- Eliminates the need to loop the wire
- External back-wire clamp for fast and easy installation of 15A & 20A branch circuits in residential applications
- Compression plates maximize holding power to provide a stronger, more secure connection
- Terminate up to 8 wires
- Accomodates #12 & #14 AWG wire
- Break-off tabs for switched receptacle applications
- Tamper-resistant shutter complies with NEC®





Clamp the connection

# Strip the wire Insert the wire



**RR15SWTRX** 

#### XClamp Duplex Receptacles

Description	Color	Catalog Number
Tamper-Resistant, 15A 125V,	Ivory	RR15SITRX
2 Pole, 3 Wire Grounding,	Light Almond	RR15SLATRX
20A Circuit Rated	White	RR15SWTRX

Standard

Push and

Side Wire

15A 125V

RR15BK

**RR15** 

RR15I

**NEMA 5-15R** 

Grounding,

Fast and

Secure

#### Listings

Tamper-Resistant

Self-Grounding,

Push and

Side Wire

15A 125V

**NEMA 5-15R** 

RR15STR

RR15SITR

**RR15SBKTR** 

Best Solution for Residential

15A & 20A Branch Circuit Wiring

UL listed to UL498 File No. E2186 Certified to CSA C22.2, No. 42 NEMA® WD-6 Compliant

Standard

Push and

Side Wire

15A 125V

**RR15S** 

RR15SI

NEMA 5-15R

Self-Grounding,

#### **Duplex Receptacles, 2 Pole, 3 Wire**

Tamper-Resistant,

Quick Thread

Push and

Side Wire

15A 125V

NEMA 5-15R

RR15QTR

**RR15QITR** 

**RR15QBKTR** 

Self-Grounding,







RR15QW

()	Description
10	Termination
D	Rating
133	Black
	Brown
	Gray
70	lvory
M	Liaht Almo

Rating Black 3rown Gray orv/ ight Almond



**RR15EWTR** 0 :

RR15KW

	_
(6)	T
D	E
D	lv L

RR15QLATR RR15QWTR	RR15LA RR15W	RR15SLAWRTR RR15SWWRTR	RR15SLATR RR15SWTR	RR15SLA RR15SW
FIRE		FIRE		
Tamper-Resistant, Quick Thread	Tamper-Resistant,	Tamper-Resistant, Without Ears*	Standard, Without Ears*	
Eight Push Wire Holes Only #14 AWG	Eight Push Wire Holes Only #14 AWG	Eight Push Wire Holes Only #14 AWG	Eight Push Wire Holes Only #14 AWG	
15A 125V NEMA 5-15R	15A 125V NEMA 5-15R	15A 125V NEMA 5-15R	15A 125V NEMA 5-15R	
RR15EQBKTR	RR15EBKTR	_	_	
RR15EQTR	_	RR15KTR	RR15K	
_	RR15EGYTR	_	_	
RR15EQITR	RR15EITR	RR15KITR	RR15KI	
RR15EQLATR	RR15ELATR	RR15KLATR	_	
RR15EQWTR	RR15EWTR	RR15KWTR	RR15KW	
	RR15QWTR  Tamper-Resistant, Quick Thread  Eight Push Wire Holes Only #14 AWG  15A 125V NEMA 5-15R  RR15EQBKTR RR15EQTR	RR15QWTR  Tamper-Resistant, Quick Thread  Eight Push Wire Holes Only #14 AWG  15A 125V NEMA 5-15R  RR15EQBKTR RR15EQBKTR RR15EQTR - RR15EQITR RR15EQLATR  RR15ELATR	RR15QWTR  RR15W  RR15SWWRTR  Tamper-Resistant, Quick Thread  Eight Push Wire Holes Only H14 AWG  15A 125V NEMA 5-15R  RR15EQBKTR RR15EQBKTR RR15EQTR - RR15EQITR RR15EQLATR  RR15ELATR  RR15ELATR  RR15SWWRTR  Tamper-Resistant, Without Ears*  Eight Push Wire Holes Only H14 AWG H14 AWG H14 AWG H14 AWG H15A 125V NEMA 5-15R NEMA 5-15R RR15EQTR - RR15EQTR - RR15EGTR RR15EGTR RR15EGTR RR15ELATR RR15KITR RR15KLATR	RR15QWTR  RR15SWWRTR  RR15SWTR  RR15

Weather and

Push and

Side Wire

15A 125V

NEMA 5-15R

RR15SBKWRTR

RR15SGYWRTR

RR15SWRTR

RR15SIWRTR

Tamper-Resistant

Self-Grounding,

Note: See page Tech-10 for Weather and Tamper-Resistant descriptions. \*100 per case, bulk packed. Mounting screws inserted into strap.





### Singles, Range and Dryer Power Receptacles and Plugs

#### Single Receptacles, 2 Pole, 3 Wire

	Weather and	<b>AR</b>		WR .	
Description	Tamper-Resistant	Tamper-Resistant	Standard	Weather Resistant	Standard
Termination	Self-Grounding,	Self-Grounding,	Self-Grounding,	Self-Grounding,	Self-Grounding,
	Side Wire	Side Wire	Side Wire	Side Wire	Side Wire
Rating	15A 125V	15A 125V	15A 125V	15A 250V	15A 250V
	NEMA 5-15R	NEMA 5-15R	NEMA 5-15R	NEMA 6-15R	NEMA 6-15R
Black	RR151BKWRTR	RR151BKTR	RR151BK	RR155BKWR	RR155BK
Brown	RR151WRTR	RR151TR	RR151	RR155WR	RR155
Gray	RR151GYWRTR	RR151GYTR	RR151GY	RR155GYWR	RR155GY
Ivory	RR151IWRTR	RR151ITR	RR151I	RR155IWR	RR155I
Light Almond	RR151LAWRTR	RR151LATR	RR151LA	RR155LAWR	RR155LA
White	RR151WWRTR	RR151WTR	RR151W	RR155WWR	RR155W
Description	Weather and Tamper-Resistant	Tamper-Resistant	Standard	Weather Resistant	Standard
Termination	Self-Grounding,	Self-Grounding,	Self-Grounding,	Self-Grounding,	Self-Grounding,
	Side Wire	Side Wire	Side Wire	Side Wire	Side Wire
Rating	20A 125V	20A 125V	20A 125V	20A 250V	20A 250V
	NEMA 5-20R	NEMA 5-20R	NEMA 5-20R	NEMA 6-20R	NEMA 6-20R
Black	RR201BKWRTR	RR201BKTR	RR201BK	RR205BKWR	RR205BK
Brown	RR201WRTR	RR201TR	RR201	RR205WR	RR205
Gray	RR201GYWRTR	RR201GYTR	RR201GY	RR205GYWR	RR205GY
Ivory	RR201IWRTR	RR201ITR	RR201I	RR205IWR	RR205I
Light Almond	RR201LAWRTR	RR201LATR	RR201LA	RR205LAWR	RR205LA
White	RR201WWRTR	RR201WTR	RR201W	RR205WWR	RR205W

Note: See page Tech-10 for Weather and Tamper-Resistant descriptions.

#### **Range and Dryer Power Receptacles**

	30A 125/250V NEMA 14-30R UL/CSA	50A 125/250V NEMA 14-50R UI /CSA	30A 125/250V NEMA 10-30R UI /CSA	50A 125/250V NEMA 10-50R UI /CSA
Description	Flush Mount for 1- or 2-Gang Box	Flush Mount for 1- or 2-Gang Box	Flush Mount for 1- or 2-Gang Box	Flush Mount for 1- or 2-Gang Box
Rating	30A 125/250V 3 Pole, 4 Wire with Ground	50A 125/250V 3 Pole, 4 Wire with Ground	30A 125/250V 3 Pole, 3 Wire without Ground	50A 125/250V 3 Pole, 3 Wire without Ground
Black	RR430F	RR450F	RR330F*	RR350F*
White	RR430FW	RR450FW		
Description	Surface Mount	Surface Mount	Surface Mount	Surface Mount
Rating	30A 125/250V 3 Pole, 4 Wire with Ground	50A 125/250V 3 Pole, 4 Wire with Ground	30A 125/250V 3 Pole, 3 Wire without Ground	50A 125/250V 3 Pole, 3 Wire without Ground
Black	RR430	RR450	RR330*	RR350*
Description	Panel Mount	Panel Mount	Panel Mount	Panel Mount
Rating	30A 125/250V 3 Pole, 4 Wire with Ground	50A 125/250V 3 Pole, 4 Wire with Ground	_	_
Black	RR430PM	RR450PM	_	_

Note: \*For replacement use only.

#### Range and Dryer Power Angled Plugs

Range and	Dryer Power Angled Plugs	
	30A 128/250V NEMA 14-30R UL/CSA UL/CSA UL/CSA	30A 125/250V NEMA 10-30R UL/CSA UL/CSA UL/CSA
	With Interchangeable Blades	With Interchangeable Blades
Description	for 30 or 50 Amp	for 30 or 50 Amp
	30/50A 125/250V	30/50A 125/250V
	3 Pole, 4 Wire	3 Pole, 3 Wire
Rating	with Ground	without Ground
Black	RR435P	RR335P



RR151\



**RR201W** 



RR430FW



RR450



RR430PM



RR435P



#### **Special Use Products**





Description

#### **Special Use Products**



Tamper-Resistant



Tamper-Resistant

**RR151CHWTR** 







RJ650BKTR

Clock Hanger/Recessed Single Receptacle, Tamper-Resistant, 2 pole, 3 wire, grounding, side wire terminations	Brass Stainless Steel Ivory (Nylon) White (Nylon)	RR151CHBSTR RR151CHSSTR RR151CHITR RR151CHWTR	RR201CHBSTR RR201CHSSTR RR201CHITR RR201CHWTR
Recessed Duplex Receptacle,	Ivory	RR1510I	_
Tamper-Resistant, 2 pole, 3 wire, grounding,	Light Almond	RR1510LA	_
side wire terminations	White	RR1510W	_
JLOAD® Multimedia Outlet,	Black	RJ650BKTR	RJ620BKTR
Provides power, Cat. 5e and coaxial in a single	Gray	RJ650GYTR	RJ620GYTR
gang box. Requires RJ600 Box. Includes decorator	Ivory	RJ650ITR	RJ620ITR

Color

White

Black

Gray

Ivory Light Almond

White

Steel

Light Almond

JLOAD® Multimedia Outlet,
Includes decorator frame with two open ports for
custom configuration and one power receptacle
125V with voltage dividers*.

frame, one Cat. 5e, one F-connector and one power

receptacle 125V with voltage dividers\*.

JLOAD® Multimedia Box, 3 inches deep with seven 1/2-inch knockouts, non-metallic sheathed cable clamps on each side. Screw in mounting to stud.

RR201CHWTR RJ620BKTR RJ620GYTR RJ650ITR RJ620ITR **RJ650LATR RJ620LATR** RJ650WTR RJ620WTR **RJ65BKTR RJ62BKTR RJ65GYTR RJ62GYTR RJ65ITR** RJ62ITR **RJ65LATR RJ62LATR RJ65WTR RJ62WTR RJ600 RJ600** 

Note: \*Dividers provided for use with the RJ600, RF515 series and RU200 series boxes. RF408 required for use with the RF400 series floor boxes. See page Z-10 for snap fit inserts.

See pages Z-21 to Z-26 for floor boxes and under cabinet power distribution options.

3A 125V AC

RDS50\*

"ON" when Door is Open

See page Tech-10 for Tamper-Resistant description.

**Door Switch with Cover Plate and Box** 







**RJ600** 



**RDS50** 

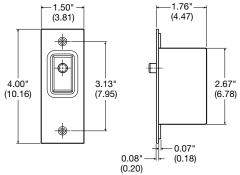
Description

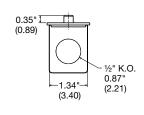
Zinc Plated Steel

Note: \*Not UL Listed.

**Dimensions** 

Rating





"OFF" when Door is Open

3A 125V AC

**RDS30\*** 

#### In-Line Cord Switches



White	RS100W	RS101W	
lvory	_	RS101I	
Wire	#18 AWG SPT 1 and SPT 2	#18 to #16 AWG SPT 1 and SPT 2	
Rating	6A 125V AC	6A 125V AC, 1/6 HP	
Description	Mini For Use with Flat Lamp Cord	Heavy Duty	



### **Dimmers and Fan Speed Controls**

#### **Features**

Standard rocker, toggle, slide and rotary styles for any interior design.

- Optimum CFL and LED Control
- Low End Adjustment for Fine Tuning
- Decorator and Traditional Toggle Styling Available
- No Neutral Required

#### **CFL/LED Dimmers**

Description	Rocker Dimmer	Toggle Dimmer
Rating	CFL/LED 150W Incadescent/ Halogen 600W 120V AC, 60Hz	CFL/LED 150W Incadescent/ Halogen 600W 120V AC, 6 0Hz
Termination	Single Pole/Three Way	Single Pole/Three Way
lvory Light Almond White	RDVCL153PI RDVCL153PLA RDVCL153PW	RAYCL153PI RAYCL153PLA RAYCL153PW





RDVCL153PW

#### **Rotary Incandescent Dimmers**

Description	ON/OFF Dimmer	Push ON/OFF Dimmer Ivory and White Knobs Provided	Push ON/OFF Dimmer Ivory and White Knobs Provided
Termination	Single Pole	Single Pole	Three Way
Rating	600W 120V AC	600W 120V AC	600W 120V AC
lvory White	RD600RI RD600RW	_ _	_ _ _
Ivory/White	_	RD600PDK	RD603PDK



2 Piece Kit Replacement Knobs	
_	
_	
_	
_	
RRKDK	



RD600RW

#### **Slide Incandescent Dimmers**

Description	Slide to OFF	Preset with ON/OFF Switch	Preset with ON/OFF Switch
Termination	Single Pole	Single Pole	Three Way
Rating	600W 120V AC	600W 120V AC	600W 120V AC
Ivory Light Almond White	RS600I RS600LA RS600W	RS600PI RS600PLA RS600PW	RS603PI RS603PLA RS603PW





RS600PW

#### Fan Speed Controls, 3 Speed

Description	Toggle	Rotary ON/OFF Knobs Provided
Termination	Single Pole/Three Way	Single Pole
Rating	1.5A 120V AC	1.5A 120V AC
lvory	RAYFSQFI	_
Light Almond	RAYFSQFLA	_
White	RAYFSQFW	_
Ivory/White	_	RFSQ2FDK

#### **Replacement Knobs**

riopiacoment ranese
Rotary Fan Control Replacement Knobs
_
_
R28032406
_
R28032401

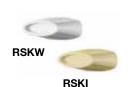




R28032406

#### Fan Speed Controls, 3 Speed

Replacement Knobs
Slide Control Replacement Knobs
RSKI
RSKLA
RSKW



**RSFSQFW** 



#### **Wall Switches and Digital Timer**

Passive infrared technology

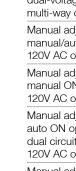
**Passive Infrared Wall Switches** 

- Photocell (WS2000 series)
- No neutral required
- 1200 sq. ft. coverage

- Steel mounting strap
- Compatible with most LED and CFL
- CEC Title 24 and ASHRAE 90.1 compliant
- cULus







WS1000NW



Note: See below for coverage patterns.



WS1020W

#### Count Down Timer Wall Switch

Description	Color	30 Minutes: OFF, 5, 10, 20, 30	60 Minutes: OFF, 15, 30, 45, 60	12 Hours: OFF, 2, 4, 8, 12
1000W @ 120V AC and 1400W @ 277V AC.	lvory	DT5030I	DT5060I	DT5012I
	Light Almond	DT5030LA	DT5060LA	DT5012LA
	White	DT5030W	DT5060W	DT5012W

Note: Neutral required.



**DT5030W** 

#### **Digital Timer Wall Switch**

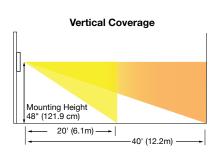
Description	Color	120V AC	277V AC	Catalog Number	
Dip switch enabled preset	White	960W	1200W	DT2000W	
intervals. User adjustable 1 min					
up to 4 hours, 3-way capable.					
Includes an ON/OFF momentary					
push button switch feature.					

Note: Neutral required.

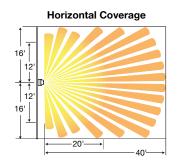
Minor Motion: PIR

#### **Wall Switches Coverage Patterns**





Major Motion: ■PIR



WS1000, WS2000 SERIES



#### Floor Boxes for Concrete Floors

Residential Round Non-Metallic Floor Box offers an economical solution for electrical power or a combination of power and voice/data applications. Designed specifically for slab-on-grade installation. Quick and easy installation is assured using a push in place leveling system. UL Listed.

#### **Features**

After the box has been secured in concrete, cut for height, apply PVC glue and push the cover assembly into the box. No fasteners or adjustment screws required.

- 4 inch minimum concrete pour
- Removable neoprene gaskets allow for independent use of either side of the receptacle with the cover closed
- Self height and leveling ring, no adjustments
- Pre-assembled flange, cover and leveling ring for quick installation
- Parallel PVC hubs for 1 inch and 3/4 inch conduit
- Recessed GFCI/decorator opening
- Tamper-Resistant duplex receptacle included
- UL listed floor box



#### Floor Boxes for Concrete Floors

Description	Rating	Material/Color	Catalog Number
Flange and Hinged Door Cover Assembly. Includes tamper-resistant duplex receptacle, gasket, floor leveling PVC ring, high impact and chemically resistant nylon. Factory pre-assembled for easy drop-in installation.	Brushed Aluminum Brushed Brass Plated Solid Brass Almond Black Chestnut Brown Gray	RF406ALU RF406BP RF406BR RF406AL RF406BK RF406BN RF406GY	
Flush fit cover for hardwood and tile floors (similar to above).	Solid Brass	RF409BR	
PVC Floor Box with Concrete Protective Cover. Accepts ¾ in. and 1 40 and schedule 80 PVC conduit. Includes round box (47/8 in. dia deep), four reducers, closure plugs, and concrete cover with locations.	Gray	RF400	
Hinged Nylon Replacement Door Cover. Includes neoprene gato seal plug openings. Replacement cover for RF406 series.	Solid Brass Almond Black	RF407BR RF407AL RF407BK	
Low Voltage Divider. For use in PVC box RF400, when JLOAD Multimedia Outlet is used.	)®	Gray	RF408



RF406ALU



RF409BR

#### Adjustable Non-Metallic Concrete Floor Box Stand

Description	Color	Catalog Number
PVC floor box stand, adjusts up to 4 inches.	White	PFBSTAND



### 15A 125V NEMA 5-15R



PEAGE

**RF408** 

#### JLOAD® Multimedia Outlet - See page Z-27 for Features

. •			
Description	Color	Tamper-Resistant	Tamper-Resistant
JLOAD® Multimedia Outlet. Specifically designed to provide power, Cat. 5e and coaxial in a single gang box. Requires Low Voltage Divider RF408 when used in PVC Box RF400. Includes decorator frame, one Cat. 5e, one F-connector and one power receptacle 125V with voltage dividers*.	Black	RJ650BKTR	RJ620BKTR
	Gray	RJ650GYTR	RJ620GYTR
	Ivory	RJ650ITR	RJ620ITR
	Light Almond	RJ650LATR	RJ620LATR
	White	RJ650WTR	RJ620WTR
JLOAD® Multimedia Outlet Includes decorator frame with two open ports for custom configuration and one power receptacle 125V with voltage dividers*.	Black	RJ65BKTR	RJ62BKTR
	Gray	RJ65GYTR	RJ62GYTR
	Ivory	RJ65ITR	RJ62ITR
	Light Almond	RJ65LATR	RJ62LATR
	White	RJ65WTR	RJ62WTR



Note: \*Dividers provided for use with the RJ600, RF515 series and RU200 series boxes. RF408 required for use with the RF400 series floor boxes. See page Z-10 for snap fit inserts.

See pages Z-21 to Z-26 for floor boxes and under cabinet power distribution options. See page Tech-10 for Tamper-Resistant description.





#### Floor Boxes for Wood Floors

Hubbell Wood Floor Boxes allow for the placement of electrical power or a combination of power and voice/data devices. Specifically designed for use with structural wood floors. The boxes are height adjustable (up to 3/4 inch) for optimal alignment and fit.

#### **Features**

- Available surface mount or flush fit
- Pre-assembled flange and cover for fast installation
- Removable neoprene gaskets allow for independent use of either side of the receptacle with the cover closed
- Low voltage divider optional provides for power and voice/data in a compact space
- Height accessible adjustments after the box is mounted
- Back and side knockouts for proper wiring access
- Recessed receptacle minimizes plug protrusion; allowing furniture to be located over the plug
- Top screw fastening and side joist mounting provided



RF500 with Divider

Note: Template cutout provided with instructions for proper installation.

#### The Right Choice for that Perfect Finishing Touch!



Solid Brass



Brass Plated









Stainless Finish





Black



Chestnut Brown

Note: Not all configurations are available in all colors. See below for details.



RF515BR





RF500



RF507BR

#### Floor Boxes for Structural Wood Floors

Description	Material	Finish	Catalog No.	Material	Finish	Catalog No.
Decorator duplex receptacle floor box kit; includes steel box, flange and hinged door cover assembly with 15A 125V tamper-resistant duplex receptacle; designed for installation in wood floors; mounts to sub-floor or joists.	Solid Brass Aluminum Aluminum Aluminum Aluminum	Clear Lacquer Stainless Paint Almond Paint Black Paint Chestnut Brown Paint	RF515BR RF515SS RF515AL RF515BK RF515BN	Aluminum Aluminum Aluminum Aluminum	Brass Plated Chrome Plated Copper Plated Nickel Plated	RF515BP RF515CH RF515CU RF515NI
Flange and hinged door cover assembly; includes tamper- resistant duplex receptacle; neoprene gaskets; for use with steel box RF500.	Solid Brass Aluminum Aluminum Aluminum Aluminum	Clear Lacquer Stainless Paint Almond Paint Black Paint Chestnut Brown Paint	RF506BR RF506SS RF506AL RF506BK RF506BN	Aluminum Aluminum Aluminum Aluminum	Brass Plated Chrome Plated Copper Plated Nickel Plated	RF506BP RF506CH RF506CU RF506NI
Flush fit cover for hardwood and tile floors (similar to above).	Solid Brass	Clear Lacquer	RF509BR			
Adjustable floor box; 3 inch deep; t one on each side; non-metallic she			bottom;	Steel	_	RF500
Hinged Door Cover Only Replacement door for RF515, RF509 and RF506 series.	Solid Brass Aluminum Aluminum Aluminum	Solid Brass Stainless Finish Almond Black	RF507BR RF507SS RF507AL RF507BK	Aluminum Aluminum Aluminum Aluminum	Brass Plated Chrome Plated Copper Plated Nickel Plated	RF507BP RF507CH RF507CU RF507NI

Chestnut Brown Paint RF507BN



#### Floor Boxes for Wood Floors

#### **Features**

Duplex floor receptacles provide ample connections to service lighting, entertainment equipment and computers for family rooms and offices. Single receptacle configurations available for minimum requirements.

- · Low profile, solid brass flange and cover
- Cut out template provided to assure proper sub-flooring preparation
- Line and low voltage options
- 2½ inch hole, ample wiring room
- For use with single or feed through service



#### **Drop-In Floor Box**

Drop-In Floor Boxes are perfect for quick and easy installation of power or low voltage. Simply cut a hole between the floor and joists and drop through. The flange lip holds it in place.











RF151R

RF6500BR

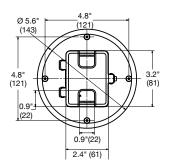
#### Floor Boxes for Wood Floors

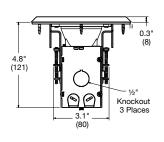
Description	Material	Catalog Number	Catalog Number
Drop In Floor Box Mounts in 2½ inch hole opening. Includes solid brass cover, single tamper-resistant receptacle, optional device mounts for two (2) voice/data video ports. Suitable for feed through circuitry. Impact resistant box.	Solid Brass	RF151R	RF201R
Duplex Receptacle Floor Box Rated Includes steel box, duplex TR receptacle and cover.	Solid Brass	RF6500BR	_
Single Receptacle Floor Box Rated Includes steel box, single receptacle and cover.	Solid Brass	RF151TR	_
Single Receptacle Display Rated Receptacle and cover only, excludes box.	Solid Brass	RF151DTR	_

Note: See page Tech-10 for Tamper-Resistant description.

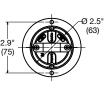
#### **Dimensions**

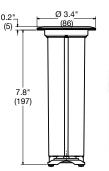
#### **Wood Floor Boxes**





#### **Drop-In Floor Box**









Dimensions in Inches (mm)



#### **Countertop Receptacles**

Hubbell Pop-Up Receptacles for countertops provide a power source ideal for kitchen and bath counters and islands. Hubbell is the first to market a countertop receptacle that is UL Listed. It allows compliance with NEC® 406.5(E) [countertops], 406.5(F) [work surfaces], and 406.5(H) [seating areas]. Pop-Up Receptacles are tested and water resistant to a half gallon spill. The receptacles feature Hubbell's patent pending silicone gaskets and patented cam action tamper-resistant technology. The compact design minimizes space required on the countertop as well as underneath in the cabinet area.

#### **Features**

- Surface or flush mount options
- Self sealing silicone gaskets at the receptacle face
- Compact design
- Permanent installation ready (suitable for MC cable or non-metallic sheath cable)
- Seven different finishes available
- Features two water and tamper-resistant receptacles
- Easy push down to pop-up function is rated for a minimum of 10,000 cycles (OPEN/CLOSE)
- Easy installation simply drop in and tighten
- c(♥L)us Listed



### **Because Spills Happen**



Hubbell Countertop Receptacles are Spill Test Compliant

Hubbell Countertop Receptacles are the first pop-up receptacles UL listed for countertop applications and permanent installations.

#### UL 498 Section 146

Built and listed to be water resistant to a half gallon of liquid spilled on the device.

#### NEC 406.5(E)

Receptacle assemblies for installation in countertop surfaces shall be listed for countertop application.

**NEC 406.5(E) "Receptacles in Countertops"**For a receptacle to meet this requirement it must be part of a listed assembly for use in countertops

- May be exposed to a larger liquid spill
- Can also be installed in work surfaces
- Must be GFCI protected surface

**NEC 406.5(F)** "Receptacles in Work Surfaces" For a receptacle to meet this requirement it must be part of a listed assembly for use in work surfaces

- Does not require as high of a spill rating
- Cannot be used in countertop applications



#### **Countertop Receptacles**





**Countertop Receptacles** 

			10000000000000000000000000000000000000	の
Surfa	ice Mount		Flush Mount	
	Color/Material	Surface Mount	Flush Mount	
Coated	Black White	RCT200BK RCT200W	RCT201BK RCT201W	



RCT200BK

Description	Finish	Color/Material	Surface Mount	Flush Mount
15A 125V Tamper-Resistant Pop-Up Kitchen Counter Receptacle, Rated for 20A circuits	Powder Coated	Black White	RCT200BK RCT200W	RCT201BK RCT201W
	Brushed	Aluminum Brass Nickel	RCT200ALU RCT200BR RCT200NI	RCT201ALU RCT201BR RCT201NI
	Polished	Chrome	RCT200CH	RCT201CH
	Matte	Bronze	RCT200BZE	RCT201BZE



Powder Coated Black



Powder Coated White



Brushed Aluminum



Brushed Brass



Brushed Nickel



Polished Chrome

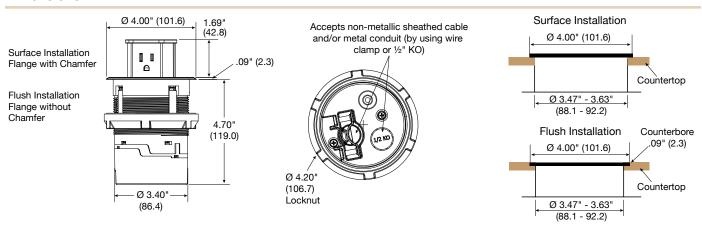


Matte Bronze

#### **Specifications**

Performance		Materials	
Configuration	15 amp 125 volt, Tamper Resistant Receptacle	Cover and Flange	Die Cast Aluminum
Circuit Rating	20 amp non-feed through	Main Body	Engineered Thermoplastic PBT
Listings	cULus Listed to UL498, Section 145 Mechanical Load Test,	Wiring Chamber	Die Cast Aluminum
	146 Spill Test	Water Seals	Elastomers and Silicon
Dielectric Voltage	Withstands 2,000V minimum		
Terminal Accommodation	#14-#12 AWG copper stranded or solid conductor only		
Terminal Identification	Terminals identified in accordance with UL 498 and CSA		
Flammability	UL 94V-2		
Operating Temperature	Maximum continuous 75°C, minimum -40°C (w/o impact)		

#### **Dimensions**



Note: Recommended to be fed by a GFCI circuit, up to 20 Amp Service.



#### **Under Cabinet/Counter Power Distribution**

#### **Features**

These boxes comply with the NEC® for kitchen receptacles, with placement not more than 20 inches above the counter surface. They can also be placed under counter islands, not lower than 15 inches from the surface.

- Available with nylon or metal cover
- Custom configurable, accepts any decorator style device
- Mounting hardware included
- UL Listed and CSA Certified under cabinet boxes





**RU100W** 

#### **Under Cabinet/Counter Power Distribution**

Description	Material	Catalog Number
Slim Box	Stainless Steel White Metal White Nylon	RU100SS RU100W RU170W*
GFCI Fit Box	Stainless Steel White Metal White Nylon	RU200SS RU200W RU270W*

Note: \*Steel box with nylon cover.



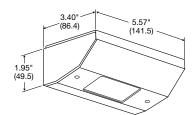
**RU200SS** 

#### **Dimensions**

Slim Box

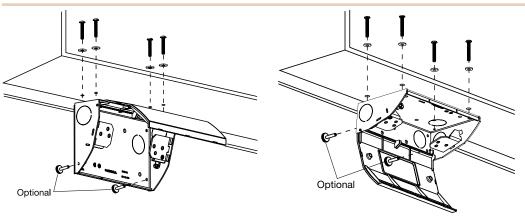
# 3.40" 5.57" (86.4) (141.5)

#### **GFCI Fit Box**



#### **Vertical Mount**

#### **Horizontal Mount**



Dimensions in Inches (mm)

NEC® is a registered trademark of the National Fire Protection Association (NFPA).



#### JLOAD® Multimedia Outlet

#### Make the Most of a Perfect Location

Install receptacles and voice/data devices exactly where they are needed, in the smallest space possible.

#### **Features**

- Accepts any snap fit jack configuration (see page Z-10)
- Isolates low voltage and power in the same box
- Custom box mounting
- Provides for data, telephone and coaxial
- Available in 15 or 20 Amp



Note: Requires unique box shown below.











RJ620WTR



**RJ62WTR** 



#### Special Use Products

Special Ose Froducts		UL/CSA	UL/CSA
Description	Color	Tamper-Resistant	Tamper-Resistant
JLOAD® Multimedia Outlet Specifically designed to provide power, Cat. 5e and coaxial in a single gang box. Requires JLOAD® Multimedia Box RJ600. Perfect for HDTV and computer use where a combination of power and data are needed. Includes decorator frame, one Cat. 5e, one F-connector and one power receptacle 125V with voltage dividers*.	Black Gray Ivory Light Almond White	RJ650BKTR RJ650GYTR RJ650ITR RJ650LATR RJ650WTR	RJ620BKTR RJ620GYTR RJ620ITR RJ620LATR RJ620WTR
JLOAD® Multimedia Outlet Includes decorator frame with two open ports for custom configuration and one power receptacle 125V with voltage dividers*.	Black Gray Ivory Light Almond White	RJ65BKTR RJ65GYTR RJ65ITR RJ65LATR RJ65WTR	RJ62BKTR RJ62GYTR RJ62ITR RJ62LATR RJ62WTR
JLOAD® Multimedia Box 3 inches deep with seven ½-inch knockouts, non-metallic sheathed cable clamps on each side.	Steel	RJ600	RJ600

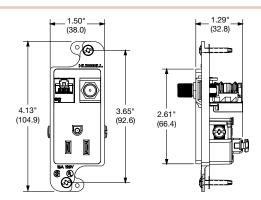
Note: \*Dividers provided for use with the RJ600, RF515 series and RU200 series boxes. RF408 required for use with the RF400 series floor boxes. See page Z-10 for snap fit inserts.

See pages Z-21 to Z-26 for floor boxes and under cabinet power distribution options.

See page Tech-10 for Tamper-Resistant description.

#### **Dimensions**

Screw in mounting to stud.





**Dividers** 



Dimensions in Inches (mm)



#### **Decorator Switches - Technical Information**

#### **Features**

- Smooth, quiet rocker action
- Self-grounding feature standard
- Ultrasonically welded cover and base provides maximum strength
- Push, back and side wiring
- Available colors: Black, Brown, Gray, Ivory, Light Almond and White



RSD115W

#### **Specifications**

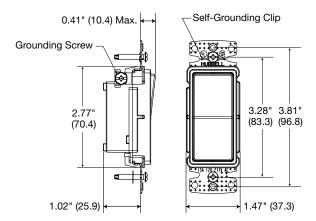
Switches	Component	Material	
Typical Specification — Catalog Number <b>RSD115xx</b>	Base and body	PVC	
Description — Decorator series rocker switch	Rocker	Polycarbonate	
Type — Single Pole	Terminals	Brass	
Rating — 15A, 120-277V AC	Mounting strap	Galvanized steel	
Certification — Listed to UL Standard 20	Contacts	Silver alloy	
CSA Certified	Movable contact arm	Copper alloy	
	Terminal screws	Steel	

Note: xx = Color: BK (Black), Blank (Brown), GY (Gray), I (Ivory), LA (Light Almond), and W (White).

#### **Performance**

Electrical	
Dielectric voltage	Withstands 1,500V AC minimum for 1 minute.
Max. working voltage	120V.
Overload	1.5 times rating.
Endurance	30,000 cycles minimum.
Mechanical	
Terminal accommodation	Back and side wire: #14 AWG min #12 AWG max. solid and stranded copper wire only; push wire: #14 AWG solid copper wire only.
Environmental	
Flammability	UL VO.
Operating temperatures	Maximum continuous 60°C; minimum -20°C (without impact).

#### **Dimensions**



**Single-Pole Decorator Switch** 

# **SECTION AA**

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### **Marine Products**

#### **New Marine Products**



# 2015 UL GFCI Requirements GFCI Standard 943 Effective June 29, 2015 . . . . . . . . . . . . . . . page AA-39

**Why:** Studies show the majority of installed GFCI devices are not being manually tested on a monthly basis as required by UL.

#### **UL Changes**

- The GFCI product must automatically monitor ground fault circuit interrupting functionality every (3) hours or less
- If the device can no longer provide GFCI protection it must deny power and provide a visual and/or audible indication that it no longer can provide protection
- If the line conductor is incorrectly wired to the load terminal, power to the receptacle will be denied. This includes initial installation and any subsequent reinstallations

#### What does this mean?

Distributors, Electricians and Contractors can continue to sell and install the current design without any restrictions before or after the June 29th date.

**GFCI Manufacturers** must end production of current design by June 28th. New self test design will begin to show up on warehouse shelves by mid June.

#### The Hubbell Story — External Changes

- No impact to installer or end user
- No change in wiring or method of installation
- Same physical size and interface
- Added power indicator (solid green)
- Added trip indicator (solid red)
- Added "end of life" indicator (flashing red)

#### Improved USB Duplex Receptacle .....page AA-38

Now, faster and more powerful than ever, Hubbell is pleased to announce the USB Duplex Receptacle with 3.8 amps of USB charging capacity.

Hubbell's 3.8 USB Charger leads the industry in providing more power to charge more portable devices faster. When specifying the Hubbell product, engineers and designers will now be able to assure their users the best in technology and speed. It runs cooler, lasts longer and available in the same physical one gang configuration.

The product is marked 3.8 amps. The face is changed compared to our 3.0 design, with a cleaner look, now without the molded in lines separating the USB section from the plug insert area.

### **New Marine Products**

# FD Boxes and Angled Adapters.....page AA-46

Introducing a fully UL Listed surface mount box engineered with features that allow easy, code compliant installation of all types of devices from 15A to 50A, including metallic ground bonding bracket, threaded conduit hubs and external mounting supports. Together with an industry first 55 degree angle adapter, the combination of devices is the only code compliant 45 cu.in. solution for 50A 4 wire installations. The angle adapter can also be installed separately for panel applications.

### **Marine Grade Dockside Boxes and Covers**

30 cu. in. FD box made of high impact thermoplastic material. Accepts duplex and single receptacles up to 50A Twist-Lock<sup>®</sup>.







# **Housing Design**

- 3/4" NPT and 1" NPT threaded hub options
- 30 cu. in. FD box made of high impact thermoplastic material
- External mounting feet, accepts #10 screw
- Stainless steel mounting/grounding bracket



- 55° angle adapter (15 cu. in.)
- External mounting feet, accepts #8 screw
- Stainless steel mounting/grounding bracket

# Hubbell Twist-Lock® Circuit Tester . . . . . . . . . page AA-38

Styled and sized like a standard Hubbell Twist-Lock® Plug. Simply plug it in and the LED back panel immediately identifies if the connections are made correctly and are in the correct position, ensuring the device is wired properly. An easy to read card is provided with the tester, to help determine if the connections are correct. This tester is compact and can easily clip onto your tool belt. The Hubbell Circuit Tester is UL and C-UL Listed.





	CONDITIONS			+
98	Open Hot			
4	Hot & G Rev.			+
1	Hot On N, No Hot	0	A	+

# **Ship-to-Shore Selection Chart - Boatside**

30A **125V AC** 2 Pole 3 Wire









HBL60CM33W

Pages AA-9 to AA-12

**50A 125V AC** 2 Pole 3 Wire





HBL63CM60



Pages AA-13 to AA-15

**50A** 125/250V AC 3 Pole 4 Wire









Pages AA-16 and AA-17

100A 125/250V AC 3 Pole 4 Wire



M4100B12R



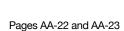
Pages AA-18 to AA-20

100A 3ØY 4 Pole 5 Wire









**Portable Telephone** Cable TV **Devices** 



M5100B9R M5100B7R



M5100C9R

M5100C7R













**HBLPHTVNM** 

PH6624

## Ship-to-Shore Selection Chart - Dockside



YC310250 - 280' (85.3m) Yellow cable only. WC310280 - 280' (85.3m) White cable only.

HBI 61CM08 & HBI 61CM08I FD - 50' (15.2m) HBL61CM05 & HBL61CM05LED

- 35' (10.7m) HBL61CM03 & HBL61CM03LED - 25' (7.6m)
HBL61CM08W & HBL61CM08WLED - 50' (15.2m) HBL61CM03W & HBL61CM03WLED - 25' (7.6m)



HBI 60CM31 HBL60CM31W



HBL26CM11



HBL26CM10

HBI 74CM25WOA HBL74CM25WOAW



HBL61CM53 & HBL61CM53LED HBL61CM43 & HBL61CM43LED

YC306250 - 250' (76.2m) Yellow cable only.



HBI 77CM16 HBL77CM16W





HBL77CM74WO



YC406250 - 250' (76.2m) Yellow cable only.

- 50' (15.2m)

- 25' (7.6m)

HBL61CM52 & HBL61CM52LED - 50' (15.2m) HBL61CM42 & HBL61CM42LED - 25' (7.6m) HBL61CM52W & HBL61CM52WLED - 50' (15.2m) HBL61CM42W & HBL61CM42WLED - 25' (7.6m)



HBL77CM16 HBL77CM16W



HBL63CM65



HBL63CM69



HBL77CM74WO



- 100' (30.4m) 4-Wire CS1004 CS754 - 75' (22.8m) 4-Wire CS100IT4 - 100' (30.4m) 3-Wire CS754IT4 - 75' (22.8m) 3-Wire

CW125IT4 - 125' (38.0m) One-ended cable set for winches. CW100IT4 - 100' (30.4m) One-ended cable set for winches. - 75' (22.8m) One-ended cable set for winches.

CS50EXT4 - 50' (15.2m) Extension cord.



M4100P12



M4100C12



M4100R12



CS100IT5 - 100' (30.4m) 4-Wire **CS75IT5** - 75' (22.8m) 4-Wire

CW125IT5 - 125' (38.0m) One-ended cable set for winches. **CW100IT5** - 100' (30.4m) One-ended cable set for winches. **CS50EXT5** - 50' (15.2m) Extension cord.



M5100P9 M5100P7



M5100C9 M5100C7



M5100R9 M5100R7



M5200PS1



M5200CS1



M5200RS1



75 Ohm TV Cable - 50' (15.2m) TV98 - 25' (7.6m) TV99W - 50' (15.2m) TV98W - 25' (7.6m)









### **Features and Benefits**

# **ABYC Code Requirements**

Hubbell Marine Electrical continues its tradition of innovation by developing a simple, flexible method of adapting a variety of ELCI Sensors and Breakers to our traditional Stainless Steel and Non-Metallic Shore Power Inlet Housings.

Effective July 31, 2012, ABYC, E-11.11.1 requires that "An Equipment Leakage Circuit Interrupter (ELCI) shall be installed with or in addition to the main shore power disconnect circuit breaker(s) or at the additional over current protection as required by E-11.10.2.8.3, whichever is closer to the shore power connection".

Note: A faulty electrical connection at the dock or on a boat could result in stray electrical current in the water. Such stray current in Electrical Shock Drowning (ESD).

Hubbell's family of ELCI adaptive Shore Power Inlet Kits provide a simple, flexible, low-cost solution.

### **Kits Contain:**

- Hubbell Shore Power Inlet
- Matching Shore Power Inlet Housing(s)
- Mounting Adapter Plate(s) for use with various ELCI Sensors and ELCI Breakers (not provided)
- Stainless Steel Hardware











### **ELCI Interface Solutions**

# Hubbell ELCI Adapter Kits for North Shore Safety, Ltd® PGFM Series (ELCI Marine) Sensing Module and Sensata Technologies® ELCI Breakers

Description

30 Amp, 125 Volt Non-Metallic Inlet
(HBL303NM) and (2) Non-Metallic Inlet
Housings, Adapter Plates and Hardware.



Breaker



Sensor



Power Inlet

HBL303NMELCI

Catalog Number

30 Amp, 125 Volt Non-Metallic Inlet (HBL303NM) and (1) Non-Metallic Inlet Housing that adapts to North Shore Safety's Sensor only (no circuit breaker inlet housing), Adapter Plate and Hardware.





HBL303NMELCIS

30 Amp, 125 Volt Stainless Steel Inlet (HBL303SS) and (2) Stainless Steel Inlet Housings, Adapter Plates and Hardware.







HBL303SSELCI

30 Amp, 125 Volt Stainless Steel Inlet (HBL303SS) and (1) Stainless Steel Inlet Housing that adapts to North Shore Safety's Sensor only (no circuit breaker inlet housing), Adapter Plate and Hardware.





HBL303SSELCIS

50 Amp, 125/250 Volt Stainless Steel Inlet (HBL504SS) and (2) Stainless Steel Inlet Housings, Adapter Plates and Hardware.







HBL504SSELCI

50 Amp, 125/250 Volt Stainless Steel Inlet (HBL504SS) and (2) Stainless Steel Inlet Housing that adapts to a standard overcurrent-type circuit breaker.







HBL504SSELCIH

Blank Non-Metallic Inlet Housing and Hardware for mounting North Shore Safety ELCI Sensor only.



**HBLRRELCI** 

Note: North Shore Safety's Sensor and Sensata Technologies Circuit Breakers (not provided) are separate devices each requiring their own blank shore power inlet interface.

## **Features and Benefits**

30 Amp Cable SetsBright, durable, LED (green) indicates "Power-ON"

High intensity LED is visible—even in bright sunlight

• Totally molded design for superior waterproofing and durability

 Exclusive copper crimp barrel terminations for tighter connections and longer life

Marine UL and cUL Listed



Note: Cable sets must be fully extended before using.



## **Housing Design**

- New improved ergonomic styling
- Line-up notches to indicate: Locked - Unlocked
- Arrow indicating lock or unlock position
- Available in yellow or white colors



## Interior Design

- Molded design totally encased in solid PVC material, for superior waterproofing and durability
- Locking ring assures proper alignment of connector to inlet for complete contact and waterproofing; prevents accidental disengagement



### Safety

 Bright green LED indicates "Power-ON"



### Interior Design

- Strain relief bull ring protects against stress and strain on the conductors caused by boat movement, crew traffic and rough handling
- Exclusive copper crimp barrel termination provides protection against internal overheating as well as additional strain relief



### Cord Flexibility

- Molded flexneck adds life to cable set by helping to prevent right-angle cable damage and pullout
- Jute fillers inside jacket for maximum cable flexibility; Hubbell cable coils neater, lighter and lays flatter; particularly in colder climates



### **Cable Set Options**

- Available in 50, 35 and 25 foot lengths
- Available with or without LED
- Available in UV resistant yellow or white
- Marine UL and cUL Listed



Cable sets only.

# 30A Ship-to-Shore Devices

# 30 Amp Cable Sets and Bulk Cable

Our 30A 125V cable set is packed with high performance details from end to end that make a real difference. Completely factory pre-wired with molded-on devices. Designed to coil easily and lay flat.









HBL61CM08 HBL61CM05 HBL61CM03

HBL61CM08W HBL61CM03W

30A 125V Ca	ble Sets	and Bulk	Cable
-------------	----------	----------	-------

Description	Catalog Number
Yellow 50 ft. (15.2m) vinyl jacketed shore power cable set. #10 AWG is factory pre-wired with molded-on devices. Connector end has non-metallic threaded sealing ring which makes inlet/connector interface watertight.	HBL61CM08
Same as HBL61CM08 except 35 ft. (10.7m) in length.	HBL61CM05
Same as HBL61CM08 except 25 ft. (7.6m) in length.	HBL61CM03
Same as HBL61CM08 except in white in color.	HBL61CM08W
Same as HBL61CM03 except in white in color.	HBL61CM03W

Note: See page AA-8 for features and benefits.

### 30A Cable Sets with LED "Power-ON" Indicator

Description	Catalog Number
Yellow 50 ft. (15.2m) vinyl jacketed shore power cable set. #10 AWG is factory pre-wired with molded-on devices. Connector end has non-metallic threaded sealing ring which makes inlet/connector interface watertight.	HBL61CM08LED
Same as HBL61CM08LED except 35 ft. (10.7m) in length.	HBL61CM05LED
Same as HBL61CM08LED except 25 ft. (7.6m) in length.	HBL61CM03LED
Same as HBL61CM08LED except in white in color.	HBL61CM08WLED
Same as HBL61CM05LED except in white in color.	HBL61CM05WLED
Same as HBL61CM03LED except in white in color.	HBL61CM03WLED

Note: See page AA-8 for features and benefits.



HBL61CM05LED HBL61CM03LED

### Accessories

Description	Catalog Number
Yellow 250 ft. (76.2m) three conductor, #10 AWG type STW, PVC jacketed portable cord with jute fillers for added flexibility. Ideal for making cable sets, extension cord, and adapters that will not mark boat's deck. 250 ft. (76.2m) lengths only.	YC310250
White 280 ft. (85.3m) three conductor, #10 AWG type STW, PVC jacketed portable cord with jute fillers for added flexibility. Ideal for making cable sets, extension cord, and adapters that will not mark boat's deck. 280 ft. (85.3m) lengths only.	WC310280
Replacement non-metallic sealing ring for 30A cable sets and boots.	RPL30P*

Note: \*Not UL Listed.



YC310250



RPL30P



### 30 Amp 125 Volt Shore Power Inlets and Outlet

Traditional, stainless steel shore power inlet has easy-to-wire terminations. Interior is transparent for quick and easy visual inspection. Interior is shielded from the elements by a gasketed, self-closing cover, watertight when cover is screwed in place. Mounting holes are 2.38 in. (60.3) on centers. Mounting screws and gasket included. Protective rear enclosure/strain relief also included.

- Self-closing cover assures the interior is shielded from the elements when the inlet is not in use
- Neoprene gasket on underside of cover. For sealing when the cover is closed
- Mirror stainless steel finish for superior appearance



### **Housing Design**

- Base and cover are #316 type stainless steel for strength and corrosion resistance
- Threaded base for making a watertight seal. When in use, it mates to the threaded ring of the weatherproof cover on the connector body; when not in use, it mates to the threaded cover





### Interior Design

- Contact blades are nickel plated brass for corrosion resistance
- Mounting holes are 2% in. (60.3) on center
- Polycarbonate interior has superior heat resistance



HBL303NM



**HBLCBISS** 



**HBLCBINM** 



### **Terminations**

- Easy-to-wire interior is transparent for quick, visual inspection of terminations
- #SR3050 protective rear enclosure cap attaches to contact carrier with 3 screws



# 30A 125V Twist-Lock® Devices

Description	Catalog Number
Stylized UV resistant non-metallic shore power inlet has white Centrex® cover which makes unit weatherproof when completely closed. Interior has easy-to-wire terminations and is transparent for quick and easy visual inspection. Mounting holes are 2.38 in. (60.3) on centers and match existing mounting patterns. Mounting screws and gasket included. Protective rear enclosure/strain relief also included. IP55 SUITABILITY.	HBL303NM
Traditional, stainless steel shore power inlet has easy-to-wire terminations. Interior is transparent for quick and easy visual inspection. Interior is shielded from the elements by a gasketed, self-closing cover, watertight when cover is screwed in place. Mounting holes are 2.38 in. (60.3) on centers. Mounting screws and gasket included. Protective rear enclosure/strain relief also included. <b>IP56 SUITABILITY.</b>	HBL303SS
Traditional stainless steel inlet housing; blank for attaching a circuit breaker (not included). Mounting hardware for Carling series breakers included. <b>IP56 SUITABILITY.</b>	HBLCBISS
Stylized non-metallic inlet housing; blank for attaching a circuit breaker (not included).  Mounting hardware for Carling series breakers included. IP55 SUITABILITY.	HBLCBINM
Protective rear cover. Fits all 30A shore power inlets. Secures to back of inlets with three screws which are provided.	SR3050*
Replacement interior for HBL303SS and 60CM61 shore power inlets.	HBL303INT
Traditional stainless steel power outlet has gasketed, self-closing cover, watertight when cover is screwed in place. Mounting holes are 2.38 in. (60.3) on centers. Mounting screws and gasket included. <b>IP56 SUITABILITY.</b>	HBL303SSO
Nickel plated brass adapter plate for mounting 30A traditional style shore power inlets and outlets to FS/FD box.	HBL60CM75

Note: \*Not UL Listed or CSA Certified.

Centrex® is a registered trademark of LANXESS Corporation.



# Plugs, receptacles and connectors only.

# 30A Ship-to-Shore Devices



# 30A 125V Twist-Lock® Devices

Description	Catalog Number
Yellow Insulgrip® plug has rugged nylon housing and cord grip with range of .36–.93 in. (9–24) that utilizes a unique offset jaws arrangement to provide secure strain relief. <b>IP20 SUITABILITY.</b>	HBL26CM11
Yellow Insulgrip connector body has rugged nylon housing and cord grip with range of .36–.93 in. (9–24) that utilizes a unique offset jaws arrangement to provide secure strain relief.	HBL26CM13
Yellow single receptacle has Rynite® body and abuse resistant nylon face. IP20 suitability.	HBL26CM10



HBL26CM11



HBL26CM13





HBL26CM10





HBL60CM31



HBL60CM33



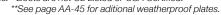
HBL60CM32

Description	Catalog Number
Yellow Seal-Tite® cover for weatherproofing HBL26CM11 plugs.  IP44 suitability. Note: Fits Insulgrip devices only.	HBL60CM31+
White Seal-Tite cover for weatherproofing HBL26CM11 plugs.  IP44 SUITABILITY. Note: Fits Insulgrip devices only.	HBL60CM31W+
Yellow Seal-Tite cover for weatherproofing HBL26CM13 connector bodies when used with shore power inlets. Threaded sealing ring makes connection watertight. Also for weatherproofing HBL26CM11 plug when used with HBL303SSO power outlet.  IP56 suitability. Note: Fits Insulgrip devices only.	HBL60CM33+
White Seal-Tite cover for weatherproofing HBL26CM13 connector body when used with shore power inlets. Threaded sealing ring makes connection watertight. Also for weatherproofing HBL26CM11 plug when used with HBL303SSO power outlet.  IP56 SUITABILITY. Note: Fits Insulgrip devices only.	HBL60CM33W+
Yellow Seal-Tite cover for weatherproofing HBL26CM13 connector bodies when used on extension cords or adapters. <b>IP44 SUITABILITY.</b> Note: Fits Insulgrip devices only.	HBL60CM32+
Yellow polycarbonate spring-loaded lift cover for weather-proofing old style 26CM10 receptacle. Meets the most stringent requirements of UL's three listing categories for weatherproof plates. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. <b>IP44 SUITABILITY.</b>	HBL74CM24WO**
Same as HBL74CM24WO except gray in color. IP44 suitability.	HBL7424WO**
Yellow polycarbonate spring-loaded lift cover for weather-proofing HBL26CM10 receptacle. Meets the most stringent requirements of UL's three listing categories for weatherproof plates. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. IP44 suitability.	HBL74CM25WOA**
Same as HBL74CM25WOA except white in color. IP44 suitability.	HBL74CM25WOAW

Note: +Boots are not UL Listed or CSA Certified.

Stainless steel wall plate for new HBL26CM10.

Stainless steel wall plate for old 26CM10.



Same as HBL74CM25WOA except gray in color. IP44 suitability.



HBL74CM25WOA



HBL74CM25WOAW



HBL7425WOA\*\*

**SS725 SS720** 

**SS725** 

Rynite® is a registered trademark of E. I. DuPont.



Plugs and connectors only.



# 30A Ship-to-Shore Devices

# 30 Amp Valise® Devices

A unique system of special locking lugs interlock the blade holder and sides as the plug is closed. These load bearing lugs provide strength and security and keep the Valise intact.





## **Housing Design**

- Nylon body
- Wiring time is reduced. Large easy to wire clamp type terminals eliminate the need to wrap conductors around a screw



### Interior Design

**Terminations** 

- Exclusive nylon webs are provided to make wiring quick & easy by joining the three sections together during assembly
- Powerful cord grips resist conductor slip and strain on wiring terminalS
- Nickel plated brass contacts for corrosion resistance



HBL26CM11V



HBL26CM11VB



HBL26CM13V

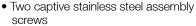


HBL60CM31V





•	Terminals provide a superior
	electrical connection by "bundling"
	the conductors when the clamps
	are tightened
_	Tive continue statisticas staril secondali





30A 125V Twist-Lock® Devices	NEMA L5-30R UL/CSA
Description	Catalog Number
Yellow Valise® plug has one-piece nylon housing and assembles easily with two screws. Built-in cord grip has range of .59–.93 in. (15.0–23.6). <b>IP20 SUITABILITY.</b>	HBL26CM11V
Black Valise plug for use on bass boats with trolling motor. One-piece nylon housing assembles easily with two screws. Built-in cord grip has a range of .59–.93 in. (15.0–23.6). IP20 SUITABILITY.	HBL26CM11VB
Yellow Valise connector body has a one-piece nylon housing and assembles easily with two screws. Built-in cord grip has range of .59–.93 in. (15.0–23.6). <b>IP20 SUITABILITY.</b>	HBL26CM13V

Description	Catalog Number
Yellow Seal-Tite® cover for weatherproofing HBL26CM11V plugs. <b>IP44 suitability.</b> Note: Fits Valise devices only.	HBL60CM31V**
Yellow Seal-Tite cover for HBL26CM13V connector body when used with shore power inlets. Threaded sealing ring makes connection watertight. IP56 SUITABILITY.  Note: Fits Valise devices only.	HBL60CM33V**
Yellow Seal-Tite cover for weatherproofing HBL26CM13V connector bodies when used on extension cords or adapters. <b>IP44 SUITABILITY.</b> Note: Fits Valise devices only.	HBL60CM32V**
Replacement non-metallic sealing ring for 30A cable sets and boots. Not UL listed.	RPL30P*

Note: \*\*Not UL Listed or CSA Certified. \*Not UL Listed.



### **Features and Benefits**

# 50 Amp Cable Sets

• Two bright and durable LEDs. GREEN indicates "Power-ON" and RED indicates "Incorrect Wiring" at the power source

• High intensity LEDs are visible—even in bright sunlight

• Totally molded design for superior waterproofing and durability

· Exclusive copper crimp barrel terminations for tighter connections and longer life

• Marine UL and cUL Listed

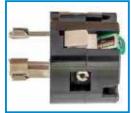


Note: Cable sets must be fully extended before using.



## Housing Design

- New improved ergonomic styling
- Line-up notches to indicate: Locked - Unlocked
- Stainless steel threaded sealing ring to provide a watertight seal when mated with the shore power inlet
- Nickel plated brass shell for positive alignment of keying and corrosionresistance



## Interior Design

- Thermoset contact carrier is arcing and heat resistant
- Nickel plated brass contact blades for corrosion-resistance



### Safety

- Arrow with ground symbol allows lining up with ground of receptacle
- Bright green LED indicates "Power-ON"; Bright red LED indicates "Incorrect Wiring" at the power source



### Superior Termination

- Bull ring for strain relief on the terminals
- Exclusive copper crimp barrel termination provides protection against internal overheating and burnout compared to brass crimps



### Cord Flexibility

- Molded-in flex feature controls the angle of cord entry and keeps water out
- Jute fillers inside iacket for maximum cable flexibility; Hubbell cable coils neater, lighter and lays flatter



### Cable Set Options

- Available in 50 and 25 foot lengths
- Available in yellow or white
- Cords for winch systems available upon request
- Marine UL and cUL Listed

### 50 Amp 125 Volt Traditional Stainless Steel Inlets

Traditional stainless steel shore power inlet has gasketed, self-closing cover so interior is shielded from the elements when not in use. Watertight when cover is securely fastened. Mounting holes are 2.38 in. (60.3) on centers and rear portion has 2.17 in. (55.1) diameter. Mounting screws and gasket included.

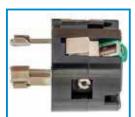
- Self-closing cover is friction tight to remain open while engaging cable set and shields the interior from the elements when the
- Neoprene gasket on underside of cover, for sealing when the cover is closed





### Housing Design

- Base and cover end threads are #316 type stainless steel for strength and corrosion resistance
- Threaded base for making a watertight seal. When in use, it mates to the threaded ring of the weatherproof cover on the connector body; when not in use, it mates to the threaded cover



### Interior Design

- Contact blades are nickel plated brass for corrosion resistance
- Pressure screw terminals for secure terminations clearly marked for easy identification
- Thermoset contact carrier is arcing and heat resistant



### **Terminations**

- Three screws "lock-in" the interior once it is in place
- Rear enclosure is nickel plated for corrosion resistance



HBL503NM



HBL63CM60





504 125V Twist-Lock® Devices

SUA 125V IWIST-LOCK Devices	30A 123V
Description	Catalog Number
Stylized non-metallic shore power inlet has UV resistant white Centrex® cover which makes unit weatherproof when completely closed. Interior has easy to wire terminals. Mounting holes are 2.38 in. (60.3) on centers and match existing mounting patterns. Mounting screws and gasket included. <b>IP55 SUITABILITY.</b>	HBL503NM
Traditional stainless steel shore power inlet has gasketed, self-closing cover so interior is shielded from the elements when not in use. Watertight when cover is securely fastened. Mounting holes are 2.38 in. (60.3) on centers and rear portion has 2.17 in. (55.1) diameter. Mounting screws and gasket included. <b>IP56 SUITABILITY.</b>	HBL503SS
Nickel plated brass connector body has heat resistant thermoset interior and combination metal and rubber cord grip provides superior strain relief capability.  Cord grip range is .44–1.14 in. (11.1–29.0). <b>IP20 SUITABILITY.</b>	HBL63CM60

### **Boots and Replacement Parts**

Catalog Number
SR3050**
CR16277
HBL77CM15**
HBL77CM15W**
HBL77CM67
HBL77CM17**

Note: \*\*Not UL Listed or CSA Certified.

Centrex® is a registered trademark of LANXESS Corporation.



Cable sets only.

## 50 Amp 125 Volt Cable Sets and Bulk Cable

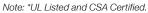
Our 50A 125V cable set is packed with high performance details from end to end that make a real difference. Completely factory pre-wired with molded-on devices. Designed to coil easily and lay flat.





### 50A 125V Cable Sets and Twist-Lock® Devices

Description	Catalog Number
Yellow 50 ft. (15.2m) vinyl jacketed shore power cable set. #6 AWG type STOW is completely factory pre-wired with molded-on devices. Connector end has threaded metallic sealing ring to make inlet/connector interface watertight. <b>IP54 SUITABILITY (BOATSIDE).</b>	HBL61CM53
Same as HBL61CM53 except with two high intensity LEDs.	HBL61CM53LED
Same as HBL61CM53 except 25 ft. (7.6m) in length.	HBL61CM43
Same as HBL61CM43 except with two high intensity LEDs.	HBL61CM43LED
Three conductor, #6 AWG type STOW, yellow PVC jacketed portable cord with jute fillers for added flexibility. Ideal for making cable sets, extension cords and adapters will not mark boat's deck. 250 ft. (75.2m) lengths only.	YC306250
Nickel plated brass plug has heat resistant thermoset interior and combination metal and rubber cord grip, provides superior strain relief capability. Cord grip range is .44–1.14 in. (11.1–29.0). <b>IP20</b> SUITABILITY.	HBL63CM61*
Single receptacle has a heat-resistant thermoset base. <b>IP20 SUITABILITY.</b>	HBL63CM70*



See page AA-13 for features and benefits.



HBL61CM43



HBL61CM53LED HBL61CM43LED



HBL63CM61

### **Boots and Weatherproof Plates**

Description	Catalog Number
Yellow Seal-Tite® cover for weatherproofing 50A plugs. <b>IP55 suitability.</b>	HBL77CM16**
White Seal-Tite cover for weatherproofing 50A plugs. IP55 suitability.	HBL77CM16W**
Yellow Valox® lift cover for weatherproofing 50A receptacles. Meets requirements of the most stringent of UL's three listing categories for weatherproof plates. Stainless steel screws and a neoprene gasket included. For mounting to FS/FD type weatherproof boxes. <b>IP44 SUITABILITY.</b>	HBL77CM74WO
Same as HBL77CM74WO except gray in color. IP44 suitability.	HBL7774WO
Stainless steel wall plate for 50A receptacle.	SS750

Note: \*\*Not UL Listed or CSA Certified.



HBL63CM70







SS750

HBL77CM16

HBL77CM16W

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



### 50 Amp 125/250 Volt Traditional Stainless Steel Inlets

Traditional stainless steel shore power inlet has gasketed, selfclosing cover so interior is shielded from the elements when not in use. Watertight when cover is securely fastened. Mounting holes are 2.38 in. (60.3) on centers and rear portion has 2.17 in. (55.1) diameter. Mounting screws and gasket included.

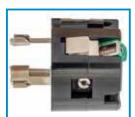
- Self-closing cover is friction tight to remain open while engaging cable set and shields the interior from the elements when the
- Neoprene gasket on underside of cover. For sealing when the cover is closed





### Housing Design

- Base and cover are #316 type stainless steel for strength and corrosion resistance
- Threaded base for making a watertight seal. When in use, it mates to the threaded ring of the weatherproof cover on the connector body. When not in use, it mates to the threaded cover



### Interior Design

- Contact blades are nickel plated brass for corrosion resistance
- Pressure screw terminals for secure terminations clearly marked for easy
- Thermoset contact carrier is arcing and heat resistant



HBL504NM





HBL63CM64





HBL77CM17



# **Terminations**

- Three screws "lock-in" the interior once it is in place
- Rear enclosure is nickel plated for corrosion resistance



Catalog Number HBL504NM

Stylized non-metallic shore power inlet has UV resistant white Centrex® cover which makes unit weatherproof when completely closed. Interior is heat resistant thermoset material and has box lug terminals. Mounting holes are 2.38 in. (60.3) on centers and match existing mounting patterns. Mounting screws and gasket included. IP55 suitability.

Traditional stainless shore power inlet has gasketed, self-closing cover so that the interior is shielded from the elements when not in use. It is watertight when the cover is securely fastened. The mounting holes are 2.38 in. (60.3) on centers and the rear portion has a 2.17 in. (55.1) diameter. Mounting screws and gasket are included. IP56 suitability.

Nickel plated brass connector body has a heat resistant thermoset interior and combination metal and rubber cord grip, which provides superior strain relief capability. Cord grip range is .44-1.14 in. (11.1-29.0). **IP20 SUITABILITY.** 

HBL504SS

HBL63CM64

**Boots and Weatherproof Plates** 

boots and weather proof reates	
Description	Catalog Number
Protective rear cover. Fits all inlets except HBL504SS. Secures to back of inlets with three screws which are provided.	SR3050**
Replacement interior for 63CM74 and HBL504SS power inlets.	CR16279**
Yellow Seal-Tite® cover for connector bodies when used with 50A shore power inlets. Threaded sealing ring makes connections watertight. IP56 SUITABILITY.	HBL77CM15**
White Seal-Tite cover for connector bodies when used with 50A shore power inlets. Threaded sealing ring makes connections watertight. <b>IP56</b> SUITABILITY.	HBL77CM15W**
Yellow Seal-Tite cover for weatherproofing 50A connector bodies on extension cords or adapters. <b>IP55 suitability.</b>	HBL77CM17**
Nickel plated brass cord clamp assembly with clamp range of .44–1.14 in. (11.1–29.0) provides strain relief for terminations on shore power inlets.	HBL77CM67

Note: \*\*Not UL Listed or CSA Certified.

Centrex® is a registered trademark of LANXESS Corporation.



Cable sets only.

### 50 Amp 125/250 Volt AC Cable Sets and Bulk Cable

Our 50A 125/250V AC cable set is packed with high performance details from end to end that make a real difference. Completely factory pre-wired with molded-on devices. Designed to coil easily and lay flat.



# 50A 125/250V Cable Sets and Twist-Lock® Devices

Description	Catalog Number
Yellow 50 ft. (15.2m) vinyl jacketed shore power cable set, #6 AWG type STOW is completely factory pre-wired with molded-on devices. The connector end has a metallic threaded sealing ring for making the inlet/connector interface watertight. IP56 SUITABILITY (BOATSIDE).	HBL61CM52
Same as HBL61CM52 except with two high intensity LEDs	HBL61CM52LED
Same as HBL61CM52 except white in color.	HBL61CM52W
Same as HBL61CM52LED except white in color.	HBL61CM52WLED
Yellow 25 ft. (15.2m) vinyl jacketed shore power cable set, #6 AWG type STOW is completely factory pre-wired with molded-on devices. The connector end has a metallic threaded sealing ring for making the inlet/connector interface watertight. IP56 SUITABILITY (BOATSIDE).	HBL61CM42
Same as HBL61CM52LED except 25 ft. (7.6m) in length.	HBL61CM42LED
Same as HBL61CM42 except white in color.	HBL61CM42W
Same as HBL61CM42LED except white in color.	HBL61CM42WLED
Four conductor, #6 AWG type STOW, yellow PVC jacketed portable cord with jute fillers for added flexibility is ideal for making cable sets, extension cords and adapters that will not mark the boats deck. Available in 250 ft. (76.2m) lengths only.	YC406250
Nickel plated brass plug has a heat resistant thermoset interior and combination metal and rubber cord grip, which provides superior strain relief capability. Cord grip range is .44–1.14 in. (11.1–29.0). <b>IP20 SUITABILITY.</b>	HBL63CM65*
Single receptacle has a heat resistant thermoset base. <b>IP20 suitability.</b>	HBL63CM69*



HBL61CM52 HBL61CM52W HBL61CM42 HBL61CM42W





HBL63CM65

Note: \*UL Listed and CSA Certified.

See page AA-13 for features and benefits.

# **Boots and Weatherproof Plates**

Catalog Number
HBL77CM16**
HBL77CM16W**
HBL77CM74WO
HBL7774WO
SS750

Note: \*\*Not UL Listed or CSA Certified.



HBL63CM69







HBL77CM16

HBL77CM16W



### **Features and Benefits**

# 100 Amp Pin and Sleeve Devices

- Hubbell Marine was the first to offer 100 amp marine grade devices that are considered second to none
- Hubbell developed the standard for 100 amp Pin and Sleeve devices with the National Electric Code and the American Boat and Yacht Council



M4100P12



## **Housing Design**

- Supertough nylon housing provides increased safety and abuse resistance
- High visibility yellow, STOW cable, 105°C rated and UL listed
- The gasketed locking ring engages the mating device and when rotated and locked makes the interface between the devices watertight



## **Housing Design**

- Nylon housing provides increased safety and resistance
- The gasketed, self-closing cover is keyed to normally seat in a position that provides a weatherproof seal; simply rotating the cover and locking it makes it watertight
- The device is marked with its catalog number and rating for easy identification



### Interior Design

- High impact thermoset contact carrier is arcing and heat resistant
- Two screw pressure terminals provide reliable terminations
- Nickel plated solid brass pins provide for long life and reliable electrical contact in corrosive environments
- Special keying makes proper alignment of mating devices quick and easy



### Interior Design

- High impact thermoset contact carrier is arcing and heat resistant
- The terminals are clearly identified with large markings for easy recognition
- Nickel plated solid brass contacts provide for long life and reliable electrical contact in corrosive environments
- Special keying makes proper alignment of mating devices quick and easy



### **Exterior Design**

- Massive external cable grips protect the wiring from conductor movement which can cause strain on the terminals
- All screws are stainless steel for corrosion resistance
- The device is marked with its catalog number and rating for easy identification

### **Features and Benefits**

### 100 Amp Cable Sets

• Only Hubbell offers 3, 4 and 5 wire 100 amp cable sets



Note: Cable sets must be fully extended before using.







CS75IT4

# 1004 Pin and Sleeve Cable Sets

100A Pin and Sieeve Cable Sets	125/250V AC	120/208V AC
Description	Catalog Number	
Yellow 75 ft. (22.8m) corrosion-resistant shore power cable set, 105°C rated, #2 AWG, (no neutral), STOW cable with plug and connector body for use with boats with isolation transformer on board.	CS75IT4*	CS75IT5
Same as above except 100 ft. (30.4m) in length.	CS100IT4	CS100IT5
Yellow 75 ft. (22.8m) corrosion-resistant shore power cable set, 105°C rated, #2 AWG, STOW cable.	CS754	_
Same as CS754/5 except 100 ft. (30.4m) in length.	CS1004	_
Yellow 50 ft. (15.2m) corrosion-resistant extension cord, 105°C rated, #2 AWG, STOW cable. For mating with existing shore power cable set.	CS50EXT4	CS50EXT5
Yellow 75 ft. (22.8m) corrosion-resistant one-ended (male only) power supply cable, 105°C rated, #2 AWG, STOW cable with 3 pole 4 wire male plug only; for use with boats using a cable winch system.	CW754	-
Yellow 100 ft. (30.4m) corrosion-resistant one-ended (male only) power supply cable, 105°C rated, #2 AWG, (no neutral) STOW cable with male plug only; for use with boats with isolation transformer on board and a cable winch system.	CW100IT4	CW100IT5
Same as CW100IT4/5 except 125 ft. (38.0m) in length.	CW125IT4	CW125IT5
Same as CW100IT4/5 except white in color.	CW100IT4W	_

Note: Periodic cleaning and lubrication (such as LPS-1® made by Holt Lloyd Corp.) of the pins and sleeves of these devices is necessary to enjoy years of optimal use. \*Also available in white, consult factory.



CS100IT4



CS100IT4W







M4100R12



M4100C12



M4100B12R





FW60100



BB1001W BB1002W

Dimensions in Inches (mm)

# 100A 125/250V Pin and Sleeve Devices



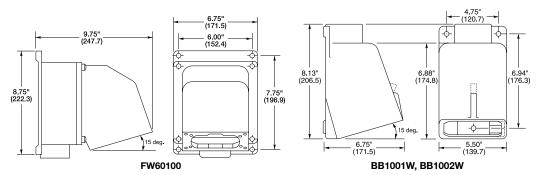
	,
Description	Catalog Number
Yellow Zytel <sup>®</sup> super tough nylon watertight plug has gasketed locking ring to make plug/receptacle interface watertight. Cord grip range is 1.06–1.94 in. (26.9–49.3). IP56 suitability.	M4100P12
Gray nylon dockside receptacle has gasketed, spring-loaded cover. Closes automatically when not in use and is watertight when securely fastened. Mounting holes are 4.88 in. (123.8) on centers. Mounting screws and gasket included. IP56 SUITABILITY.	M4100R12
Yellow Zytel <sup>®</sup> super tough nylon watertight connector body for mating plug to connector interface on extension cords or adapters. Cord grip range is 1.06–1.94 in. (26.9–49.3). Note: It cannot be mated to the shore power inlet. <b>IP56 SUITABILITY.</b>	M4100C12
Gray nylon shore power inlet has gasketed, spring-loaded cover which closes automatically when not in use and is watertight when securely fastened. Mounting holes are 4.88 in. (123.8) on centers and rear portion has 3.94 in. (100.0) diameter. Mounting screws and gasket included. IP56 suitability.	M4100B12R
Yellow Zytel® super tough nylon watertight connector body has gasketed locking ring to make inlet/connector interface watertight. Cord grip range is 1.06–1.94 in. (26.9–49.3). Note: This device mates with shore power inlet only. IP56 SUITABILITY.	M4100C12R

### 100A Back Boxes and Accessories

Description	Catalog Number
Back box for inlets and receptacles has 15° angle section which can be installed in any of 4 positions. Box is cast aluminum with corrosion-resistant gray alkyd-based enamel finish and $1\frac{1}{2}$ in. NPT hub which can be mounted for either top or bottom feed. <b>IP56 SUITABILITY.</b>	FW60100
15° angle cast aluminum back box has corrosion-resistant gray finish and top hub with 1½ in. NPT 100A receptacles can be mounted directly to it.	BB1001W
Same as BB1001W except threaded top hub is 2 in. NPT.	BB1002W
15° angle non-metallic back box, made of high-grade engineered thermoplastic Valox <sup>®</sup> to resist chemicals, abuse and U.V. rays. Has integral grounding plate, 1½ in. NPT hub size and 120 cu. in. capacity (hub is not included - Raco part number 1706 is recommended). IP57 suitability.	BB100N
Closure Cap for 100A plugs and connector bodies that (do not have a cap attached) have locking rings.	PC100
Replacement lift cover assembly; includes cover, arm and assembly tool.	CA100
Replacement locking ring and cord clamp.	CC100
Replacement locking ring only.	LR100

Note: Periodic cleaning and lubrication (such as LPS-1® made by Holt Lloyd Corp.) of the pins and sleeves of these devices is necessary to enjoy years of optimal use.

### Product Dimensions Inches (mm)



Zytel® is a registered trademark of E.I. DuPont. Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

Description

IP56 SUITABILITY.







M5100R9

M5100C9

M5100B9R

M5100C9R

Catalog Number M5100P9



M5100R7

M5100C7

M5100B7R

M5100C7R

### 100A 3ØY 120/208V and 3ØY 277/480V Devices

Yellow Zytel® super tough nylon watertight plug has gasketed locking ring
to make plug/receptacle interface watertight. Cord grip range is 1.06–1.94 in.
(26.9–49.3). <b>IP56 suitability.</b>

Gray nylon dockside receptacle has gasketed, spring-loaded cover. Closes automatically when not in use and is watertight when securely fastened. Mounting holes are 4.88 in. (123.8) on centers. Mounting screws and gasket included. IP56 suitability.

Yellow Zytel® super tough nylon watertight connector body for making plug to connector interface on extension cords or adapters. Cord grip range is 1.06-1.94 in. (26.9-49.3). Note: It cannot be mated to the shore power inlet. IP56 SUITABILITY.

Gray nylon shore power inlet has gasketed, spring-loaded cover which closes automatically when not in use and is watertight when securely fastened. Mounting holes are 4.88 in. (123.8) on centers and rear portion has 3.94 in. (100.0) diameter. Mounting screws and gasket included.

Yellow Zytel® super tough nylon watertight connector body has gasketed locking ring to make inlet/connector interface watertight. Cord grip range is 1.06-1.94 in. (26.9-49.3). Note: This device mates with shore power inlet only. IP56 suitability.

M5100P9 M5100P7



M5100R9





M5100B9R

# 100A Back Boxes and Accessories

Description	Catalog Number
Back box for inlets and receptacles has 15° angle section which can be installed in any of 4 positions. Box is cast aluminum with corrosion-resistant gray alkyd-based enamel finish and 1½ in. NPT hub which can be mounted for either top or bottom feed. <b>IP56 SUITABILITY.</b>	FW60100
15° angle cast aluminum back box has corrosion-resistant gray finish and top hub with 1½ in. NPT 100A receptacles can be mounted directly to it.	BB1001W
Same as BB1001W except threaded top hub is 2 in. NPT.	BB1002W
15° angle non-metallic back box, made of high-grade engineered thermoplastic Valox® to resist chemicals, abuse and U.V. rays. Has integral grounding plate, 1½ in. NPT hub size and 120 cu. in. capacity (hub is not included - Raco part number 1706 is recommended). IP57 SUITABILITY.	BB100N
Closure Cap for 100A plugs and connector bodies that (do not have a cap attached) have locking rings.	PC100
Replacement lift cover assembly; includes cover, arm and assembly tool.	CA100
Replacement locking ring and cord clamp.	CC100

Note: Periodic cleaning and lubrication (such as LPS-1® made by Holt Lloyd Corp.) of the pins and sleeves of these devices is necessary to enjoy years of optimal use.

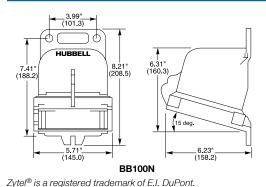
M5100C9R

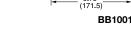
**BB100N** 

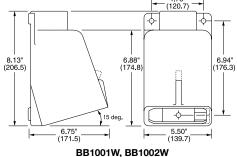


### Product Dimensions Inches (mm)

Replacement locking ring only.







Dimensions in Inches (mm)

LR100



### **Features and Benefits**

### 200 Amp Pin and Sleeve Devices

Hubbell was the first to offer a UL listed 100 amp Marine Ship-To-Shore System... and now, we are the first to offer a UL listed 200 amp Marine Ship-To-Shore System.

The only 200 amp rated Ship-to-Shore System - built specifically for Mega-Yachts.

Hubbell 200 amp devices are listed to UL1682 and UL Classified for the mating and operation of 200 amp devices. Mates with Cooper® Crouse-Hinds® Arktite® or Appleton® Powertite® (when installed in accordance with instructions furnished with device).





## **Housing Design**

- Pins and Sleeves are made of nickelplated Tellurium copper for superior corrosion and heat resistance
- UL Listed and CSA Certified



### **Housing Design**

- Housing is made of copper-free aluminum with an electrostatically applied epoxy/polyester finish
- Type 3, 4, 4X Rated per UL50 standard for superior water resistance



# Interior Design

- Interchangeable with other "UL1686 Series C1" Listed devices
- Terminal screws feature swivel/pressure pads to secure and prevent damage to conductors strands



### Interior Design

- Interchangeable with other "UL1686 Series C1" Listed devices
- Terminal screws feature swivel/pressure pads to secure and prevent damage to conductors strands



### **Exterior Design**

- Cable clamp captures cable at four points, provides superior retention
- Accepts a cord range of #1 AWG 250 MCM

Appleton® and Powertite® are registered trademarks of Appleton Electric Company. Cooper Crouse-Hinds® and Arktite® are registered trademarks of Cooper Industries, Inc.





### 200A 600V AC/250V DC, 50-400 Hertz Pin and Sleeve Devices

Description	Catalog Number
Gray metallic, watertight boatside power inlet with wingnut-secured lid for water tightness when not in use.	M5200BS1R
Gray/yellow metallic, watertight boatside connector body with locking ring to make inlet/connector body interface watertight. Cord grip range is #1 AWG-250 MCM 1.00-2.5 in. (25.4-6.35).	M5200CS1R
Gray/yellow metallic, watertight dockside plug with locking ring to make plug/receptacle interface watertight. Cord grip range is #1 AWG-250 MCM 1.00-2.5 in. (25.4-6.35).	M5200PS1
Gray metallic, watertight dockside receptacle with wing nut-secured lid for water tightness when not in use.	M5200RS1
Gray/yellow metallic, watertight dockside connector body with wing nut-secured lid for water tightness when not in use. For making plug/connector body interface on extension cords or adapters.	M5200CS1



M5200BS1R



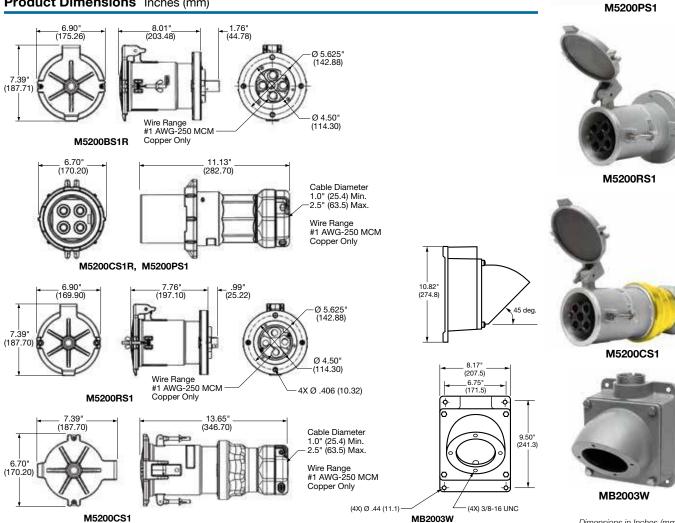
M5200CS1R

### 200A Back Boxes

Description	Catalog Number
Gray metallic back box for inlets and receptacles has 45° angle section which can be installed in any of 4 positions, 2 in. NPT hub.	MB2003W
Gray metallic back box – same as above but 2½ in. NPT hub.	MB2004W



# Product Dimensions Inches (mm)



Dimensions in Inches (mm)

### **Features and Benefits**

### **Internationally Rated Conventional-Styled Devices**

Hubbell offers the only CE certified electrical shore power systems truly dedicated for boats destined for Europe and the International community. Hubbell's offering of international shore power inlets are available in traditional 316 stainless steel and attractive white non-metallic types resembling our domestic offering in style and appearance but are not interchangeable with the domestic shore power system.

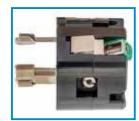
Utilizing standard NEMA (National Electrical Manufacturer's Association) configurations not typically used in the marine market, Hubbell can offer a safe and non-interchangeable 16 amp 230 volt system and 32 amp 230 volt system for use with 50 cycle systems. The system includes white power supply cables (one-end, female only) in both the 16 amp and 32 amp categories.

Hubbell also offers a series of Internationally Rated Pin and Sleeve Devices, available in 16A, 32A and 63A 240V, these devices are interchangeable with other manufactures of UL1686 C1 devices.



### **Housing Design**

- Base and cover are #316 type stainless steel for strength and corrosion resistance
- Self-closing cover is friction tight to remain open while engaing cable set and shields the interior from the elements when the inleet is not in use



### Interior Design

- Contact blades are nickel plated brass for corrosion resistance
- Watertight seal when in use, threaded base mates to the threaded ring of the watertight cover on the connector body; when not in use, it mates to the threaded cover



### **Housing Design**

- White Centrex® cover and PBT base, weatherproof when closed
- Easy to wire polycarbonate interior is heat resistant and clear for visual inspection (16 amp and 32 amp)



### Terminations (63 Amp)

- Thermoset contact carrier is arcing and heat resistant
- Three screws "lock-in" the interior once it is in place
- Rear enclosure is nickel plated for corrosion resistance

# Internationally Rated Pin and Sleeve Devices, 16A, 32A or 63A, 240V, 2 Pole Plus Earth (≟)











·	rius Eurui (=)			
	Description	16A 240V	32A 240V	63A 240V
	Shore power inlet with mounting holes 3.13 in. (79.3) on centers and 2.72 in. (69.1) diameter on rear portion.	HBL316B6W	HBL332B6W	HBL363B6W
ř	Connector body with cord grip range of .36–.83 in. (9.1-21.1).	HBL316C6W	HBL332C6W	HBL363C6W
	Shore power receptacle with mounting holes 3.13 in. (79.3) on centers and 2.72 in. (69.1) diameter on rear portion.	HBL316R6W	HBL332R6W	HBL363R6W
ŀ	Plug with cord grip range of .36–.83 in. (9.1-21.1).	HBL316P6W	HBL332P6W	HBL363P6W
	Closure plug for HBL316B6W.	PC320*	PC3430*	PC60*
	Back box for inlets and receptacles is cast aluminum with corrosion-resistant alkyd-based enamel finish and two % in. NPT hubs.	BB201W	BB301W	BB601W
	Feed-thru box for inlets and receptacles is cast aluminum with corrosion-resistant alkyd-based enamel finish and one ¾ in. NPT hubs.	FT202W	-	FW60100

Note: \*Not CSA Certified.

Centrex® is a registered trademark of LANXESS Corporation.

# **Internationally Rated Conventional-Styled Devices**

# Twist-Lock® Devices, Ship-To-Shore Power System

Description	16A 230V	32A 230V, 50 Cycle
Non-metallic, white, stylized, UV resistant shore power inlet. White Centrex® cover makes the inlet weatherproof when closed. Mounting holes are 2.38 in. (60.3) on centers and match most existing mounting patterns. Rear enclosure strain/relief cap is provided. <b>IP55 SUITABILITY.</b>	HBL316NM	HBL332NM
Traditional, stainless steel shore power inlet has easy-to-wire terminations. Interior is transparent for quick and easy visual inspection. Interior is shielded from the elements by a gasketed, self-closing cover, watertight when cover is screwed in place. Mounting holes are 2.38 in. (60.3) on centers. Mounting screws and gasket included. Protective rear enclosure/strain relief also included. <b>IP56 SUITABILITY.</b>	HBL316SSX	HBL332SSX
25 ft. (7.6m) white, vinyl jacketed power supply cord with female (boat side) end only; other end blunt cut. <b>IP56 suitability.</b>	HBL316CS25	-
50 ft. (15.2m) white, vinyl jacketed power supply cord with female (boat side) end only; other end blunt cut.	HBL316CS	HBL332CS
Yellow locking connector replacement end for HBL316CS25 and HBL316CS. IP20 suitability.	HBL316CRCX	HBL332CRCX
White Seal-Tite® cover with threaded sealing ring for use with HBL316CRC and HBL332CRC connector bodies. <b>IP56</b> sultability.	HBL60CM33W	HBL60CM33W
White Seal-Tite® cover with threaded sealing ring for use with HBL316CRC and HBL332CRC connector bodies. <b>IP56</b> SUITABILITY.	HBL60CM33	HBL60CM33



HBL332NM



HBL316SSX HBL332SSX



HBL316CRCX HBL332CRCX



HBL363SSX





HBL363CRP



HBL363CRC



HBL363CRR



**HBL316CS25** HBL316CS HBL332CS



HBL60CM33 HBL60CM33W



# 63A 230V Ship-To-Shore Power Systems

2304	
Catalog Number	
HBL363SSX	
HBL363CRP	
HBL363CRC	
HBL363CRR	
HBL77CM15	
HBL77CM15W	
HBL77CM16	
HBL77CM16W	





Centrex® is a registered trademark of LANXESS Corporation.

### **Features and Benefits**

## **Intelligent Y Adapters**

**YQ230** - Safely powers a 50A 125/250V AC boat from two 30A 125V AC receptacles at dockside.\*

**Problem:** A boat owner with one electrical system on board docks in a marina that can only provide a different electrical system.

**Solution:** Use of the Hubbell YQ series of Intelligent Adapters can correct many electrical system mismatches.

Note: \*The two 30 amp receptacles must be on separate phases to function.





### **Housing Design**

- Rugged UV resistant high-impact housing
- Environmentally sealed against humidity, fog and rain
- Cord clamps prevent strain on terminals
- Sealing grommets keep moisture out



### Safety

- Safety indicator light, (when ON, safe operation is indicated)
- 3 pole contactor breaks both hots and neutrals to prevent possibility of "live" plug when not engaged

### **Intelligent Y Adapters**

Description	Catalog Number
Adapter that permits use of 50A 125/250V AC cable set. (HBL61CM52), with two 30A 125V AC receptacles, HBL26CM10.	YQ230
Adapter that permits use of 100A 125/250V AC cable set. (CS754, CS1004) with one or two 50A 125/250V AC receptacles, HBL63CM69.	YQ100PLUS

Note: The YQ230 Adapter will only work with two 30A receptacles that are on different phases.

The YQ100PLUS Adapter must be plugged into two 50A 125/250V AC receptacles that are on the same phase to achieve 100 amp, 125/250 volts power —or the "A" leg 50A male can be plugged into a single 50A 125/250V AC receptacle to achieve 50 amp, 125/250 volts power.

### **Intelligent Y Adapters**

**YQ100PLUS** - Safely powers a 100A 125/250V AC boat from two 50A 125/250V AC receptacles at dockside -or- from a single 50A 125/250V AC receptacle acting as a single adapter.

### Internal Logic Senses That:

- Both plugs are fully engaged (i.e., one is not dangling loose while the other is plugged in) -or- the "A" leg plug is engaged to access a single 50A 125/250V receptacle
- The polarity of the receptacle on the dock is correct (i.e., no mis-wiring of the hot and neutral wires)
- The two receptacles are from correct phases

CAUTION: This adapter must be connected to an onboard, center-tapped isolation transformer or shore power converter. DO NO USE this adapter if such a transformer or converter is not available.





### Housing Design

- Rugged, smaller, lighter-weight enclosure
- Environmentally sealed against humidity, fog and rain
- Sealing grommets keep moisture out



### Safety

- Indicator lights indicate correct polarity and safe operation
- "A" leg for accessing a single 50A 125/250V receptacle

### **Features and Benefits**

### **Hubbell Molded Adapters**

Hubbell Straight Adapters (pigtails) and "Y" Adapters are built to the same standards as all Hubbell Shore Power Cords.

Filled with end-to-end features and weathertight when mated with Hubbell shore cords without the need for extra collars, etc.

Hubbell Marine Adapters deliver the power you need.

- Available in a variety of configurations
- Now CSA Compliant





## **Housing Design**

- Fully molded fittings (except 100A) for superior waterproofing and durability
- Hubbell adapters are weatherproof when mated with Hubbell cable sets



### Interior Design

- Terminations utilize exclusive copper crimp barrel terminations, holds over 300% more securely
- Bull ring for strain relief on the terminals
- Nickel plated brass contact blades for corrosion-resistance



### Safety

- Provides 15 amp convenience power with GFCI protection
- Manual reset button
- High impact PVC housing, UV stabilized
- Sealed GFCI housing and keypad
- Large LED power "ON" light



### **Cord Flexibility**

- Molded-in flex feature controls the angle of cord entry and keeps water out
- Jute fillers inside jacket for maximum cable flexibility; Hubbell cable coils neater, lighter and lays flatter



# **Adapter Selection Guide**

Boat/Cable Set Side Connector Body (Female End)	Molded Straight Adapters				Power Center/Dock Side Plug (Male End)
15A 125V, 2P 3W Straight Blade with GFCI protection	[] w	HBL105GF	(V) 1°	30A 125V, 2P 3W Twist-Lock®	
30A 125V, 2P 3W Twist-Lock		HBL61CM22 HBL61CM22W	$\begin{bmatrix} \mathbf{w} & \mathbf{I} \end{bmatrix}$	15A 125V, 2P 3W Straight Blade (lock type)	
30A 125V, 2P 3W Twist-Lock		HBL61CM25	( ) 1°	20A 125V, 2P 3W Twist-Lock	
50A 125V, 2P 3W Twist-Lock		HBL61CM54	(w   I	15A 125V, 2P 3W Straight Blade	
30A 125V, 2P 3W Twist-Lock		HBL61CM55	( 1 w)	50A 125V, 2P 3W Twist-Lock	
50A 125V, 2P 3W Twist-Lock		HBL61CM56	( ) Jo	30A 125V, 2P 3W Twist-Lock	
30A 125V, 2P 3W Twist-Lock		HBL61CM71		50A 125/250V, 3P 4W Twist-Lock	
50A 125V, 2P 3W Twist-Lock		HBL61CM72		50A 125/250V, 3P 4W Twist-Lock	
100A 125/250V, 3P 4W Pin and Sleeve		HBL61CM100		50A 125/250V, 3P 4W Twist-Lock	
	N	lolded Y Adapters			
2) 30A 125V, 2P 3W Twist-Lock		HBL64CM54	( 1x)	50A 125/250V, 3P 4W Twist-Lock	
2) 50A 125V, 2P 3W Twist-Lock		HBL64CM55	( 1×)	50A 125/250V, 3P 4W Twist-Lock	
2) 30A 125V, 2P 3W Twist-Lock		HBL64CM56	(V) 1 G	30A 125V, 2P 3W Twist-Lock	
2) 30A 125V, 2P 3W Twist-Lock		HBL64CM57	( 1 W	50A 125V, 2P 3W Twist-Lock	
One Piece Adapters					
30A 125V, 2P 3W Twist-Lock	(c) (c) (c) (c) (c) (c) (c) (c) (c) (c)	HBL31CM28	$\begin{bmatrix} \mathbf{w} & \mathbf{I} \end{bmatrix}$	15A 125V, 2P 3W Straight Blade	
5 or 20A 125V, 2P 3W Straight Blade		HBL31CM29	( <b>y 1</b> <sub>G</sub> )	30A 125V, 2P 3W Twist-Lock	
20A 125V, 2P 3W Twist-Lock	(cf )	HBL21CM28	$\begin{bmatrix} \mathbf{w} & \mathbf{I} \end{bmatrix}$	15A 125V, 2P 3W Straight Blade	
5 or 20A 125V, 2P 3W Straight Blade		HBL21CM29	(V, 1)	20A 125V, 2P 3W Twist-Lock	

Note: See page AA-27 for features and benefits. See page AA-29 for photographs and descriptions.



# **Molded Adapters**

# Molded Straight Adapters - Now CSA Compliant

Description	Catalog Number
Permits use of 20A 125V Twist-Lock® locking type plug with 15 or 20A 125V straight blade receptacle. <b>IP20 suпавшту.</b>	HBL21CM28*
Permits use of 15A or 20A 125V straight blade plug with 20A 125V Twist-Lock locking type receptacle. <b>IP20 suitability.</b>	HBL21CM29*
Permits use of 30A 125V Twist-Lock locking type plug with 15 or 20A 125V straight blade receptacle. IP20 SUITABILITY.	HBL31CM28
Permits use of 15A or 20A 125V straight blade plug with 30A 125V Twist-Lock locking type receptacle. <b>IP20 suitability.</b>	HBL31CM29
Permits use of 30A 125V cable set, HBL61CM08 with 15 or 20A 125V straight blade receptacle. Anchor locking screw on plug when screwed down resists pullout of the cable set. IP55 suitability (Connector).	HBL61CM22
Same as HBL61CM22, except white.	HBL61CM22W
Permits use of 30A 125V cable set, HBL61CM08 with 20A 125V Twist-Lock receptacle, HBL23CM10. <b>IP55 SUITABILITY (CONNECTOR).</b>	HBL61CM25
Permits use of 50A 125V cable set, HBL61CM53 with 15 or 20A 125V straight blade receptacle. IP55 suitability (Connector).	HBL61CM54
Permits use of 30A 125V cable set, HBL61CM08 with 50A 125V Twist-Lock receptacle, HBL63CM70. <b>IP55 SUITABILITY (CONNECTOR).</b>	HBL61CM55
Permits use of 50A 125V cable set, HBL61CM53 with 30A 125V Twist-Lock receptacle, HBL26CM10. <b>IP55 SUITABILITY (CONNECTOR).</b>	HBL61CM56
Permits use of 30A 125V cable set, HBL61CM08 with 50A 125/250V Twist-Lock receptacle, HBL63CM69. IP55 sultability (Connector).	HBL61CM71 <sup>△</sup>
Permits use of 50A 125V cable set, HBL61CM53 with 50A 125/250V Twist-Lock receptacle, HBL63CM69. IP55 sultability (CONNECTOR).	HBL61CM72 <sup>▲</sup>
Permits use of 15A 125V 3 wire straight blade plug with 15 or 20A 125V 2 wire straight blade receptacle. <b>IP55 suitability (Connector).</b>	HBL5273L*
Permits a 100A 125/250V cable set to plug into a single 50A 125/250V outlet. IP55 suitability (Connector).	HBL61CM100*
Permits use of 15A straight blade plug with 30A 125V Twist-Lock receptacle; with GFCI protection. IP55 sultability (Plug).	HBL105GF**



Catalog Number
HBL64CM54
HBL64CM55
HBL64CM56
HBL64CM57**

Note: \*UL Listed.

Adapters do not provide overcurrent protection and do not provide GFCI protection except HBL105GF.



















<sup>\*\*</sup>Not CSA Certified.

<sup>▲</sup> The male plug end (50A 125/250V) has a blade removed and the blade slot filled with epoxy. Omitting the blade ensures achieving 125V safely.

# **Telephone and Cable TV Devices**



**HBLPHTVNM** 



**HBLPHTVSS** 



**HBLTVSS** 





PH6624



**Telephone and Cable TV Ship-to-Shore Devices** 

Description	Catalog Number
Stylized non-metallic inlet provides telephone and cable TV connections in one unit. UV resistant white Centrex® cover makes unit weatherproof when completely closed. Mounting holes are 2.38 in. (60.3) on centers and match existing mounting patterns. Mounting screws and gasket provided. <b>IP55 SUITABILITY.</b>	HBLPHTVNM
Traditional stainless steel inlet provides connections for telephone and cable TV in one unit. Connections can be used individually or together. Gasketed cover is self-closing so interior is shielded from the elements when not in use. Watertight when cover is screwed in place. Mounting holes are 2.38 in. (60.3) on centers. Mounting screws and gasket included. IP56 SUITABILITY.	HBLPHTVSS
Same as HBLPHTVSS above except no phone.	HBLTVSS
Replacement int. for PH6594TV and HBLPHTVSS series inlets.	CR16914
Black locking type plug for telephone cable sets or adapters.	PH6625
Black locking type connector body used on telephone cable sets or adapters.	PH6624
Yellow Seal-Tite® cover for weatherproofing PH6624 connector body on cable sets when connecting to an inlet and for weather-proofing PH6625 plug. IP20 SUITABILITY.	PH7440
Yellow Seal-Tite cover for weatherproofing PH6624 connector body when used on extension cords or adapters. <b>IP55 SUITABILITY.</b>	PH7499
Factory pre-wired 50 ft. (15.2m) telephone cable set. Uses 3 conductor, #16 AWG type SJTO, yellow vinyl cord for marine and recreational vehicle applications.  IP20 SUITABILITY.	PH6599
Same as PH6599 except white in color.	PH6599W
Same as PH6599 except 25 ft. (7.6m) in length.	PH6598
Same as PH6598 except white in color.	PH6598W



PH6599 PH6599W PH6598 PH6598W

Centrex® is a registered trademark of LANXESS Corporation.

# **Telephone and Cable TV Devices**

# **Telephone and Cable TV Ship-to-Shore Devices**

Description	Catalog Number
Black polycarbonate combination telephone/TV outlet with spring-loaded weatherproof lift cover. Can be wired for telephone service only or for telephone and MATV/CATV services in one FS/FD box in both marinas and RV parks. Can be padlocked to prevent unauthorized use. IP44 suitability.	PH6597TV
Black polycarbonate cable TV outlet has coax connector and gasketed, spring-loaded lift cover for weatherproofing. Designed for mounting to FS/FD type weatherproof boxes (like PH6619) in both marinas and RV parks. <b>IP20 SUITABILITY.</b>	TV97
Black polycarbonate telephone outlet has gasketed, spring-loaded lift cover for weatherproofing. Designed for mounting to FS/FD type weatherproof boxes (like PH6619) in both marinas and RV parks. IP20 SUITABILITY.	PH6597
Black polycarbonate telephone outlet has gasketed, spring-loaded lift cover for weatherproofing. Can be used to retrofit old style telephone outlets of Pauluhn Manufacturing Company (2833 and 2843) in both marinas and RV parks. IP20 SUITABILITY.	PH6596
Black polycarbonate RV inlet for telephone connection only. Has spring-loaded, gasketed weatherproof lift cover designed for mounting to FS/FD type weatherproof boxes.  IP20 SUITABILITY.	PH6595
Black non-metallic FS box with ¾ in. threaded hubs used for mounting phone and TV outlets and PH6595 recreational vehicle inlet. Cord connector included for strain relief and to maintain watertight integrity of box when cable is used. PVC adapter also included for connection of PVC conduit to box.	PH6619
50 ft. (15.2m) yellow jacketed ship-to-shore TV cable set is the industry standard 75 Ohm, RG59-U with male plugs on both ends. Adapter included for a quick, slip-on connection to inlet on boat.	TV99
Same as TV99 except white in color.	TV99W
Same as TV99 except 25 ft. (7.6m) in length.	TV98
Same as TV98 except white in color.	TV98W



PH6597TV



ΓV97



PH6597



PH6596



PH6595



PH6619





# 30 Amp 28 Volt DC Rated

# **Electric Fishing Reel Devices**

Hubbell has a DC rated electrical system designed specifically for larger electric fishing reel systems. Up until now, larger electric fishing reel systems typically utilized conventional 30 Amp AC rated devices since an appropriately rated DC system was not available.

The system features a corrosion-resistant plug, connector body and receptacle and can be used along with a Hubbell outlet box and weatherproof cover plate to complete the installation. These devices are all rated at 28 Volt DC and are applicable for all 12, 24 and 32 Volt DC fishing reel systems. The devices are UL listed and CSA certified. All devices are made of high-visibility yellow nylon that is impact resistant and UV stabilized for longer life. Also, the contacts are nickel plated for corrosion resistance.



HBL328DCR

# 30A 28V DC Rated Devices

Description	Catalog Number
Yellow locking single receptacle with abuse-resistant face. Can be mounted in Hubbell box HBL6083 and used wit HBL74CM25WOA weatherproof plate.	HBL328DCR
Yellow locking plug has rugged nylon housing and rear dust seal to keep dust and foreign matter out.	HBL328DCP
Yellow locking connector body has rugged, nylon housing and rear dust seal to keep dust and foreign matter out.	HBL328DCC



HBL328DCP

### Accessories

Description	Catalog Number
Gray, high-impact thermoplastic FD (deep) weatherproof box with ¾ in. (19.1) NPT threaded hub, with 30 cubic inch capacity.	HBL6083
Same as HBL6083 except yellow in color.	HBL60CM83A
Same as HBL6083 except white in color.	HBL60CM83WA
Black phenolic type FS (shallow) weatherproof box has two $\%$ in. (19.1) I.P.S. molded-in knockouts. 4.56 in. H x 2.94 in. W x 2.19 in. D (115.9H x 74.6W x 55.6D) and has 16 cubic inch capacity.	HBL6080OS
Spring-loaded lift cover, for weatherproofing HBL328DCR outlet. Yellow in color.	HBL74CM25WOA
Same as HBL74CM25WOAW except white in color.	HBL74CM25WOAW
Same as HBL74CM25WOAW except gray in color.	HBL7425WOA



HBL328DCC



HBL60CM83A



Note: See page AA-46 for 55° angle adapters and additional accessories.

**HBL6080OS** 



HBL74CM25WOA



HBL74CM25WOAW

# 12 Volt DC Rated Switches

### **KEY CHART**



### 1. Toggle switch

Fits panels up to 1/4 in. thick when not using the back-up nut provided; fits panels up to 3/16 in. thick when using the back-up nut. Requires a ½ in. mounting hole.



M11LRGSP

2. Lighted toggle switch Built-in pilot light (R=red, G=green) for night vision. Same panel specs as 1.



3. Lighted-tip toggle switch 4. Rocker switch Red pilot light visible in tip of toggle only. Same panel specs as 1.



MR11SP

Requires a 11/2 in. high x % in. wide rectangular opening.



MR123LRSP

# 5. Lighted rocker switch

Built-in pilot light for night vision. Same panel specs as 4.

### **Panel Mount Toggle and Rocker Switches**

Description	Typical Applications	Key	Catalog Number
Single pole, single throw,	Lights, bilge blower, bilge pump(s),	1	M11SP
ON/OFF.	accessories	2	M11LRSP
		2	M11LRGSP
		3	M11LTR
		4	MR11SP
		5	MR11LRSP
Single pole, single throw,	Horn, starter, winches, gauges		M11MSP
ON/OFF/ON.			MR11MSP
Single pole, double throw,	Bilge pumps, speed selector,		M123SP
ON/OFF/ON.	lights, navigation lights		M123LTR
			MR123SP
			MR123LRSP
Single pole, double throw,	Bilge pumps	1	M123MSP
Momentary ON/OFF/ON.	5 1 1 2	4	MR123MSP
Single pole, double throw.	Trim Tabs	1	M123MMSP
Momentary ON/OFF/Momentary ON.		4	MR123MMSP
Double pole, single throw,	Lights, accessories	1	M21SP
ON/OFF.		4	MR21SP
Double pole, double throw,	Navigation lights, wipers,	1	M223SP
ON/OFF/ON.	dual fuel tanks	4	MR223SP
Double pole, double throw,	Navigation lights, windlass	1	M223JSP
ON/OFF/ON (with jumper).			
Double pole, double throw.	Winches, trim tabs,	1	M223MMSP
Momentary ON/OFF/Momentary ON.	dual fuel tanks	4	MR223MMSP
Black silicone rubber boot bonded	Provides positive seal against		MSB1
to brass nut.	moisture, oil, etc. Fits any		
	non-lighted toggle switch.		
Push-button horn switch with 15/32 in.	For remote operation of horn.		MH11
long nickel plated brass mounting stem. Terminals are .25 in. spade.			
Black push-button (horn) boot.	Fits MH11 horn switch.		MHB11





MR11SP



M21SP



M223SP



MSB<sub>1</sub>



MH11



**MHB11** 



# 15 Amp Twist-Lock® Devices and Accessories



HBL47CM00





Description	Catalog Number
Yellow duplex receptacle has heat resistant body. IP20 suitability.	HBL47CM00
Yellow Insulgrip <sup>®</sup> plug has rugged nylon housing and detachable cord grip with range of .30–.69 in. (7.5–17.4) that utilizes a unique offset jaws arrangement to provide secure strain relief. <b>IP20 SUITABILITY.</b>	HBL47CM20C
Yellow Insulgrip connector body has rugged nylon housing and detachable cord grip with range of .30–.69 in. (7.5–17.4) that utilizes a unique offset jaws arrangement to provide secure strain relief. <b>IP20 SUITABILITY.</b>	HBL47CM29C
Panel mount flanged outlet has heat resistant melamine interior and stainless steel casing.  IP20 SUITABILITY.	HBL47CM15
Panel mount flanged inlet has heat resistant melamine interior and stainless steel casing. IP20 suitability.	HBL47CM16



HBL47CM20C



HBL47CM29C



HBL47CM15



HBL47CM16



# **Accessories**

Description	Catalog Number
Yellow Valox® spring-loaded lift cover for weatherproofing duplex receptacles. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. IP20 suitability.	HBL52CM21
Same as HBL52CM21 except white in color	HBL52CM21W
Same as HBL52CM21 except gray in color.	HBL5221
Same as HBL52CM21 except for mounting to standard boxes.	HBL52CM22
Same as HBL52CM22 except gray in color.	HBL5222
Short yellow Seal-Tite® cover for weatherproofing HBL47CM20C Insulgrip plug when used with receptacles or connector bodies. Also can be used to weatherproof HBL47CM29C Insulgrip connector body when used with HBL47CM16 flanged inlet. <b>IP44 SUITABILITY.</b>	HBL60CM23**
Yellow Seal-Tite cover for weatherproofing HBL47CM29C Insulgrip connector body when used on extension cords and adapters. <b>IP20 SUITABILITY.</b>	HBL60CM24**
Three conductor, #14 AWG type STW, yellow PVC jacketed portable cord has jute fillers for added flexibility and is ideal for making cable sets, extension cords and adapters as it will not mark the boat's deck. Available in 250 ft. (76.2m) length only.	YC314250

Note: \*\*Not UL Listed or CSA Certified.







52CM21W YC314250

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



# 15 Amp Straight Blade Devices and Accessories



# 15A 125V AC Straight Blade Devices

Description	Catalog Number
Yellow corrosion-resistant/weather resistant duplex receptacle. Use outdoors or where salt and other corrosive materials are a problem. Accepts 15A 125V, 2 pole 3 wire straight blade plugs. <b>IP20 SUITABILITY.</b>	HBL52CM62
Same as HBL52CM62 except ivory in color.	HBL52CM62I
Single version of HBL52CM62 duplex yellow receptacle. IP20 suitability.	HBL52CM61
Yellow Insulgrip <sup>®</sup> plug has rugged nylon housing and detachable cord grip with range of .23–.72 in. (5.8–18.3) that utilizes a unique offset jaws arrangement for secure strain relief. <b>IP20 SUITABILITY.</b>	HBL52CM66C
Yellow Insulgrip connector body has rugged nylon housing and detachable cord grip with range of .23–.72 in. (5.8–18.3) that utilizes a unique offset jaws arrangement for secure strain relief. IP20 SUITABILITY.	HBL52CM69C
Yellow Valise® plug has one-piece nylon housing that assembles easily with two screws. Built-in cord grip has range of .22–.66 in. (5.6–16.8). <b>IP20 SUITABILITY.</b>	HBL52CM66V
Yellow Valise connector body has one-piece nylon housing that assembles easily with two screws. Built-in cord grip has range of .22–.66 in. (5.6–16.8). IP20 SUITABILITY.	HBL52CM69V
Yellow Insulgrip plug with anchor locking screw to prevent accidental pull-out. The plug is "locked" into the receptacle when the screw is turned down so the head is flush with the plug surface. The cord grip range is .30–.69 in. (7.5–17.4). UL Recognized Component. IP20 SUITABILITY.	HBL52CM80C
Compact gray nylon panel mount inlet ideal for bass boat battery charging connection. Has gasketed spring-loaded lift cover for weatherproofing front and neoprene boot for weatherproofing rear. Will accept both 15A 125V and 20A 125V, 2 pole 3 wire straight blade connector bodies. IP44 suitability.	HBL61CM64
Same as HBL61CM64 except black in color.	HBL61CM64BK
Note: See page Tech-10 for Weather Resistant descriptions.	



Description	Catalog Number
Yellow Seal-Tite® cover for weatherproofing straight blade Insulgrip plugs, HBL52CM66C and HBL53CM66C, when used with receptacles and connector bodies. Can also be used to weatherproof Insulgrip connector bodies when mating with flanged inlets. <b>IP44 SUITABILITY.</b> Note: For Insulgrip devices only.	HBL60CM17**
Yellow Seal-Tite cover for weatherproofing straight blade Insulgrip connector bodies, HBL52CM69C and HBL53CM69C, on extension cords and adapters. IP55 suitability. Note: For Insulgrip devices only.	HBL60CM18**
Yellow Valox® spring-loaded lift cover for weatherproofing duplex receptacles. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. IP20 suitability.	HBL52CM21
Same as HBL52CM21 except gray in color.	HBL5221
Same as HBL52CM21 except for mounting to standard boxes.	HBL52CM22
Same as HBL52CM22 except gray in color.	HBL5222
Yellow Valox spring-loaded lift cover for weatherproofing single straight blade receptacles. Stainless steel screws and neoprene gasket included. For mounting to FS/FD type weatherproof boxes. <b>IP44 SUITABILITY.</b>	HBL74CM23WO
Same as HBL74CM23WO except gray in color.	HBL7423WO

Note: \*\*Not UL Listed or CSA Certified.







HBL74CM23WO

HBL52CM62



HBL52CM66C



HBL52CM69C



HBL52CM80C



HBL52CM66V



HBL52CM69V



HBL61CM64





HBL60CM17





# 20 Amp Twist-Lock® Devices and Accessories

Plugs, receptacles and connectors only.





HBL23CM10

# 20A 125V Twist-Lock® Devices

Description	Catalog Number
Yellow single receptacle has Rynite® body and abuse resistant nylon face.  IP20 suitability.	HBL23CM10
Yellow Insulgrip® plug has rugged nylon housing and cord grip with range of .36–.93 in. (9–24) that utilizes a unique offset jaws arrangement to provide secure strain relief. <b>IP20 SUITABILITY.</b>	HBL23CM11
Yellow Insulgrip connector body has rugged nylon housing and cord with range of .36–.93 in. (9–24) that utilizes a unique offset jaws arrangement to provide secure strain relief. <b>IP20 SUITABILITY.</b>	HBL23CM13
Yellow Valise plug has one-piece nylon housing, assembles easily with two screws. Built-in cord grip has range of .33–.72 in. (8.3–18.2). IP20 SUITABILITY.	HBL23CM11V



HBL23CM11



HBL23CM13



HBL23CM11V



HBL60CM31



HBL60CM31V



Accessories

Description	Catalog Number
Yellow polycarbonate spring-loaded lift cover for weather-proofing HBL23CM10 receptacle. Meets the most stringent requirements of UL's three listing categories for weatherproof plates. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. <b>IP44 SUITABILITY.</b>	HBL74CM25WOA
Same as HBL74CM25WOA except gray in color.	HBL7425WOA
Same as HBL74CM25WOA except white in color.	HBL74CM25WOAW
Yellow Seal-Tite® cover for weatherproofing HBL26CM11 or HBL23CM11 plugs.  IP44 suitability. Note: Fits Insulgrip devices only.	HBL60CM31**
Same as HBL60CM31 except white in color.	HBL60CM31W**
Yellow Seal-Tite cover for weatherproofing HBL26CM13 or HBL23CM13 connector bodies when used on extension cords or adapters. <b>IP44 SUITABILITY.</b> Note: Fits Insulgrip devices only.	HBL60CM32**
Yellow vinyl Seal-Tite cover for weatherproofing HBL23CM13V or HBL26CM13V connector bodies. <b>IP44 SUITABILITY.</b> Note: Fits Valise® devices only.	HBL60CM32V**
Yellow Seal-Tite cover for weatherproofing HBL23CM11V or HBL26CM11V plugs. <b>IP44 SUITABILITY.</b> Note: Fits Valise devices only.	HBL60CM31V**
Three conductor, #12 AWG type STW, yellow PVC jacketed portable cord with jute fillers for added flexibility. Ideal for making cable sets, extension cords and adapters as will not mark boat's deck. Available in 250 ft. (76.2m) length only.	YC312250

Note: \*\*Not UL Listed or CSA Certified.



Rynite® is a registered trademark of E. I. DuPont.



HBL74CM25WOA



YC312250



# 20 Amp Straight Blade Devices and Accessories



# 20A 125V AC Straight Blade Devices

Description	Catalog Number
Yellow corrosion-resistant/weather resistant duplex receptacle. Use outdoors or where salt and other corrosive materials are a problem. Accepts both 20A 125V and 15A 125V, 2 pole 3 wire straight blade plugs. <b>IP20 SUITABILITY.</b>	HBL53CM62
Single version of HBL53CM62 duplex yellow receptacle. IP20 suitability.	HBL53CM61
Yellow Insulgrip® plug has rugged nylon housing and detachable cord grip with range of .23–.72 in. (5.8–18.3) that utilizes unique offset jaws arrangement to provide secure strain relief. <b>IP20 SUITABILITY.</b>	HBL53CM66C
Yellow Insulgrip connector body has rugged nylon housing and cord grip with range of .23–.72 in. (5.8–18.3) that utilizes unique offset jaws arrangement for secure strain relief. <b>IP20 SUITABILITY.</b>	HBL53CM69C
Compact gray nylon panel mount outlet ideal for electric trolling motors and reel applications. Features gasketed spring-loaded lift cover for weatherproofing front and neoprene boot for weatherproofing rear. Accepts both 20A 125V and 15A 125V, 2 pole 3 wire straight blade plugs. <b>IP44 SUITABILITY.</b>	HBL61CM65

Note: See page Tech-10 for Weather Resistant descriptions.



HBL53CM62 HBL53CM61



HBL53CM66C







HBL52CM66V



HBL52CM69V



HBL61CM65



**HBL7423WO** 

# **Accessories**

Description	Catalog Number
Yellow Seal-Tite® cover for weatherproofing straight blade Insulgrip plugs, HBL52CM66C and HBL53CM66C, when used to mate receptacles and connector bodies. Can also be used with Insulgrip connector bodies when mating with flanged inlets. <b>IP44 SUITABILITY.</b> Note: For Insulgrip devices only.	HBL60CM17**
Yellow Seal-Tite cover for weatherproofing straight blade Insulgrip connector bodies, HBL52CM69C and HBL53CM69C, on extension cords and adapters.  IP55 SUITABILITY. Note: For Insulgrip devices only.	HBL60CM18**
Yellow closure plug used with HBL60CM18 long Seal-Tite cover to prevent water from entering front of device when not in use. <b>IP55 SUITABILITY.</b>	HBL60CM19**
Yellow polycarbonate spring-loaded lift cover for weatherproofing duplex receptacles. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. <b>IP20</b> suitability. Not CSA certified.	HBL52CM21
Same as HBL52CM21 except white in color.	HBL52CM21W
Same as HBL52CM21 except gray in color.	HBL5221
Same as HBL52CM21 except for mounting to standard boxes.	HBL52CM22
Same as HBL52CM22 except gray in color.	HBL5222
Yellow polycarbonate spring-loaded lift cover for weatherproofing single straight blade receptacles. Stainless steel screws and neoprene gasket included. For mounting to FS/FD type weatherproof boxes. <b>IP44 SUITABILITY.</b> Not CSA certified.	HBL74CM23WO
Same as HBL74CM23WO except gray in color.	HBL7423WO

Note: \*\*Not UL Listed or CSA Certified.



HBL52CM21





HBL74CM23WO



# **Testers, Surge Protection and USB Charger Receptacles**

# **Hubbell Twist-Lock® Circuit Tester**



Styled and sized like a standard Hubbell Twist-Lock® Plug. Simply plug it in and the LED back panel immediately identifies if the connections are made correctly and are in the correct position, ensuring the device is wired properly. An easy to read card is provided with the tester, to help determine if the connections are correct. This tester is compact and can easily clip onto your tool belt. The Hubbell Circuit Tester is UL and C-UL Listed.

Catalog Number
HBLT26CM11





GFT2G



Description	Catalog Number
This unit is designed to measure the trip level of GFCI portables, receptacles, or breakers within	GFT2G*
any range from 2 to 7 milliamperes, or the leakage in portable tools or appliances within a	
leakage range of 1 to 7 milliamperes. It can be used on any AC circuit of 110 to 130V.	
	1101 5000++

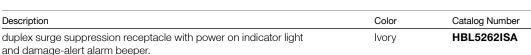
This outlet circuit tester has a simple arrangement of neon lights which visually indicate correct wiring, reversed polarity, open ground wire, open neutral wire, open hot wire, hot and ground reversed and hot wire on neutral terminal and hot terminal unwired. Simply plug the HBL5200 into a single phase 125V 2 pole 3 wire outlet and the combination of lighted and/or unlighted lamps will immediately indicate the condition of the circuit. The instructions and symbol identification are printed on durable polyester labels permanently attached to the tester. To test other 2 pole 3 wire single phase 125V outlets, use one of the proper adapters shown on page AA-29.



Note: \*Not UL Listed or CSA Certified. \*\*Not CSA Certified.

# **Surge Suppression Receptacle**

Surge suppression receptacles 15A 125V AC Nominal. UL Listed at 600V voltage protection level. Suitable for ANSI/IEEE C 62.41-installation categories "A" (outlets and long branch circuits) and "B" (major feeders and short branch circuits). The Hubbell Surge Suppression Receptacle helps protect your electronic equipment from damage caused by transient voltages. The receptacle contains metal oxide varisters which dissipate the electrical energy of voltage spikes without interfering with normal operations.





HBL5200

HBL5262ISA

# **USB Charger Tamper-Resistant Duplex Receptacle, New with 3.8 Amps of Charging Power**

Hubbell's USB Charger Receptacle provides both USB and AC electrical power in a standard single gang electrical opening. Designed to provide more charging options for personal electronics.

Charge Devices Simultaneously!

- Tablets
- Apple<sup>®</sup> iPad<sup>®</sup>
- Smartphones

Color Black

Brown

Light Almond

Gray Ivory

White

- Apple<sup>®</sup> iPod<sup>®</sup>
- MP3 players
- Apple® iPhone®

Catalog Number

USB15X2BK USB15X2

USB15X2GY

USB15X2I USB15X2LA

USB15X2W





Description

15A 125V AC USB Charger Tamper-Resistant receptacle,	
Two USB Type 2.0 ports 3.8 Amp, 5 Volt DC,	
15 or 20 Amp, 125 Volt AC decorator duplex.	

Note: See page Tech-10 for Tamper-Resistant descriptions.

Apple, iPad, iPod and iPhone are registered trademarks of Apple, inc.





### **GFCI and Portable Ground Fault Circuit Interrupters**

The American Boat and Yacht Council recommends the use of ground fault protected receptacles in a head, galley, machinery space or on a weather deck. Refer to ABYC "Ground Fault Protection" on page AA-48.

### Ground Fault Circuit Interrupter (GFCI) Receptacles - 2015 Code Compliant

These UL Listed receptacles have been designed to protect people from line-to-ground electrical shock hazards which may develop from faulty appliance, tools or defective portable cords. If a ground fault does occur and the leakage level exceeds 4 to 6 milliamperes, the GFCI unit quickly acts to protect the user by opening the circuit, thus interrupting the power supply and limiting the duration of any electrical current flow. After tripping, the receptacle is reset by pushing a button on its face. A test button allows the user to test that the GFCI is in working order.

Note: The 2015 UL 943 requirements apply to all permanently installed GFCI devices. Each device must automatically monitor GFCI functionality every (3) hours or less. If the device can no longer provide GFCI protection it must deny power and provide a visual and/or audible indication for end of life. All GFCIs manufactured prior to June 29th, 2015 are grandfathered from these new requirements.



GFRST52MW

Hubbell's GFCI receptacles can be mounted on any standard 2.50 inch (63.5) deep box. A feed-through feature provides protection not only at that receptacle but also at any other receptacle located downstream from it on the same circuit. These devices meet the requirements of The National Electric Code (NEC) and American Boat and Yacht Council Standard and will accept locking fork terminals.

Caution: Ground Fault Receptacles should not be mounted in locations exposed to salt spray nor in the engine room. For GFCI protection of such locations, downstream feeding from an internally located Ground Fault Receptacle is recommended.

Description	Color	Catalog Number
15A 125V GFCI duplex receptacle with power denial.  Nylon wallplate included.	Brown Gray Ivory White	GFRST52M GFRST52MGY GFRST52MI GFRST52MW
PVC weatherproof lift cover for ground fault receptacles (such as GFRST52M series) and Style Line® receptacles. For vertical mounting in standard or FS/FD type boxes.	Gray White	CWP26CR CWP26CRW





GFP15M

### Portable Ground Fault Circuit Interrupters (GFCI)

Ideal for providing safety in applications requiring multiple outlets, features gasketed cover to protect outlets not in use. Ensures safety by interrupting power when leakage to ground is 4 to 6 milliamperes. A test button allows the user to test that the GFCI is in working order. This portable solution provides open neutral protection.

Description	Catalog Number
The housing is high-impact yellow polycarbonate as are the liftcovers which protect the receptacles from dirt and damage. Incorporates a 20 Amp GFCI module that can be replaced in the field. The module provides not only ground fault protection, but also contains the no voltage release feature.	GFP15M
3-outlet plug-in unit. Plugs into boat convenience receptacles to provide ground fault protection.	GFP315A
Note: GFCI devices will not protect against overloads or short circuits.	



GFP315A

### 15A 125V GECLLine Cord Devices

10A 120V at of Line out a Devices		
Description	Line Cord Length	Catalog Number
Ideal for personal plug-in protection at marinas and onboard boats when used with pumps, drills, sanders and all portable electrical equipment. GFCI	6 ft. (1.8m)	GFP6C15M
mechanism is watertight and approved for outdoor use. High visibility yellow SJTW-A power cord resists moisture, chemicals and sunlight.	25 ft. (7.6m)	GFP25C15M



GFP25C15M







### 15 and 20 Amp Receptacles

### Style Line® Decorator Receptacles

- High-impact nylon face resists breaking, chipping and cracking.
- Will accept locking fork terminal to comply with ABYC standards.
- Available in 4 colors for any decor with matching wall plates.
- Smooth, high-gloss finish for rich appearance.









**DR15GRYWRTR** 

### Commercial Style Line® Decorator Series







Description	Color	Standard Duplex	Duplex, Tamper-Resistant	Duplex, Weather and Tamper-Resistant
15A 125V duplex receptacle.	Almond	DR15AL	DR15ALTR	-
	Black	DR15BLK	DR15BLKTR	DR15BLKWRTR
	Brown	DR15	DR15TR	DR15WRTR
	Gray	DR15GRY	DR15GRYTR	DR15GRYWRTR
	lvory	DR15I	DR15ITR	DR15IWRTR
	Light Almond	DR15LA	DR15LATR	DR15LAWRTR
	White	DR15WHI	DR15WHITR	DR15WHIWRTR





Duplex, Weather and Tamper-Resistant, Back and Side Wired

**BR15BLKWRTR BR15WRTR BR15GRYWRTR BR15IWRTR BR15LAWRTR BR15WHIWRTR** 





CR15TR



**BR15IWRTR** 

### **Commercial Series**

Description	Color	Standard Duplex, Spec. Grade, Side Wired	Duplex, Tamper-Resistant
15A 125V duplex receptacle.	Almond	CR15AL	CR15ALTR
	Black	CR15BLK	CR15BLKTR
	Brown	CR15	CR15TR
	Gray	CR15GRY	CR15GRYTR
	lvory	CR15I	CR15ITR
	Light Almond	CR15LA	CR15LATR
	White	CR15WHI	CR15WHITR

Note: All devices above will accept locking fork terminal to comply with ABYC standards. See page Tech-10 for Tamper and Weather Resistant descriptions.









HBL53611



HBL52CM62I HBL8200ILI

### Extra Heavy Duty Single Receptacles

Extra fleaty Buty Single fleeepitation		
Description	Color	Catalog Number
15A 125V single receptacle.	Brown	HBL5251
	lyory	HRI 52511

20A 125V single receptacle. Brown Ivory

### **Corrosion-Resistant Receptacles**

HBL5361	
HBL5361I	
্ৰান্ত নিৰ্ভাৱ কৰিছে ক	

Color Catalog Number HBL52CM62 15A 125V yellow corrosion-resistant duplex receptacle. Yellow Use where salt or other corrosive elements are a problem. Same as HBL52CM62 except ivory in color. Ivory HBL52CM62I

### Special Application Illuminated Receptacle

Description	Color	Catalog Number
Illuminated receptacle 15A 125V grounding. A high quality receptacle with an illuminated face. Ideal for use in halls or as a gentle night light.	lvory	HBL8200ILI

Note: See page Tech-10 for Weather Resistant descriptions.



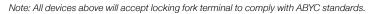




### **Switches and Accessories**

### **Commercial Series**

Description	Toggle Color	Catalog Number
15A single-pole toggle switch for controlling	Almond	CS115AL
AC load from one point.	Black	CS115BK
	Brown	CS115
	Gray	CS115GY
	lvory	CS115I
	Light Almond	CS115LA
	White	CS115W
15A three-way toggle switch for controlling	Almond	CS315AL
AC load from two points.	Black	CS315BK
	Brown	CS315
	Gray	CS315GY
	lvory	CS315I
	Light Almond	CS315LA
	White	CS315W





HBL1221IL



HBL1221PL

### **Special Application Series**

Description	Catalog Number
20A 120V toggle switch with LED lamp set in ivory handle. Handle illuminates when switch is in "OFF" position.	HBL1221IL
20A 120V three-way toggle switch with LED illuminated ivory handle for controlling AC load from two points. Handle illuminates when "OFF".	HBL1223IL
20A 120V single-pole toggle switch with LED lamp set in clear red handle.  Handle illuminates when switch is "ON". Serves as instant reminder that current is flowing to an appliance.	HBL1221PL
20A 120V three-way toggle switch with LED for controlling AC load from two points. Red handle illuminates when "ON".	HBL1223PL
Single-pole PresSwitch® for controlling AC load from one point. Switch activated brown button.	HBL1281
Same as HBL1281 except ivory button.	HBL1281I
Three-way PresSwitch for controlling AC load from two points. Switch activated brown button.	HBL1283*
Same as HBL1283 except ivory button.	HBL1283I*



HBL1281



HBL1283

### Accessories

Description	Catalog Number
Yellow neoprene weatherproof plate for use only with PresSwitches.  PresSwitch button is activated when bubble is pressed. Not CSA certified.	HBL17CM50*
Clear silicone rubber weatherproof bubble plate for use with all AC toggle switches and PresSwitches. Also ideal for use with lighted handle toggle switches. Not CSA certified.	HBL1795
Plastic switch/receptacle box. Measures 3.281" x 2.188" x 2.50" (83.3 x 55.6 x 63.5) deep. For mounting in walls without studs. A support strap is provided which pulls box tightly against back side of wall.	HBL6079**

Note: \*Not UL Listed. \*\*Not CSA Certified.



HBL17CM50



HBL1795



HBL6079

## **Marine Products**



### Wallplates

- Nylon plates—virtually unbreakable
- Rounded corners for stylish look
- Reinforced ribs for extra strength
- Screws are factory-inserted for fumble-free installation

			Sr	mooth Nylon		Smooth Metal
Description		Color	Standard	Mid-Size	Material	Catalog Number
*	1-Gang, 1-Toggle	Black Brown Gray Ivory White	NP1BK NP1 NP1GY NP1I NP1W	NPJ1BK NPJ1 NPJ1GY NPJ1I NPJ1W	Brass Stainless Steel	SB1 SS1
8	1-Gang, 1-Duplex	Black Brown Gray Ivory White	NP8BK NP8 NP8GY NP8I NP8W	NPJ8BK NPJ8 NPJ8GY NPJ8I NPJ8W	Brass Stainless Steel	SB8 SS8
2	1-Gang, 1-Decorator	Black Brown Gray Ivory White	NP26BK NP26 NP26GY NP26I NP26W	NPJ26BK NPJ26 NPJ26GY NPJ26I NPJ26W	Brass Stainless Steel	SB26 SS26
0 0	2-Gang, 2-Toggle	Black Brown Gray Ivory White	NP2BK NP2 NP2GY NP2I NP2W	NPJ2BK NPJ2 NPJ2GY NPJ2I NPJ2W	Brass Stainless Steel	SB2 SS2
**	2-Gang, 2-Duplex	Black Brown Gray Ivory White	NP82BK NP82 NP82GY NP82I NP82W	NPJ82BK NPJ82 NPJ82GY NPJ82I NPJ82W	Brass Stainless Steel	SB82 SS82
, n	2-Gang, 2-Decorator	Black Brown Gray Ivory White	NP262BK NP262 NP262GY NP262I NP262W	NPJ262BK NPJ262 NPJ262GY NPJ262I NPJ262W	Brass Stainless Steel	SB262 SS262
18	2-Gang, 1-Toggle, 1-Duplex	Black Brown Gray Ivory White	NP18BK NP18 NP18GY NP18I NP18W	NPJ18BK NPJ18 NPJ18GY NPJ18I NPJ18W	Brass Stainless Steel	SB18 SS18
i	2-Gang, 1-Toggle, 1-Decorator	Black Brown Gray Ivory White	NP126BK NP126 NP126GY NP126I NP126W	NPJ126BK NPJ126 NPJ126GY NPJ126I NPJ126W	Brass Stainless Steel	SB126 SS126
	1-Gang, 1-Single 1.40" Dia. Hole	Black Brown Gray Ivory White	NP7BK NP7 NP7GY NP7I NP7W	NPJ7BK NPJ7 NPJ7GY NPJ7I NPJ7W	Brass Stainless Steel	SB7 SS7
- 4	1-Gang, 1-Blank, Box Mount	Black Brown Gray Ivory White	NP13BK NP13 NP13GY NP13I NP13W	NPJ13BK NPJ13 NPJ13GY NPJ13I NPJ13W	Brass Stainless Steel	SB13 SS13

## **Marine Products**

### **Communication Frames and Connectors**

### Hubbell Now Offers The Ability To Put 2 or 3 Communication Devices In a Single, Style Line® Plate

Any combination of phone (6-position jack), cable TV (F-type connector) and Category 5e modular data jacks can be assembled onto a 2-port or 3-port frame—each sold individually so you can customize them as needed. Or the highly popular phone and cable TV combination is available with the frame and matching wallplate under a single catalog number, in all the popular colors.

Finally—a single communications plate that can take the place of 2 or 3 plates—available from a company you can trust for superior quality.

Hubbell's Marine communication frames and connectors deliver high quality data and multimedia transmission to the point of connection. Hubbell's 2 and 3 port Style Line® frames and leading edge connections allow for customized configurations. Install Hubbell's Marine communication offering and be assured a reliable connection.

## 2 Port Communication Frame, Fully Loaded (6-Position Phone Jack, F-Type Cable TV Jack and Style Line® Plate Included)

Color	No. of Ports	Connection Type	Catalog Number
lvory	2	USOC, F-Type	NS783I
White	2	USOC, F-Type	NS783W

### Style Line® Frames, 2 Port and 3 Port Unloaded

Color	No. of Ports	Connection Type	Catalog Number
Black	2	_	NS612BK
Gray	2	_	NS612GY
lvory	2	_	NS612I
White	2	_	NS612W
Black	3	_	NS613BK
Gray	3	_	NS613GY
lvory	3	_	NS613I
White	3	_	NS613W

### **Category 6 Modular Keystone Jacks**

Color	Wiring	No. Positions	Catalog Number
Black	T568A/T568B	8-Positions	NSJ6BK
Gray	T568A/T568B	8-Positions	NSJ6GY
Ivory	T568A/T568B	8-Positions	NSJ6I
White	T568A/T568B	8-Positions	NSJ6W

### **Category 5e Modular Keystone Jacks**

Color	Wiring	No. Positions	Catalog Number
Black	T568A/T568B	8-Positions	NSJ5EBK
Gray	T568A/T568B	8-Positions	NSJ5EGY
lvory	T568A/T568B	8-Positions	NSJ5EI
White	T568A/T568B	8-Positions	NSJ5EW

### **USOC Modular Keystone Jacks**

Color	Wiring	No. Positions	Catalog Number
Black	USOC	6-Positions	NSJUBK
Gray	USOC	6-Positions	NSJUGY
lvory	USOC	6-Positions	NSJUI
White	USOC	6-Positions	NSJUW

### F-Type Connector Keystone

Color	Catalog Number
Black	SFFGBK
Gray	SFFGGY
lvory	SFFGEI
White	SFFGW



NS783I





NS613I





**NSJUW** 



**SFFGEI** 

Enclosures only.

### **Boatyard Accessory Items**

### Non-Metallic While-In-Use Weatherproof Covers

- High-impact polycarbonate construction provides maximum durability
- Patented keyhole mounting system allows installation in under a minute
- Includes attached gasket and mounting hardware
- Pre-configured for GFCI with patented knockout technology for alternate devices
- · Lockable tab
- NEMA 3R rated
- EXTRA DUTY® 5800 Series covers meet or exceed the extra duty rating per UL 514D and are NEMA 3R rated
- 2017 NEC® Compliant (Article 406.9A & B)
- cULus Listed







RW58300

### 1-Gang Weatherproof Covers for Vertical or Horizontal Mounting

Description	Standard	EXTRA DUTY®
Non-metallic, black (standard) or gray (extra duty) with clear tinted cover, while-in-use, 16-in-1 configurations below.	RW57300	RW58300
Jumbo, non-metallic, black (standard) or gray (extra duty) with	RW57350	RW58350



















Duplex











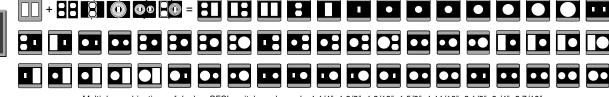
RW57750

### 2-Gang Weatherproof Covers for Vertical or Horizontal Mounting

Description	Standard	EXTRA DUTY®
Non-metallic, black (standard) or gray (extra duty) with clear	RW57750	RW58750
tipted cover while in use 55 in 1 configurations helew		

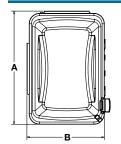
Note: Required by the NEC® for while-in-use outdoor power distribution. Thermoplastic covers provide protection for use in wet locations with the cover closed, NEMA® 3R rated. Meets 2017 NEC 406.9 - receptacles in damp or wet locations. Holes for padlocks are .40 inch.

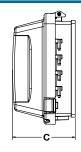




Multiple combinations of duplex, GFCI, switch, and rounds: 1 1/4", 1 3/8", 1 9/16", 1 5/8", 1 11/16", 2 1/8", 2 1/4", 2 7/16"

### Product Dimensions Inches (mm)





	1-Gang Jumbo,		1-Gang	2-Gang		
	Standard	EXTRA DUTY®	Standard	EXTRA DUTY®	Standard	EXTRA DUTY®
Α	5.54" (140.7)	5.90" (149.9)	5.54" (140.7)	5.92" (150.4)	5.54" (140.7)	5.54" (140.7)
В	3.79" (96.3)	4.18" (106.2)	3.79" (96.3)	4.20" (106.7)	5.43" (137.9)	5.43" (137.9)
С	3.07" (78.0)	3.00" (76.2)	5.08" (129.0)	5.10" (129.5)	3.07" (78.0)	3.07" (78.0)

Dimensions in Inches (mm)

NEC® is a registered trademark of the The National Electrical Code. NEMA® is a registered trademark of The National Electrical Manufacturers Association.



### **Boatyard Accessory Items**

### **Marine Grade Weatherproof Plates**

Description	Color	Catalog Number
Thermoplastic vertical spring-loaded lift cover plate for weatherproofing ground fault receptacles and decorator-type devices. Marine drip-proof rated with stainless steel hardware. IP44 SUITABILITY.	Gray Yellow	HBL5226 HBL52CM26
Same as above except for horizontal mounting.	Gray Yellow	HBL5226H HBL52CM26H
Valox® spring-loaded lift cover for weatherproofing duplex receptacles. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. IP20 suitability.	Gray Yellow White	HBL5221 HBL52CM21 HBL52CM21W
Same as HBL52CM21 except for mounting to standard boxes.	Gray Yellow	HBL5222 HBL52CM22
Valox spring-loaded lift cover for weatherproofing single straight blade receptacles. Stainless steel screws and neoprene gasket included. For mounting to FS/FD type weatherproof boxes. IP44 suitability.	Gray Yellow	HBL7423WO HBL74CM23WO
Valox spring-loaded lift cover for weatherproofing old style 26CM10 receptacle. Meets the most stringent requirements of UL's three listing categories for weatherproof plates. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes.	Gray Yellow	HBL7424WO HBL74CM24WO
Valox spring-loaded lift cover for weatherproofing HBL26CM10 receptacle. Meets the most stringent requirements of UL's three listing categories for weatherproof plates. Stainless steel screws and neoprene gasket included for mounting to FS/FD type weatherproof boxes. <b>IP44 SUITABILITY.</b>	Gray Yellow White	HBL7425WOA HBL74CM25WOA HBL74CM25WOAW
Valox lift cover for weatherproofing 50A receptacles. Meets requirements of the most stringent of UL's three listing categories for weatherproof plates. Stainless steel screws and a neoprene gasket included. For mounting to FS/FD type weatherproof boxes. <b>IP44 SUITABILITY.</b>	Gray Yellow	HBL7774WO HBL77CM74WO



HBL52CM26



HBL52CM21W



HBL52CM26H

### **Commercial Grade Weatherproof Plates**

Available in a host of configurations—Twist-Lock® and straight blade receptacles in single or duplex as well as switches—these plates are perfect for marine use. The PVC resists deterioration over time and has high tensile and impact strength. Each plate comes with a tightly sealing, rubberized gasket and a super strong lift cover spring.

Description	Catalog Number
Gray thermoplastic weatherproof lift cover for toggle switches (such as CS115). For vertical mounting in standard or FS/FD type boxes.	HBL5201
Gray PVC weatherproof lift cover for duplex receptacles (such as HBL52CM62). For vertical mounting in standard or FS/FD type boxes.	CWP8CR
Gray PVC weatherproof lift cover for ground fault receptacles (such as GF5252MGYA) and Style Line® receptacles. For vertical mounting in standard or FS/FD type boxes.	CWP26CR
Same as CWP26CR except white in color.	CWP26CRW



HBL52CM21



HBL74CM23WO







HBL77CM74WO

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.

## **Marine Products**

### **Boatyard Accessory Items**

### Marine Grade Dockside Boxes and Covers

30 cu. in. FD box made of high impact thermoplastic material. Accepts duplex and single receptacles up to 50A Twist-Lock®.





HBL60CM83A



### **Housing Design**

- 3/4" NPT and 1" NPT threaded hub options
- 30 cu. in. FD box made of high impact thermoplastic material
- External mounting feet, accepts #10 screw
- Stainless steel mounting/grounding bracket



### Housing Design

- 55° angle adapter (15 cu. in.)
- External mounting feet, accepts #8 screw
- Stainless steel mounting/grounding bracket



HBL60CM83A





HBLP14FS





**HBL6082** 

### FD Boxes, Angled Adapters, Kits and Covers

Gray	White	Yellow
HBL6083	HBL60CM83WA	HBL60CM83A
HBL6084	HBL60CM84WA	HBL60CM84A
HBL6055*	HBL60CM55W*	HBL60CM55*
HBL6083AK	HBL60CM83WAK	HBL60CM83AK
HBL6084AK	HBL60CM84WAK	HBL60CM84AK
HBLP14FS	HBL60CM88W	HBL60CM88
	HBL6083 HBL6084 HBL6055* HBL6083AK HBL6084AK	HBL6083 HBL60CM83WA HBL6084 HBL60CM84WA  HBL6055* HBL60CM55W*  HBL6083AK HBL60CM83WAK HBL6084AK HBL60CM84WAK

### Marine Grade Dockside Boxes and Covers

Description	Catalog Number
Black phenolic type FS (shallow) weatherproof box has two $\%$ in. (19.1) I.P.S. molded-in knockouts. 4.56 in. H x 2.94 in. W x 2.19 in. D (115.9H x 74.6W x 55.6D) and has 16 cubic inch capacity.	HBL6080OS
Black non-metallic FS box with ¾ in. threaded hubs used for mounting phone and TV outlets and PH6595 recreational vehicle inlet. Cord connector included for strain relief and to maintain watertight integrity of box when cable is used. PVC adapter also included for connection of PVC conduit to box.	PH6619
Black phenolic junction box with four ¾ in. (19.1) I.P.S. molded-in knock-outs. Has 4.13 in. (104.8) diameter and is 1.88 in. (47.6) deep.	HBL6081
Phenolic blank cover, ¼ in. (6.4) thick, for HBL6081 box.	HBL6082
Black phenolic blank cover plate for HBL6080OS.	HBL6087
Yellow Valox® blank cover plate for use with FS and FD type boxes.	HBL60CM88

Valox® is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.



### **Boatyard Accessory Items**

### Non-Metallic Vapor-tight Incandescent Fixtures

These non-metallic, vapor-tight incandescent fixtures offer long life and trouble-free lighting in wet locations in marinas and on boats. Some features of these new units are:

- UV resistant, gray, glass filled thermoplastic polyester box, mounting adapters and globe guards resists abuse and harmful effects of the elements
- Excellent temperature operating range of -40°F (-40°C) to +302°F (150°) for use in areas with wide temperature variations or extreme ambient temperatures
- High temperature silicone gasketing maintains integrity and molded threads for ease of installation/removal
- Heat resistant glass globe withstands thermal shock in wet locations and has thread type mounting to assure weathertight sealing
- High strength protective globe guard helps prevent accidental globe and lamp breakage
- Accommodates Type A incandescent lamps up to 150 watts
- UL 1598 Standard for luminaries
- UL 1598A Marine type luminaries





**NVA15GHGA** 

### **Lighting and Lighting Fixtures**

Description	Catalog Number
Ceiling mount non-metallic, vapor-tight incandescent luminaries including the fixture, mounting box, guard and heat resistant glass globe. Accepts up to 150 watt Type A incandescent lamp (not included).	NVX15GHGA
Pendant mount non-metallic, vapor-tight incandescent luminaries including fixture, mounting cap, guard and heat resistant glass globe. Accepts up to 150 watt Type A incandescent lamp (not included).	NVA15GHGA
Wall mount bracket only to adapt NVX15GHGA ceiling mount fixture to a wall mount fixture.  Order NVBA and NVX15GHGA to get wall mount fixture.	NVBA
Replacement guard to NVX15GHGA and NVA15GHGA.	NVGA
Heat resistant replacement globe for NVX15GHGA and NVA15GHGA. Made of tempered glass.	VCGP100



## VCGP100



HBL6085



HBL10CM22S

### **Nylon Watertight Strain Relief Cord Connectors**

These Hubbell nylon cord connectors provide strain relief and a watertight seal where cable enters a piece of equipment, panel, or box. A patented GOTCHA® ring, with a split and hinge design, allows for better adjustment to the cord as the connector nut is tightened, providing superior cord gripping compared to other types. A soft neoprene bushing compresses to keep liquids out and allows the nut to be easily tightened.

Description			Catalog Number
A gray male PVC adapter with % in. boxes with % in. NPT hub (HBL608	HBL6085		
Description	NPT Hub Size	Diameter Range	Catalog Number
Straight nylon cord connector	½ in.	.2538 in. (6.4-9.5)	HBL10CM22S
	½ in.	.3850 in. (9.5-12.7)	HBL10CM23S
	³¼ in.	.3850 in. (9.5-12.7)	HBL10CM35S
	¾ in.	.5063 in. (12.7-15.9)	HBL10CM36S
	³¼ in.	.6375 in. (15.9-19.1)	HBL10CM37S
	1.0 in.	.6375 in. (15.9-19.1)	HBL10CM41S

## **Marine Products**

### **Electrical Standards**

### **Codes and Specifications**

ABYC Standard, July 2015, E-11 Excerpts.

- **11.4 DEFINITIONS** For the purposes of this standard, the following definitions apply.
- 11.4.11 Equipment Leakage Circuit Interrupter (ELCI) A residual current device which detects equipment ground fault leakage current and disconnects all current carrying conductors from the supply source at a preset trip threshold.
- 11.4.14 Ground fault circuit interrupter (GFCI) A device intended for the protection of personnel that functions to de-energize a circuit, or portion thereof, within an established period of time when a current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.
- **11.4.34** Watertight Constructed so that water will not enter the enclosure under the test conditions specified in NEMA Standard 250, Type 6P or IEC Standard 60529 Type IP67.
- **11.4.35** Weatherproof Constructed or protected so that exposure to the weather will not interfere with successful operation under the test conditions specified in NEMA Standard 250, Type 3 or IEC Standard 60529 Type IP54.

### 11.11 GROUND FAULT PROTECTION - AC SYSTEMS

- **11.11.1** An Equipment Leakage Circuit Interrupter (ELCI) or Type A Residual Current Device (RCD) shall be installed with or in addition to the main shore power disconnect circuit breaker(s) or at the additional overcurrent protection as required by E-11.10.2.8.3 whichever is closer to the shore power connection.
- **11.11.1.1** Trip level shall be a maximum of 30mA. The trip time shall be a maximum of 100ms.
- 11.11.1.4 The ELCI shall be readily accessible.
- Note: A ground fault circuit interrupter (GFCI) may be used on single phase AC circuits to provide additional protection for personnel and equipment.
- **11.11.5** GFCI receptacle devices shall meet the requirements of Underwriters Laboratories' standard UL 943, Ground Fault Circuit Interrupters and the requirements of UL 498, Electrical Attachment Plugs and Receptacles.
- Note: GFCI receptacle devices may be installed as part of a convenience outlet installation either in single outlet applications or in multiple feed through installations. (See E-11.13.3.5)

### 11.12 SWITCHES

- **11.12.1.1** Switches shall have voltage ratings not less than the system voltage, current ratings not less than the connected load and shall be rated for the type of load, i.e., inductive or resistive.
- **11.12.3.1** Switches used in branch circuits shall simultaneously open all ungrounded conductor(s) of the branch circuit.

### 11.13 PLUGS AND RECEPTACLES

- 11.13.1.1 Receptacles shall be installed in locations not normally subject to rain, spray, or flooding but if receptacles are used in such areas the following shall apply:
- 11.13.1.1.1 Receptacles installed in locations subject to rain, spray, or splash shall be weatherproof when not in use.
- Note: Weatherproofing may be provided by means such as spring-loaded, self-closing, or snap type receptacle covers.
- **11.13.1.1.2** Receptacles installed in areas subject to flooding or momentary submersion shall be of a watertight design as may be provided by a threaded, gasketed cover.

- **11.13.1.3** Receptacles and matching plugs used on AC systems shall not be interchangeable with receptacles and matching plugs used on DC systems.
- **11.13.3.1** Receptacles shall be installed in boxes that meet the requirements of UL 514A, Metallic Outlet Boxes, or 514C, Non-metallic Outlet Boxes, Flush Device Boxes And Covers.
- **11.13.3.2** Receptacles shall be of the grounding type with a terminal provided for the grounding (green) conductor as shown in Figure 11, Figure 12 and Figure 13 of ABYC E-11.
- **11.13.3.3** Power wiring for receptacles shall be connected so that the grounded (white) conductor attaches to the terminal identified by the word "white" or a light color (normally white or silver). The ungrounded conductor(s) shall be attached to the terminal(s) identified by a dark color (normally brass or copper) and, optionally, the letters X, Y and Z or L1, L2 and L3.
- **11.13.3.4** A branch circuit supplying a combination of receptacle loads and permanently connected loads shall not supply permanently connected loads in excess of the following:
- 11.13.3.4.1 600 watts for a 15 ampere circuit.
- 11.13.3.4.2 1000 watts for a 20 ampere circuit.
- **11.13.3.5** If installed in a head, galley, machinery space, or on a weather deck, the receptacle shall be protected by a Type A (nominal 5 milliamperes) Ground Fault Circuit Interrupter (GFCI). (See E-11.11.)

Note: GFCI receptacle devices are not necessarily ignition protected per E-11.5.1.4.

### **11.6.2.2 SHORE POWER**

- **11.6.2.2.2.1** Power Inlet The receptacle, or receptacles, installed to receive a connecting cable to carry AC shore power aboard shall be a male type connector.
- **11.6.2.2.2.2** Power inlets installed in locations subject to rain, spray, or splash shall be weatherproof whether or not in use.
- **11.6.2.2.2.2.1** Power inlets installed in areas subject to flooding or momentary submersion shall be watertight whether or not in use.
- 11.6.2.2.2.3 Metallic power inlets installed on metallic or carbon fiber reinforced boats using an isolation transformer or a galvanic isolator shall be insulated from metallic structure and components. On non-metallic boats using an isolation transformer or a galvanic isolator the power inlet shall be insulated from metallic components connected to the boat's ground.
- **11.6.2.2.1.1** Shore Power Cable On each boat equipped with an AC shore power system, a shore power cable that contains the conductors for the power circuit and a grounding (green) conductor shall be provided.
- **11.6.2.2.1.2** Except where the shore power cable is permanently connected to the boat, the boat end of this cable shall be terminated with a locking and grounding female type connector to match the boat power inlet. (See Figure 12 and Figure 13 of ABYC E-11).
- 11.6.2.2.1.3 The shore power cable shall be flexible cord with the minimum properties of Type SOW, STW, STOW, SEOW, or STOOW and shall be suitable for outdoor use. The shore connection end of this cable shall be fitted with a locking and grounding type plug with the required number of poles and shall comply with Article 555 of the National Electrical Code. (See Figure 13 and Table VII-A of ABYC E-11).

EXCEPTION: Pin and sleeve devices in accordance with Figure 14 of ABYC E-11.

# **SECTION BB**









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Circuit Testers	
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Product	Page
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### **Features and Benefits**

### Twist-Lock® Circuit Testers

The Hubbell Twist-Lock® Tester is an exclusive patented design that easily tests the circuit condition without the need for traditional measurement techniques. Whether it is a contractor, electrician, or entertainment stage crew, knowing that power is present at any receptacle or connector is critical. By plugging the tester into an outlet, an LED output will immediately provide the state of the circuit.

An easy to read card is provided with the tester, to help determine if the connections are made properly and in the correct position. This unique NEMA configuration ensures that the proper connection was made through an easy to read output display. It also easily attaches to a tool belt so it is available when needed.

- Quickly diagnose mis-wiring situation or application
- Great for dark, difficult to reach spaces
- No measurement readings to interpret
- UL 1436 listed





### **Housing Design**

- Insulgrip® nylon housing for secure gripping
- Brass blades
- Steel (nickel plated) assembly screws
- Styles available: L21-20P, L21-30P, L5-20P, L5-30P, L5-30P Marine, L6-20P, L6-30P, L7-20P, L14-20P, L14-30P, L24-20P



### Attachment Clip

• Carabiner style clip to secure to work belt



### **Proper Connection**

Easy to read LED output and condition tables

CONDITIONS	X	Y	Z	G		1	in Park	1	CC	NDITIONS	X	Y	Z		G
Correct	X	Y	Z	G					X	& N Rev.	X	Y	Z		Δ
Open Neutral			5.4	G	1			1	Y	& N Rev.	×	W	Z	G	
Open Ground	X	Y	Z		6		2021	1	Z	& N Rev.	X	Y	Z	G	· 🛕
Open X		Y	Z	-	Ness III	The state of the s	The same		X	& G Rev.	-	Y	Z	G	3/4
Open Y	X		2	G		- 2.2		1	Y	& G Rev.	X	in a	Z	G	A
Open Z	X	Y		G			-	1	Z	& G Rev.	X	γ		G	A

### **Circuit Testers**

### Twist-Lock® Circuit Testers



		20	O Amp	30	) Amp
Description	Rating	Configuration	Catalog Number	Configuration	Catalog Number
3-Phase Circuit Tester	3Ø 120/208V AC Min. Voltage: 90V AC	NEMA L21-20P	HBL3PT2511	NEMA L21-30P	HBL3PT2811
Circuit Tester	125V	NEMA L5-20P	HBLT2311	NEMA L5-30P	HBLT2611 HBLT26CM11 (Marine)
	250V	NEMA L6-20P	HBLT2321	NEMA L6-30P	HBLT2621
	277V	NEMA L7-20P	HBLT2331		
	125/250V	NEMA L14-20P	HBLT2411	NEMA L14-30P	HBLT2711
	347V	NEMA L24-20P	HBLT3721		



**HBL3PT2511** 



HBLT26CM11

Note: Testers in other NEMA configurations can be developed upon request.

### SNAPConnect® Receptacle Wiring Tester with GFCI Test Button

Description	Catalog Number
Circuit Tester for SNAPConnect receptacle terminals, GFCI and standard receptacles.	SNAPCTG

### **Receptacle Circuit Tester**





### **How It Operates**

The Hubbell HBL5200 Receptacle Circuit Tester has a simple arrangement of neon lights which visually indicate and identify various fault conditions in electrical circuits (see chart below). By plugging the HBL5200 Tester into a single phase, 125V, 2 pole, 3 wire outlet the combination of lighted and/or unlighted lamps will immediately indicate circuit condition.

- Large, easy to read symbols.
- Recessed indicating lamps with one piece Polycarbonate lens.
- · Tough impact resistant nylon housing.
- User information and instructions printed on durable Polyester labels permanently attached to the tester.
- · Rotatable labels can be easily read regardless of tester position.



Correct

Wiring



Reversed

Polarity



Open









Hot on Neutral Term. and Hot Term. Unwired

Neutral Ground Hot







Open



Open

Hot Wire



Ground

Reversed



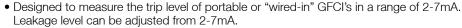


When testing other receptacle types, use HBL5200 only with polarized adapters.

CAUTION: This device introduces low level current into the grounding path. Use with caution in critical care areas.

### **GFCI Tester**

Description	Rating	Catalog Number
Ground fault tester.	120V AC	GFT2G



• Ideal for measuring leakage level of GFCI breakers, GFCI portables and GFCI receptacles.







### **Features and Benefits**

### **Adapters and Fluorescent Starters**

- Available in 6 diferent configurations
- One female slot end and one male blade end
- UL listed, except for adapter HBL31CM29





### **Nylon Convenience Adapters**

NEMA Configur	ration					
Catalog Number	HBL2270	HBL2271	HBL2128	HBL2274	HBL2129	HBL31CM29*
Male	■ G	15A 125V	15A 125V	15A 125V	20A 125V	30A 125V
Blade End	W	NEMA 5-15P	NEMA 5-15P	NEMA L5-15P	NEMA L5-20P	NEMA L5-30P
Female	20A 125V	15A 125V	20A 125V	20A 125V	20A 125V	ZOA 125V
Slot End	NEMA 5-20R	NEMA L5-15R	NEMA L5-20R	NEMA 5-20R	NEMA 5-20R	NEMA 5-20R

Note: \*Not UL Listed.



**CAUTION:** Where adapters have different ratings on the blade and slot end the following precautions must be exercised in their use. (1) Remember that overcurrent protection is determined by the blade end. (2) The use of the adapter should be limited to the lowest rated end of the adapter in order to prevent overheating.

(3) Adapters do not provide GFCI, overcurrent or short circuit protection.



HBL5273L



HBL5289



9054A



### **Plug In Adapters**

Description	Catalog Number
Male end - 2 wire parallel polarized blades, 15A, 125V.	HBL5273L
Female end - 3 wire 15A, 125V straight slot grounding.	
Male end - 3 wire crow foot 15A, 125V blades.	HBL5289 ♦*
Female end - 3 wire 15A, 125V straight slot grounding.	
Male end - 3 wire 10A, 250V, 15A, 125V Twist-Lock® blades.	9053A **
Female end - 3 wire 15A, 125V straight slot grounding.	
Male end - 3 wire 15A, 125V straight blade grounding.	9054A <sup>♦</sup> *
Female end - 10A, 250V, 15A 125V Twist-Lock® slots.	

Note: •Must always be used with a grounded receptacle. \*Not UL Listed.

### Fluorescent Starters





Neostart
The Hubbell Neostart is a glow discharge type of starter
which combines fast starting speed with rugged, dependable
operation. The Neostart lights the lamp very rapidly and
insures proper lamp operation throughout rated life.
Because of its rugged construction, it can be depended
upon to withstand continued punishment resulting from
lamp failure. In addition, it operates satisfactorily over a wide
temperature range. In dual lamp circuits, the Neostart lights
both lamps quickly and uniformly.

Lamps	Catalog Number
14, 15 and 20 watt lamps	FS2
13, 30 and 40 watt lamps	FS4
4, 6 and 8 watt lamps	FS5
22 watt circle line, 25 watt standard lamps	FS25

### **Lockout Devices**

### PLUGOUT®, Keyed PLUGOUT® and SWITCHOUT® Lockout Devices

Description	Typical Devices Accommodated	Catalog Number	
Small yellow lockout device.	15 and 20A straight blade plugs. 15A Twist-Lock <sup>®</sup> plugs.	HLDMP	
Medium yellow lockout device.	15 and 20A, 125V straight blade plugs. 20 and 30A Twist-Lock® plugs.	HLD	
Large yellow lockout device.	20, 30 and 60A metallic and non-metallic Pin and Sleeve, Hubbellock® and 50A Twist-Lock® plugs.	HLD2	
Yellow SWITCHOUT device.	Toggle switch.	HSLDPK2*	
Yellow lockout kit.	One each of above lockout devices.	HLDKIT	
Yellow keyed PLUGOUT, keyed differently.	15 and 20A, 125V straight blade plugs with holes in blades.	HKLD	

Note: \*Two devices per package.

## 3.14" (79.8) 4.22" (107.2)

HLDMP



HLD



HSLDPK2

### **Cord Grip**

Description	Catalog Number
Cord grip for ½ inch knockouts.	HBL112*

Note: \*Not UL Listed.



### Lampholders

Lampholders provide lighting in unfinished areas, such as attics and basements.

### **Porcelain White Lampholders**









Catalog Number	RL8804	RL8806	RL8812	RL8816	RL8822
Description	Keyless, 4 Terminal Screws	Keyless, 6 inch Pigtails	Pull Chain, 2 Terminal Screws	Pull Chain, 6 inch Pigtails	Pull Chain with Receptacle, 2 Terminal Screws
					660W 125V 15A 125V
Rating	660W 250V	660W 250V	660W 250V	660W 250V	NEMA 5-15R

### **Plastic White Lampholders**







Catalog Number	RL8504	RL8506	RL8512	RL8516	
Description	Keyless, 4 Terminal Screws	Keyless, 6 inch Pigtails	Pull Chain, 2 Terminal Screws	Pull Chain, 6 inch Pigtails	
Rating	660W 600V	660W 600V	660W 250V	660W 250V	

### Incandescent Brass Lampholders, Medium Base













Catalog Number	RL101*	RL102*	RL105*	RL100**	RL106*
Description	Turn Knob, On/Off	Turn Knob, Three Way	Push Through, On/Off	Keyless	Pull Chain, On/Off
Rating	250W 250V	250W 250V	660W 250V	660W 250V	660W 250V

Note: \*UL or cUL. \*\*UL or CSA.

### **Fluorescent Lampholders**

### **Compact Flourescent Lampholders**

















Catalog Number	RL479HSM	RL413HSI	RL413HSM	RL426G24	RL42G11HSM	RL42G11H9
Description	G23 base	GX23 base	GX23 base	G24Q-3, GX24Q-4	2G11 base, 4 pin	2G11 base, 4 pin
Lamp Type	5W, 7W, 9W	13W	13W	26-32W	18-55W	18-55W
Rating	75W, 600V	75W, 600V	75W, 600V	75W, 600V	75W, 600V	75W, 600V
Mounting	Horizontal, screw-down	Horizontal, snap-in	Horizontal, screw-down	Horizontal, screw-down	Horizontal, screw-down	Vertical 90°, snap-in

### RL42G11C



Clip for 2G11 Base Lampholders, Adjustable, Snap-in

### **High Output Fluorescent Lampholders**

















Catalog Number	RL305*	RL306*	RL307	RL308	RL356	RL357
Description	Plunger	Fixed	Plunger	Fixed	Plunger	Fixed
Lamp Type	Horizontal - Recessed double contact	Horizontal - Recessed double contact	Horizontal - Recessed double contact	Horizontal - Recessed double contact	Vertical - Power groove & jacketed lamps	Vertical - Power groove & jacketed lamps
Rating	660W, 600V	660W, 600V	660W, 600V	660W, 600V	660W, 600V	660W, 600V
Mounting	Pedestal, slide-on	Pedestal, slide-on	Slide-on, snap-in	Slide-on, snap-in	Slide-on, snap-in	Slide-on, snap-in

Note: \*UL or cUL.

### Medium Bi-Pin Fluorescent Lampholders - T8 and T12









Catalog Number	RL320	RL325	RL325B
Description	Disconnect 4 wire	Disconnect 4 wire	Shunted 2 wire
Lamp Type	Bi-pin/tall profile	Bi-pin/low profile	Bi-pin/low profile
Rating	660W, 600V	660W, 600V	660W, 600V
Mounting	Slide-on and snap-in with captive nut	Slide-on and snap-in with captive nut	Slide-on and snap-in

### **Slimline Type** Fluorescent Lampholder





RL310*	RL311*
Plunger	Fixed
Single pin	Single pin
660W, 600V	660W, 600V
Slide-on and snap-in	Slide-on and snap-in

Note: \*UL or cUL.

### **Incandescent Lampholders**

### **HID Incandescent Lampholders, Porcelain Keyless**









Catalog Number	RL4221*	RL5221	RL3742
Description	Mogul base	Mogul base	Medium base prefocus
Lamp Type	E39 socket	EX39 socket	Bayonet socket
Rating	1500W, 600V Max, 4KV or 5KV PULSE	1500W, 600V Max, 5KV PULSE	1200W, 250V
Mounting	Screw mount, 12 inch leads	Screw mount, 12 inch leads	Screw mount

Note: \*UL Listed, CSA Certified.

### **Straight Body Keyless Porcelain**











				Control of the Contro		
Catalog Number	RL162	RL156	RL157	RL160	RL158	RL159
Description	Medium base	Medium base	Medium base	Medium base	Medium base, low profile	Medium base, shallow base
Lamp Type	E26 socket	E26 socket	E26 socket	E26 socket	E26 socket	E26 socket
Rating	660W, 250V	660W, 250V	660W, 250V	660W, 250V	660W, 250V	660W, 250V
Mounting	Screw mount, screw terminals	Screw mount, 12 inch leads	NPSF1/8 hickey with terminals	NPSF1/8 hickey with 12 inch leads	Front mount, panel mount snap-in	Front mount, panel mount snap-in

### Surface and Sign Mount, Medium Base













Catalog Number	RL152	RL153	RL161	RL163	RL164
Description	Medium base, Porcelain, Pony Cleat	Medium Base, Plastic, Black, Pony Cleat	Medium base, Porcelain	Medium base, Porcelain	Medium base, Porcelain
Lamp Type	E26 socket	E26 socket	E26 socket	E26 socket	E26 socket
Rating	660W, 250V	660W, 250V	660W, 250V	660W, 250V	660W, 250V
Mounting	1 piece, surface mount	1 piece, surface mount	2 piece, surface mount	2 piece, sign mount with leads	2 piece, sign mount with terminals

### **Lampholder Accessories**

### Incandescent Lampholders, Medium Base







San San	

Catalog Number	RL124*	RL124H	RL202
Description	Pigtail Medium Base Socket with 6 inch Leads, Rubber with #18 Gauge Wire		Medium Lampholder to Lampholder Adapter, Pull Chain with Two 2-Prong Outlets without Ground
Rating	660W 250V	660W 250V	660W 125V 15A 125V

Note: \*cCSAus Certified only.

### **Incandescent Adapters, Medium Base**











Catalog Number	RL150	RL154	RL200	RL201
Description	Medium to medium	Mogul to medium	Outlet Adapter,	Medium Lampholder Adapter,
	base extension,	base adapter,	2 Prong Plug to	Medium Lampholder to Outlet
	Screw-in, E26 to	Screw-in E39 to	Medium Lampholder	without Ground
	E26 socket	E26 socket	·	
Rating	250W, 250V	660W, 250V	15A 660W 125V	15A 125V
			15A 125V	NEMA 1-15R
			NEMA 1-15R	

### **Lamp Switches**











Catalog Number	RL120	RL121	RL122	RL125
Description	Pull chain switch, 2 circuit, L1/L2/L1+L2/off	Pull chain switch, SPST on/off	Pull chain switch, L1/L2/L3/off	Rotary switch, SPST on/off
Rating	6A 125V AC, 3A 250V AC, 3A 125V "L"	6A 125V AC, 3A 250V AC, 3A 125V "L"	6A 125V AC, 3A 250V AC	6A 125V AC, 3A 250V AC, 3A 125V "L"

Note: 6 inch wire leads are #18 AWG AWM/TEW 105°C 600V.

### **Snap-in Receptacles**







Catalog Number	RR374	RR374W
Description	Single receptacle, Black	Single receptacle, White
Rating	15A 125V, 3 wire NEMA 5-15R	15A 125V, 3 wire NEMA 5-15R

- Accommodate panel thickness of .031 to .062 inch (0.7 to 1.5 mm).
- Panel cutout .95 x .95 inch (24.1 x 24.1 mm).
- #14 AWG 6 inch AWM/TEW FT1 105°C 600V on black and white leads.
- #14 AWG 6 inch AWM/TEW FT1 600V on green lead.

### **Taps, Adapters, Plugs and Connectors**

### **Taps and Adapters**













RT600I	RT300I			
_	H 13001	— RT303	RT200* —	<u>-</u> -
RT600W	RT300W	_	_	RT100W
Duplex Receptacle to Six Outlets with Ground	Single Receptacle to Three Outlets with Ground	Single Receptacle to Three Outlets, Heavy Duty Rubber, with Ground	Two Wire to U-Ground	Cube Tap without Ground
15A 125V AC NEMA 5-15	15A 125V AC NEMA 5-15	15A 125V AC NEMA 5-15	15A 125V AC NEMA 5-15	15A 125V AC NEMA 1-15
	RT600W  Duplex Receptacle to Six Outlets with Ground	RT600W  Duplex Receptacle to Six Outlets with Ground  RT300W  Single Receptacle to Three Outlets with Ground  15A 125V AC  15A 125V AC	RT600WRT300W—Duplex Receptacle to Six OutletsSingle Receptacle to Three Outlets with GroundSingle Receptacle to Three Outlets, Heavy Duty Rubber, with Ground15A 125V AC15A 125V AC15A 125V AC	RT600WRT300W——Duplex Receptacle to Six Outlets with GroundSingle Receptacle to Three Outlets with GroundSingle Receptacle to Three Outlets, Heavy Duty Rubber, with GroundTwo Wire to U-Ground15A 125V AC15A 125V AC15A 125V AC15A 125V AC

Note: \*UL Listed only.

### **Plugs and Connectors**















Color					-
Black	RP101BK	RP102BK	RP646	RP648	RP649
White	RP101W	RP102W	—	—	—
Description	Straight Plug,	Straight Connector,	Straight Plug,	Straight Plug,	Straight Connector,
	Polarized,	Polarized,	Non-Polarized,	Polarized,	Polarized,
	Two Blade	Two Blade,	Two Blade,	Two Blade,	Two Blade,
	Light Duty	Light Duty	Heavy Duty	Heavy Duty	Heavy Duty
Wire Range	#16,18 AWG,	#16,18 AWG,	#14-18 AWG,	#14-18 AWG,	#14-18 AWG,
Cord	Up to .250 inch Dia.	Up to .250 inch Dia.	Up to .330 inch Dia.	Up to .330 inch Dia.	Up to .330 inch Dia.
Rating	15A 125V	15A 125V	15A 125V	15A 125V	15A 125V
	NEMA 1-15P				

Color	1				
lvory White	RP123I RP123W				
Description	Straight Plug, Non-Polarized, Two Blade				
Cord	SPT 1 and 2 Cord 18/2 & 16/2 AWG				
Rating	15A 125V NEMA 1-15P				

Catalog Number	Page	Catalog Number	Page	Catalog Number	Page	Catalog Number	Page
00322001LPK50	X-75	02201020	X-20	02202061	.X-23	02207011	.X-24
00322002LPK50		02201021	X-20	02203001		02207012	
00322003LPK50	X-75	02201022	X-20	02203002	.X-21	02207013	.X-24
00322004LPK50	X-75	02201023	X-20	02203003	.X-21	02208009	.X-25
00322005LPK50	X-75	02201024	X-20	02203005	.X-21	02209009	.X-25
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CR6526 G  A.23,N-15   CS8175   S875   S8260BRU   D-14   CS8156Y   D-15   CR6526 GW   A.23,N-15   CS826C   B-56   CS8200BRU   D-14   CS815L1   D-13   CR6526 GW   A.23,N-15   CS826C   B-56   CS8200GW   D-11   CS815L1   D-13   CR6526 GW   A.23,N-15   CS826C   B-56   CS8200GW   D-11   CS815L1   D-13   CR615L1   A.24   CS8275   B-56   CS820GW   D-11   CS815W   D-13   CR615L1   A.24   CS826C   B-57   CS820BU   D-11   CS815W   D-13   CR615GW   A.24   CS826C   B-57   CS820BU   D-11   CS8120L2   D-13   CR615GW   A.24   CS836C   B-57   CS820BU   D-14   CS8120L4   D-13   CR615GW   A.24   CS836C   B-57   CS820BU   D-14   CS8120L4   D-13   CR615GW   A.24   CS836C   B-57   CS820BU   D-14   CS8120GW   D-13   CR615GW   A.24   CS836C   B-56   CS820BU   D-14   CS8120GW   D-13   CR615GW   A.24   CS836C   B-56   CS820BU   D-14   CS8120GW   D-13   CR615GW   A.24   CS846C   B-56   CS820BU   D-14   CS8120GW   D-13   CR615GW   A.24   CS846C   B-56   CS820BU   D-11   CS8120GW   D-13   CR620W   A.24   CS846G   B-56   CS820BW   D-11   CS8120GW   D-13   CR620W   A.24   CS846G   B-56   CS820W   D-11   CS8120W   D-13   CR620W   D-13   CR620W   A.24   CS8115 A. D-11   CS820W   D-11   CS8120GW   D-13   CR620W   D-13   CR620W   D-13   CR620W   D-13   CR620W   D-13   CR620W   D-13   CR620W   D-13   CS8120GW   D-13   CS								
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CS115AL         AA-41,D-11         CSB120ALV         D-14         CSB420AL         D-11         CSL420AL         D-13           CS115BK         AA-41,D-11         CSB120BK         D-11         CSB420BK         D-11         CSL420BK         D-13           CS115IG         AA-41,D-11         CSB120BKU         D-14         CSB420GY         D-11         CSL420IA         D-13           CS115IA         AA-41,D-11         CSB120BRIV         D-14         CSB420IA         D-11         CSL420IA         D-13           CS115IA         AA-41,D-11         CSB120GYIV         D-14         CSB420IA         D-11         CSL420IA         D-13           CS120A         D-11         CSB120GYIV         D-14         CSB420R         D-11         CSL420W         D-13           CS120BI         D-11         CSB120II         D-11         CSB420R         D-11         CSL420W         D-13           CS120BI         D-11         CSB120II         D-14         CSB420R         D-11         CSL420W         D-13           CS120BI         D-11         CSB120II         D-14         CSL115B         D-13         CSL420W         D-13           CS120BI         D-11         CSB120II         D-14         CSL115B </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
CS115BK AA-41,D-11 CSB120BK D-11 CSB420BK D-13 CSL420BK D-13 CS115GY AA-41,D-11 CSB120BKUV D-14 CSB420GY D-11 CSL420GY D-13 CS115I AA-41,D-11 CSB120BRUV D-14 CSB420GY D-11 CSL420LA D-13 CS115I AA-41,D-11 CSB120BRUV D-14 CSB420LA D-11 CSL420LA D-13 CS115W AA-41,D-11 CSB120BRUV D-14 CSB420LA D-11 CSL420LA D-13 CS115W AA-41,D-11 CSB120GY D-11 CSB420LA D-13 CS115W AA-41,D-11 CSB120GY D-11 CSB420R D-11 CSL420W D-13 CS120L D-11 CSB120GY D-11 CSB120GV D-13 CS120L D-11 CSB120L D-11 CSB120W D-13 CS120L D-11 CSB120L D-11 CSB120W D-13 CS120BK D-11 CSB120IF D-11 CSB120F D-11 CSB120W D-13 CSB120W D-13 CSB120GY D-11 CSB120LA D-11 CSB120LA D-11 CSB120GY D-11 CSB120LA D-11 CSB120W D-13 CU300A E-10 CS315AL AA-41,D-11 CSB120W D-11 CSL150W D-13 CU300A E-10 CS315BK AA-41,D-11 CSB120W D-11 CSL120L D-13 CU300M E-10 CS315BK AA-41,D-11 CSB120W D-11 CSL120L D-13 CU300M E-10 CS315BK AA-41,D-11 CSB120W D-11 CSL120L D-13 CU300M E-10 CS315BK D-11 CSB120K D-11 CSL120GY D-13 CW100Tf4 AA-19 CS315BW AA-41,D-11 CSB120W D-11 CSL120GY D-13 CW100Tf4 AA-19 CS315BW AA-41,D-11 CSB120W D-11 CSL120GY D-13 CW100Tf4 AA-19 CS320A D-11 CSB126A D-11 CSL120W D-13 CW100Tf5 AA-49 CS320BK D-11 CSB215BK D-11 CSL120W D-13 CW100Tf4 AA-19 CS320BK D-11 CSB215BK D-11 CSL120W D-13 CW100Tf5 AA-49 CS320BK D-11 CSB215BK D-11 CSL120W D-13 CW100Tf4 AA-19 CS320BK D-11 CSB215BK D-11 CSL120W D-13 CW100Tf4 AA-19 CS320BK D-11 CSB215BK D-11 CSL120								
CS115GY AA-41,D-11 CSB120BKIV D-14 CSB420GY D-11 CSL420GY D-13 CS115II AA-41,D-11 CSB120GY D-14 CSB420I D-11 CSL420I D-13 CS115II AA-41,D-11 CSB120GY D-11 CSB420I D-11 CSL420I D-13 CS115IW AA-41,D-11 CSB120GY D-14 CSB420R D-11 CSL420W D-13 CS115W AA-41,D-11 CSB120GY D-14 CSB420R D-11 CSL420W D-13 CS120AL D-11 CSB120IF D-11 CSB120IF D-11 CSL420 D-13 CS120BK D-11 CSB120IF D-11 CSL120BK D-13 CS120BK D-11 CSB120IV D-14 CSL15IS D-13 CSL420W D-13 CS120BK D-11 CSB120IV D-14 CSL15IS D-13 CSM120P J-33 CS120BK D-11 CSB120IA D-13 CSM00A E-10 CS315AL AA-41,D-11 CSB120W D-14 CSL15IB D-13 CU300IA E-10 CS315BK AA-41,D-11 CSB120WHU D-14 CSL120D D-13 CU300IA E-10 CS315BK AA-41,D-11 CSB120WHU D-14 CSL120D D-13 CU300IA E-10 CS315BK AA-41,D-11 CSB120WHU D-14 CSL120IA D-13 CU300IA E-10 CS315BK AA-41,D-11 CSB215BK D-11 CSL120BK D-13 CW100ITW AA-19 CS320BK D-11 CSB215BK D-11 CSL120BK D-13 CW100ITW AA-19 CS320BK D-11 CSB215BK D-11 CSL120BK D-13 CW100ITW AA-19 CS320BK D-11 CSB215BK D-11 CSL120BK D-13 CW100ITW AA-19 CS320BK D-11 CSB215BK D-11 CSL120BK D-13 CW100ITW AA-19 CS320BK D-11 CSB215BK D-11 CSL120BK D-13 CW100ITW AA-19 CS320BK D-11 CSB220BK D-11 CSB220BK D-11 CSB215BK D-11 CSL120B D-13 CW100ITW AA-19 CS320BK D-11 CSB220BK D-11 CSB220BK D-11 CSB20BK D-1					CSB420BK	D-11	CSL420BK	D-13
CS115I.         AA-41,D-11         CSB120BRIV         D-14         CSB420I.         D-11         CSL420I.         D-13           CS15ISA.         AA-41,D-11         CSB120GYU.         D-14         CSB420R.         D-11         CSL420I.         D-13           CS120.         D-11         CSB120GYU.         D-14         CSB420W.         D-11         CSL420W.         D-13           CS120.         D-11         CSB120IF.         D-11         CSL15IS.         D-13         CSL420W.         D-13           CS120BK.         D-11         CSB120IIV.         D-14         CSL15IS.         D-13         CSL420W.         D-13           CS120GY.         D-11         CSB120IIA.         D-11         CSL115BK.         D-13         CSM12IP.         J-33           CS120GY.         D-11         CSB120IA.         D-11         CSL115BK.         D-13         CSM18         J-33           CS120GY.         D-11         CSB120IA.         D-14         CSL115BK.         D-13         CSM18         J-33           CS120W.         D-11         CSB120IA.         D-14         CSL115BW.         D-13         CSM8         J-33           CS315EM.         AA-41,D-11         CSB120IW.         D-14         CSL115B					CSB420GY	D-11		
CS115IA         AA-41,D-11         CSB120GY.         D-11         CSB420IA         D-11         CSL420IA         D-13           CS115W         AA-41,D-11         CSB120GYLV.         D-14         CSB420R         D-11         CSL420W         D-13           CS120.         D-11         CSB120I.         D-11         CSB420W.         D-11         CSL420R         D-13           CS120BL         D-11         CSB120IF.         D-11         CSL115A.         D-13         CSL420W         D-13           CS120BK         D-11         CSB120ILV.         D-14         CSL115A.         D-13         CSM12LP.         J-33           CS120BK         D-11         CSB120IA.         D-11         CSL115BK         D-13         CSM18.         J-33           CS120IA         D-11         CSB120IAF.         D-11         CSL115BK         D-13         CSM18.         J-33           CS120IA         D-11         CSB120IAV.         D-14         CSL115B         D-13         CSM8.         J-33           CS120W         D-11         CSB120RV.         D-11         CSL115W.         D-13         CSMR.         J-33           CS315AL         AA-41,D-11         CSB120RV.         D-11         CSL115W. <t< td=""><td>CS115I</td><td>₩-41,D-11</td><td></td><td></td><td>CSB420I</td><td>D-11</td><td></td><td></td></t<>	CS115I	₩-41,D-11			CSB420I	D-11		
CS120.         D-11         CSB120IF.         D-11         CSB420W.         D-13         CSL420R.         D-13           CS120AL         D-11         CSB120IF.         D-11         CSL115A.         D-13         CSL420W.         D-13           CS120BK         D-11         CSB120ILV.         D-14         CSL115AL         D-13         CSM20P.         J-33           CS120I.         D-11         CSB120LAF         D-11         CSL115BK         D-13         CSM18         J-33           CS120I.         D-11         CSB120LAF         D-11         CSL115GY         D-13         CSM30         J-33           CS120LA         D-11         CSB120LAL         D-14         CSL115GY         D-13         CSM30         J-33           CS120W         D-11         CSB120RLV         D-14         CSL115DW         D-13         CSM88         J-33           CS315AL         AA-41,D-11         CSB120RLV         D-14         CSL115W         D-13         CU300A         E-10           CS315BK         AA-41,D-11         CSB120WF         D-11         CSL120W         D-13         CU300HD         E-10,E-13,E-15           CS315GY         AA-1,D-11         CSB120WF         D-11         CSL120AL	CS115LAA	\A-41,D-11	CSB120GY	D-11	CSB420LA	D-11	CSL420LA	D-13
CS120AL         D-11         CSB120IF.         D-11         CSL115.         D-13         CSL420W         D-13           CS120BK         D-11         CSB120ILV         D-14         CSL115AL         D-13         CSM12IP.         J-33           CS120GY         D-11         CSB120LA         D-11         CSL115BK         D-13         CSM18         J-33           CS120I         D-11         CSB120LAF         D-11         CSL115GY         D-13         CSM30         J-33           CS120IA         D-11         CSB120LALV         D-14         CSL115I         D-13         CSM80         J-33           CS120IA         D-11         CSB120RLP         D-11         CSL115I         D-13         CSM80         J-33           CS120IA         D-11         CSB120RLP         D-11         CSL115I         D-13         CSM80         J-33           CS120IA         D-11         CSB120RLP         D-11         CSL115I         D-13         CU300A         E-10           CS315EA         AA-41,D-11         CSB120RLP         D-11         CSL115W         D-13         CU300HD         E-10,E-13,E-15           CS315EA         AA-41,D-11         CSB120WHLP         D-14         CSL120AL         D-13<	CS115W	\A-41,D-11			CSB420R	D-11	CSL420OW	D-13
CS120BK         D-11         CSB120ILV         D-14         CSL115AL         D-13         CSM12LP         J-33           CS120GY         D-11         CSB120LA         D-11         CSL115BK         D-13         CSM18         J-33           CS120L         D-11         CSB120LAF         D-11         CSL115GY         D-13         CSM30         J-33           CS120W         D-11         CSB120LAIV         D-14         CSL115I         D-13         CSM8         J-33           CS120W         D-11         CSB120RL         D-11         CSL115IA         D-13         CSM8         J-33           CS315AL         AA-41,D-11         CSB120RL         D-14         CSL115OW         D-13         CU300A         E-10           CS315BL         AA-41,D-11         CSB120WF         D-11         CSL120         D-13         CU300ML         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WF         D-11         CSL120A         D-13         CU300ML         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WF         D-11         CSL120A         D-13         CU300ML         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB215WF         D-11         CS	CS120	D-11	CSB120I	D-11			CSL420R	D-13
CS120GY         D-11         CSB120LA         D-11         CSL115BK         D-13         CSM18         J-33           CS120L         D-11         CSB120LAF         D-11         CSL115GY         D-13         CSM30         J-33           CS120LA         D-11         CSB120LAV         D-14         CSL115I         D-13         CSM8         J-33           CS120LA         D-11         CSB120R         D-11         CSL115I         D-13         CSM6         J-33           CS120LA         D-11         CSB120RLV         D-14         CSL115DW         D-13         CU300A         E-10           CS315BL         AA-41,D-11         CSB120RLV         D-14         CSL115DW         D-13         CU300A         E-10           CS315BK         AA-41,D-11         CSB120WF         D-11         CSL115W         D-13         CU300A         E-10,E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WF         D-11         CSL120AL         D-13         CU300MD         E-10,E-10,E-13,E-15           CS315B         AA-41,D-11         CSB120WHLV         D-14         CSL120AL         D-13         CW100ITA         AA-19           CS315W         AA-41         CSB215B         D-11         CSL12								
CS120I         D-11         CSB120LAF         D-11         CSL115GY         D-13         CSM30         J-33           CS120LA         D-11         CSB120LAU         D-14         CSL115I         D-13         CSM8         J-33           CS120W         D-11         CSB120RLV         D-14         CSL115LA         D-13         CSRFKIT         I-33           CS315B.         AA-41,D-11         CSB120RLV         D-14         CSL115OW         D-13         CU300A         E-10           CS315BL         AA-41,D-11         CSB120W         D-11         CSL115W         D-13         CU300HD         E-10,E-10           CS315BK         AA-41,D-11         CSB120WF         D-11         CSL120A         D-13         CU300HD         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WFLV         D-14         CSL120AL         D-13         CU300MD         E-10,E-10,E-13,E-15           CS315W         AA-41,D-11         CSB120WFLV         D-14         CSL120AL         D-13         CU300MD         E-10,E-10,E-13,E-15           CS315W         AA-10         CSB215W         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315W         AA-10         CSB215W <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
CS120LA         D-11         CSB120LALV         D-14         CSL115I         D-13         CSM8         J-33           CS120W         D-11         CSB120R         D-11         CSL115LA         D-13         CSRFKIT         I-3           CS315         AA-41,D-11         CSB120RV         D-14         CSL1150W         D-13         CU300A         E-10           CS315AL         AA-41,D-11         CSB120W         D-11         CSL115W         D-13         CU300ELC         E-10           CS315BK         AA-41,D-11         CSB120WF         D-11         CSL120AL         D-13         CU300HD         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WHLV         D-14         CSL120AL         D-13         CU300HD         E-10,E-13,E-15           CS315LA         AA-41,D-11         CSB215BK         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315W         AA-41,D-11         CSB215BK         D-11         CSL120GY         D-13         CW100IT4         AA-19           CS320A         D-11         CSB215GY         D-11         CSL120GY         D-13         CW100IT4         AA-19           CS320BK         D-11         CSB215GY         D-11								
CS120W         D-11         CSB120R         D-11         CSL115LA         D-13         CSRFKIT         I-3           CS315         AA-41,D-11         CSB120RLV         D-14         CSL115OW         D-13         CU300A         E-10           CS315BL         AA-41,D-11         CSB120W         D-11         CSL120         D-13         CU300HD         E-10,E-13,E-15           CS315BK         AA-41,D-11         CSB120WHLV         D-14         CSL120AL         D-13         CU300HD         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WHLV         D-14         CSL120AL         D-13         CU300M         E-10           CS315I         AA-41,D-11         CSB215SAL         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315UA         AA-41,D-11         CSB215AL         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315W         AA-41,D-11         CSB215BAL         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS320         D-11         CSB215GY         D-11         CSL120BK         D-13         CW100IT5         AA-19           CS320BK         D-11         CSB215GY         D-11 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
CS315.         AA-41,D-11         CSB120RLV         D-14         CSL115OW         D-13         CU300A         E-10           CS315AL         AA-41,D-11         CSB120W         D-11         CSL115W         D-13         CU300ELC         E-10           CS315BK         AA-41,D-11         CSB120WF         D-11         CSL120AL         D-13         CU300HD         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WHLV         D-4         CSL120AL         D-13         CU300MD         E-10           CS315I         AA-41,D-11         CSB215         D-11         CSL120BK         D-13         CW100IT4         AA-41           CS315W         AA-41,D-11         CSB215AL         D-11         CSL120GY         D-13         CW100IT4         AA-41           CS320         D-11         CSB215BK         D-11         CSL120GY         D-13         CW100IT5         AA-49           CS320AL         D-11         CSB215GY         D-11         CSL120LA         D-13         CW100IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120LA         D-13         CW125IT5         AA-19           CS320BY         D-11         CSB215LA         D-11 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
CS315AL         AA-41,D-11         CSB120W.         D-11         CSL115W.         D-13         CU300ELC         E-10           CS315BK         AA-41,D-11         CSB120WF.         D-11         CSL120.         D-13         CU300HD.         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB15UWHLV         D-14         CSL120AL         D-13         CU300M         E-10           CS315I.         AA-41,D-11         CSB215AL         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315LA         AA-41,D-11         CSB215AL         D-11         CSL120GY         D-13         CW100IT4         AA-19           CS315W         AA-41,D-11         CSB215BK         D-11         CSL120I         D-13         CW100IT4         AA-19           CS320         D-11         CSB215GY         D-11         CSL120I         D-13         CW100IT5         AA-19           CS320AL         D-11         CSB215GY         D-11         CSL120W         D-13         CW125IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120OW         D-13         CW125IT5         AA-19           CS320BX         D-11         CSB215W         D-11								
CS315BK         AA-41,D-11         CSB120WF         D-11         CSL120         D-13         CU300HD         E-10,E-13,E-15           CS315GY         AA-41,D-11         CSB120WHLV         D-14         CSL120AL         D-13         CU300M         E-10           CS315I         AA-41,D-11         CSB215         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315LA         AA-41,D-11         CSB215AL         D-11         CSL120GY         D-13         CW100IT4         AA-19           CS315W         AA-41,D-11         CSB215BK         D-11         CSL120I         D-13         CW100IT5         AA-19           CS320         D-11         CSB215BK         D-11         CSL120I         D-13         CW100IT5         AA-19           CS320AL         D-11         CSB215GY         D-11         CSL120I         D-13         CW125IT4         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120OW         D-13         CW125IT5         AA-19           CS320GY         D-11         CSB215W         D-11         CSL120W         D-13         CW754         AA-39           CS320W         D-11         CSB220L         D-11         CSL215DW </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
CS315GY         AA-41,D-11         CSB120WHLV         D-14         CSL120AL         D-13         CU300M         E-10           CS315I         AA-41,D-11         CSB215         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315A         AA-41,D-11         CSB215AL         D-11         CSL120GY         D-13         CW100IT4W         AA-19           CS315W         AA-41,D-11         CSB215BK         D-11         CSL120I         D-13         CW100IT5         AA-19           CS320         D-11         CSB215GY         D-11         CSL120IA         D-13         CW125IT5         AA-19           CS320AL         D-11         CSB215GY         D-11         CSL120DW         D-13         CW125IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120W         D-13         CW754         AA-19           CS320BY         D-11         CSB215W         D-11         CSL120W         D-13         CW754         AA-19           CS320LA         D-11         CSB220W         D-11         CSL215W         D-13         CW754         AA-19           CS320W         D-11         CSB220W         D-11         CSL215W         D-13								
CS315I         AA-41,D-11         CSB215         D-11         CSL120BK         D-13         CW100IT4         AA-19           CS315LA         AA-41,D-11         CSB215AL         D-11         CSL120GY         D-13         CW100IT4W         AA-19           CS315W         AA-41,D-11         CSB215BK         D-11         CSL120I         D-13         CW100IT5         AA-19           CS320         D-11         CSB215GY         D-11         CSL120LA         D-13         CW125IT4         AA-19           CS320AL         D-11         CSB215IS         D-11         CSL120DW         D-13         CW125IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120R         D-13         CW125IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120R         D-13         CW754         AA-19           CS320I         D-11         CSB215LA         D-11         CSL120W         D-13         CW754         AA-19           CS320LA         D-11         CSB220AL         D-11         CSL215W         D-13         CWP26CRW         AA-39,AA-45           CS320W         D-11         CSB220BK         D-11         CSL215AL         <								
CS315LA         .AA-41, D-11         CSB215AL         D-11         CSL120GY         D-13         CW100IT4W         AA-19           CS315W         .AA-41, D-11         CSB215BK         D-11         CSL120I         D-13         CW100IT5         AA-19           CS320         D-11         CSB215GY         D-11         CSL120LA         D-13         CW125IT4         AA-19           CS320AL         D-11         CSB215I         D-11         CSL120OW         D-13         CW125IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120R         D-13         CW754         AA-19           CS320BK         D-11         CSB215W         D-11         CSL120W         D-13         CW796CR         AA-39           CS320GY         D-11         CSB215W         D-11         CSL215W         D-13         CWP26CRW         AA-39           CS320LA         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP26CRW         AA-39           CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV         Z-4           CS50EXT5         AA-19         CSB220GY         D-11         CSL215GY								
CS315W         AA-41,D-11         CSB215BK         D-11         CSL120I         D-13         CW100IT5         AA-19           CS320         D-11         CSB215GY         D-11         CSL120LA         D-13         CW125IT4         AA-19           CS320AL         D-11         CSB215I         D-11         CSL120OW         D-13         CW125IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120R         D-13         CW754         AA-19           CS320GY         D-11         CSB215W         D-11         CSL120W         D-13         CWP26CR         AA-39,AA-45           CS320I         D-11         CSB220         D-11         CSL215S         D-13         CWP26CRW         AA-39,AA-45           CS320W         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP26CRW         AA-39,AA-45           CS320W         D-11         CSB220BK         D-11         CSL215AL         D-13         CWP26CRW         AA-45           CS50EXT4         AA-19         CSB220BK         D-11         CSL215BK         D-13         DD100NLV         Z-4           CS636C         B-56         CSB220I         D-11         CSL215GY <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>								
CS320.         D-11         CSB215GY         D-11         CSL120LA         D-13         CW125IT4.         AA-19           CS320AL         D-11         CSB215I.         D-11         CSL120OW         D-13         CW125IT5.         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120R         D-13         CW754         AA-19           CS320GY         D-11         CSB215W         D-11         CSL120W         D-13         CWP26CR         AA-39,AA-45           CS320I         D-11         CSB220         D-11         CSL215         D-13         CWP26CR         AA-39,AA-45           CS320LA         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP8CR         AA-45           CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV         Z-4           CS50EXT4         AA-19         CSB220BK         D-11         CSL215GY         D-13         DD100NLIV         Z-4           CS636C         B-56         CSB220LA         D-11         CSL215I         D-13         DD100NLIV         Z-4           CS636C         B-56         CSB220W         D-11         CSL215W         D-13								
CS320AL         D-11         CSB215I         D-11         CSL120OW         D-13         CW125IT5         AA-19           CS320BK         D-11         CSB215LA         D-11         CSL120R         D-13         CW754         AA-19           CS320GY         D-11         CSB215W         D-11         CSL120W         D-13         CWP26CR         AA-39,AA-45           CS320I         D-11         CSB220         D-11         CSL215         D-13         CWP26CRW         AA-39,AA-45           CS320LA         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP8CR         AA-45           CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV         Z-4           CS50EXT4         AA-19         CSB220GY         D-11         CSL215GY         D-13         DD100NLIA         Z-4           CS6360C         B-56         CSB220LA         D-11         CSL215LA         D-13         DD100NLWH         Z-4           CS6361C         B-56         CSB220R         D-11         CSL215W         D-13         DHADC         E-11           CS6365C         B-57         CSB315         D-11         CSL220W         D-13								
CS320BK         D-11         CSB215LA         D-11         CSL120R         D-13         CW754         AA-19           CS320GY         D-11         CSB215W.         D-11         CSL120W         D-13         CWP26CR         AA-39,AA-45           CS320I         D-11         CSB220         D-11         CSL215         D-13         CWP26CRW         AA-39,AA-45           CS320LA         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP8CR         AA-45           CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV         Z-4           CS50EXT4         AA-19         CSB220GY         D-11         CSL215GY         D-13         DD100NLIA         Z-4           CS6360C         B-56         CSB220LA         D-11         CSL215I         D-13         DD100NLWH         Z-4           CS6361C         B-56         CSB220R         D-11         CSL215LA         D-13         DHADC         E-11           CS6364C         B-57         CSB220W         D-11         CSL215W         D-13         DHCM         E-11           CS6369         B-57,H-13         CSB315AL         D-11         CSL220AL         D-13								
CS320GY         D-11         CSB215W.         D-11         CSL120W         D-13         CWP26CR         AA-39,AA-45           CS320I         D-11         CSB220         D-11         CSL215.         D-13         CWP26CRW.         AA-39,AA-45           CS320LA         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP8CR         AA-45           CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV.         Z-4           CS50EXT4         AA-19         CSB220GY         D-11         CSL215GY         D-13         DD100NLIA         Z-4           CS50EXT5         AA-19         CSB220I         D-11         CSL215I         D-13         DD100NLWH         Z-4           CS6360C         B-56         CSB220LA         D-11         CSL215LA         D-13         DHADC         E-11           CS6361C         B-56         CSB220R         D-11         CSL215W         D-13         DHAP         E-11           CS6364C         B-57         CSB220W         D-11         CSL215W         D-13         DHCM         E-11           CS6369         B-57,H-13         CSB315AL         D-11         CSL220AL         D-13								
CS320I         D-11         CSB220         D-11         CSL215         D-13         CWP26CRW         AA-39,AA-45           CS320LA         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP8CR         AA-45           CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV         Z-4           CS50EXT4         AA-19         CSB220GY         D-11         CSL215GY         D-13         DD100NLLA         Z-4           CS50EXT5         AA-19         CSB220I         D-11         CSL215I         D-13         DD100NLWH         Z-4           CS6360C         B-56         CSB220LA         D-11         CSL215LA         D-13         DHADC         E-11           CS6361C         B-56         CSB220R         D-11         CSL215OW         D-13         DHAP         E-11           CS6364C         B-57         CSB220W         D-11         CSL215W         D-13         DHCM         E-11           CS6365C         B-57         CSB315         D-11         CSL220         D-13         DHIP         E-11           CS6369         B-57,H-13         CSB315BK         D-11         CSL220BK         D-13         DHOP </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
CS320LA         D-11         CSB220AL         D-11         CSL215AL         D-13         CWP8CR         AA-45           CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV         Z-4           CS50EXT4         AA-19         CSB220GY         D-11         CSL215GY         D-13         DD100NLLA         Z-4           CS50EXT5         AA-19         CSB220I         D-11         CSL215I         D-13         DD100NLWH         Z-4           CS6360C         B-56         CSB220LA         D-11         CSL215LA         D-13         DHADC         E-11           CS6361C         B-56         CSB220R         D-11         CSL215OW         D-13         DHAP         E-11           CS6364C         B-57         CSB220W         D-11         CSL215W         D-13         DHCM         E-11           CS6365C         B-57         CSB315         D-11         CSL220         D-13         DHIP         E-11           CS6369         B-57,H-13         CSB315BK         D-11         CSL220BK         D-13         DHOP         E-11           CS6370         B-56         CSB315BK         D-11         CSL220BK         D-13         DHSP								
CS320W         D-11         CSB220BK         D-11         CSL215BK         D-13         DD100NLIV         Z-4           CS50EXT4         AA-19         CSB220GY         D-11         CSL215GY         D-13         DD100NLLA         Z-4           CS50EXT5         AA-19         CSB220I         D-11         CSL215I         D-13         DD100NLWH         Z-4           CS6360C         B-56         CSB220LA         D-11         CSL215LA         D-13         DHADC         E-11           CS6361C         B-56         CSB220R         D-11         CSL215OW         D-13         DHAP         E-11           CS6364C         B-57         CSB220W         D-11         CSL215W         D-13         DHCM         E-11           CS6365C         B-57         CSB315         D-11         CSL220         D-13         DHIP         E-11           CS6369         B-57,H-13         CSB315AL         D-11         CSL220AL         D-13         DHOP         E-11           CS6370         B-56         CSB315BK         D-11         CSL220BK         D-13         DHSP         E-11								
CS50EXT4       AA-19       CSB220GY       D-11       CSL215GY       D-13       DD100NLLA       Z-4         CS50EXT5       AA-19       CSB220I       D-11       CSL215I       D-13       DD100NLWH       Z-4         CS6360C       B-56       CSB220LA       D-11       CSL215LA       D-13       DHADC       E-11         CS6361C       B-56       CSB220R       D-11       CSL215OW       D-13       DHAP       E-11         CS6364C       B-57       CSB220W       D-11       CSL215W       D-13       DHCM       E-11         CS6365C       B-57       CSB315       D-11       CSL220       D-13       DHIP       E-11         CS6369       B-57,H-13       CSB315AL       D-11       CSL220AL       D-13       DHOP       E-11         CS6370       B-56       CSB315BK       D-11       CSL220BK       D-13       DHSP       E-11								
CS50EXT5       AA-19       CSB220I       D-11       CSL215I       D-13       DD100NLWH       Z-4         CS6360C       B-56       CSB220LA       D-11       CSL215LA       D-13       DHADC       E-11         CS6361C       B-56       CSB220R       D-11       CSL215OW       D-13       DHAP       E-11         CS6364C       B-57       CSB220W       D-11       CSL215W       D-13       DHCM       E-11         CS6365C       B-57       CSB315       D-11       CSL220       D-13       DHIP       E-11         CS6369       B-57,H-13       CSB315AL       D-11       CSL220AL       D-13       DHOP       E-11         CS6370       B-56       CSB315BK       D-11       CSL220BK       D-13       DHSP       E-11								
CS6360C         B-56         CSB220LA         D-11         CSL215LA         D-13         DHADC         E-11           CS6361C         B-56         CSB220R         D-11         CSL215OW         D-13         DHAP         E-11           CS6364C         B-57         CSB220W         D-11         CSL215W         D-13         DHCM         E-11           CS6365C         B-57         CSB315         D-11         CSL220         D-13         DHIP         E-11           CS6369         B-57,H-13         CSB315AL         D-11         CSL220AL         D-13         DHOP         E-11           CS6370         B-56         CSB315BK         D-11         CSL220BK         D-13         DHSP         E-11								
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HBL563P6W	. G-7	HBL5744S3IVA	. T-4	HBL5P320DB	. N-4	HBL60W47D
HBL563R6W	. G-7	HBL5744SIVA	. T-4	HBL5SA40	. N-7	HBL60W48
HBL5652		HBL5744SWA	. T-4	HBL5W100C	. N-6	HBL60W48D
HBL5652I		HBL5744WA		HBL600B		HBL60W49
HBL5656		HBL5745IVA		HBL60100RGBF-8		HBL60W49D C-
HBL5658		HBL5745WA		HBL6017		HBL6187 O-2
HBL5661		HBL57472IVA		HBL6018		HBL61CM03 AA-
HBL5661I		HBL57472WA		HBL6019		HBL61CM03LED AA-
HBL5661RT		HBL57473IVA		HBL6023		HBL61CM03W
HBL5662		HBL5747IVA		HBL6024		HBL61CM03WLED AA-
HBL5662I		HBL5747WA		HBL6027		HBL61CM05AA-
HBL5666C		HBL57482IVA		HBL6028 HBL6031		HBL61CM05LED AA- HBL61CM05WLED
HBL5666VY		HBL57483IVA		HBL6032		HBL61CM08AA-
HBL5669C		HBL57483WA		HBL6035		HBL61CM08LED
HBL5669VY		HBL57484IVA		HBL6036		HBL61CM08WAA-
HBL5678C		HBL57485IVA		HBL6055		HBL61CM08WLED AA-
HBL5679C		HBL57486IVA		HBL605CUT		HBL61CM100 AA-2
HBL5684	.A-11	HBL5748IVA	. T-4	HBL605K	T-8	HBL61CM22 AA-2
HBL56CM66C	.A-36	HBL5748SIVA	. T-5	HBL6079		HBL61CM22W AA-2
HBL5700FIVA	T-6	HBL5748SWA	. T-5	HBL607CUT		HBL61CM25 AA-2
HBL5700FWA		HBL5748WA		HBL607K		HBL61CM42 AA-1
HBL5701C		HBL57512IVA		HBL6080OS		HBL61CM42LED AA-1
HBL5703IV		HBL57513IVA		HBL6081		HBL61CM42W
HBL5703W		HBL5751AIVA		HBL6082		HBL61CM42WLED AA-1
HBL5709		HBL5751AWA		HBL6083		HBL61CM43
HBL5709GC		HBL5751IVA		HBL6083AK		HBL61CM43LED
HBL5711BRIVA		HBL5751WA		HBL6084		HBL61CM52AA-1
HBL5711LHWA		HBL5752IVA HBL5752RA		HBL6085		HBL61CM52LED AA-1 HBL61CM52W AA-1
HBL5711RHIVA		HBL5753IVA		HBL6087		HBL61CM52WLED AA-1
HBL5711RHWA		HBL5753RA		HBL60CM17A-48,		HBL61CM53 AA-1
HBL5715BRIVA		HBL5760IVA		HBL60CM18A-48,		HBL61CM53LED AA-1
HBL5715IVA		HBL5780		HBL60CM19A-48,A		HBL61CM54AA-2
HBL5715WA		HBL5781		HBL60CM23B-51,		HBL61CM55
HBL5717BRIVA		HBL5781A		HBL60CM24B-51,		HBL61CM56
HBL5718BRIVA		HBL5782A	. T-8	HBL60CM31B-53,A		HBL61CM64A-35,AA-3
HBL5719IVA	T-7	HBL5782C		HBL60CM31VB-53,		HBL61CM64BK A-35,AA-3
HBL5719WA		HBL5783IVA		HBL60CM31WAA-11,A		HBL61CM65A-35,AA-3
HBL57242IVA		HBL5784IVA		HBL60CM32B-53,		HBL61CM71 AA-2
HBL57242WA		HBL5785AIVA		HBL60CM32V B-53,		HBL61CM72 AA-2
HBL5731IV		HBL5785AWA		HBL60CM33AA-11,A		HBL620BCKT-1
HBL5733IVA	I-5	HBL5786AIVA	. I-/	HBL60CM33V	<del>v</del> 4-12	HBL620C

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HBLSSCM65								
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HBLESWATZ  C-7   HBLE747BXXGY  T-31   HBLESWB3   C-7   HBL7341SX   C-17   HBLE5WATZ  C-7   HBLE747DXXGY  T-31   HBLESHG1520   M-16,N-9   HBL7342RK  C-17   HBLE5W490   C-7   HBLE747C1N  T-31   HBLEHG1520   M-16,N-9   HBL7349   C-22   HBLESW49D  C-7   HBLE747C1N  T-31   HBLEHG620   M-16,N-9   HBL737FK  C-17   HBLE6GBCK  T-32   HBLE6747C2N  T-31   HBLEHG620   M-16,N-9   HBL737PK  C-17   HBLE6GBCK  T-32   HBLE747DXXG  T-31   HBLEHG620   M-16,N-9   HBL737PK  C-17   HBLE6GCK  T-32   HBLE747DXXG  T-31   HBLEMG155   M-16,N-9   HBL7379   B-59   HBL69CCK  T-32   HBL6747DXXG  T-31   HBLEMG155   M-16,N-8   HBL7382   B-60   HBL69CCK  T-32   HBL6747DXXG  T-31   HBLEMG1520   M-16,N-8   HBL7383   B-60   HBL69COK  T-32   HBL6747DXG  T-31   HBLEMG1520   M-16,N-8   HBL736M14C  B-45   HBL6710BK  T-30   HBL6747DXG  T-31   HBLEMG620   M-16,N-8   HBL740BC  B-45   HBL6710BK  T-30   HBL6747DXG  T-31   HBLEMG620   M-16,N-8   HBL740BC  B-45   HBL6710BK  T-30   HBL6747DXG  T-31   HBLEMG620   M-16,N-8   HBL740BC  B-45   HBL6710BK  T-30   HBL6750B10G  T-28   HBL6MGPT1520   M-16,N-8   HBL740BC  B-45   HBL6710GK  T-30   HBL6750B10G  T-28   HBL6MGPT620   M-16,N-8   HBL7410BC  B-45   HBL6710GY  T-30   HBL6750C0756Y  T-28   HBL6MGPT620   M-16,N-8   HBL7411GC  B-44   HBL6710GY  T-30   HBL6750C0756Y  T-28   HBL6MF8160   M-16,N-8   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-44   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-45   HBL6711GY  T-29   HBL6750C135G  T-28   HBL6MF815  N-9   HBL7411GC  B-45   HBL6750C165G  T-28   HBL6750C165G  T-28   HB								
HBL65W49			HBL6747BXXGY	T-31				
HBL65W49D						,		
HBL660BDK								
HBL660BDK								
HBL680C								
HBL660CDK.   T-32								
HBL6700								
HBL6710BGY.   T-30   HBL6747RXXIV   T-31   HBL6MGRPT15.   M-16.N-8   HBL7409C   B-45   HBL6710DFOGY   T-30   HBL6747RXXIV   T-31   HBL6MGRPT15.0   M-16.N-8   HBL7410B   B-45   HBL6710DFOGY   T-30   HBL6750B10GY   T-28   HBL6MGRPT66   M-16.N-8   HBL7410BG   B-45   HBL6710DFOIV   T-30   HBL6750C075GY   T-28   HBL6MGRPT620   M-16.N-8   HBL7411C   B-44   HBL6710DF   T-30   HBL6750C075GY   T-28   HBL6MGRPT620   M-16.N-8   HBL7411C   B-44   HBL6710DF   T-30   HBL6750C075GY   T-28   HBL6MPS   N-9   HBL7411GCB   B-45   HBL6711DFOGY   T-29   HBL6750C135GY   T-28   HBL6MPS1050   N-9   HBL7413C   B-45   HBL6711DFOGY   T-29   HBL6750C135GY   T-28   HBL6MPS105015   N-9   HBL7413C   B-45   HBL6711DFOW   T-29   HBL6750C135GY   T-28   HBL6MPS105015   N-9   HBL7413C   B-45   HBL6711DFOW   T-29   HBL6750C195GY   T-28   HBL6MPS105   N-9   HBL7413C   B-45   HBL6711DFOW   T-29   HBL6750C195GY   T-28   HBL6MPS105   N-9   HBL7420   A-47,B-50,0-23   HBL6711V   T-29   HBL6750C195GY   T-28   HBL6MPS105   N-5   HBL7420   A-47,B-50,0-23   HBL6711V   T-29   HBL6750C315GY   T-28   HBL6P120CMAC   N-5   HBL7423WO   A-47,B-50,0-23   HBL6712TXIV   T-29   HBL6750CGY   T-28   HBL6P120CMB   N-5   HBL7425WOA   B-52,C-12,0-23   HBL6714AGY   T-30   HBL6750CHY   T-28   HBL6P160DB   N-4   HBL7425WOA   B-52,C-12,0-23   HBL6714AGY   T-30   HBL6750DGY   T-28   HBL6P320DB   N-4   HBL7428WOR   B-65,0-22   HBL6715DFOGY   T-29   HBL6750GY   T-31,T-45   HBL6P320DB   N-4   HBL7428WOR   B-65,0-22   HBL6715DFOGY   T-29   HBL6750TFV   T-30   HBL6P335015A   N-9   HBL7440   B-6   HBL6717DFOGY   T-29   HBL6750DAGY   T-28   HBL6P335015A   N-9   HBL7449   B-6   HBL6717DFOGY   T-29   HBL6750DAGY   T-28   HBL6P335015A   N-9   HBL7460   B-6   HBL6717DFOGY   T-29   HBL6750DAGY   T-28   HBL6P335015A   N-9   HBL7460   B-6   HBL6717DFOGY   T-29   HBL6750DAGY   T-28   HBL6P335015A   N-9   HBL7460   B-6   HBL6717DFOGY   T-29   HBL6750DAGY   T-28   HBL6935015A   N-9   HBL7460   B-6   HBL6717DFOGY   T-29   HBL6756AGY   T-30   HBL685152   N-9   HBL7460   B-6   HBL6717DFOGY   T-2	HBL6700	C-8			HBL6MG6 M-1	6,N-8		
HBL6710BIV.   T-30								
HBL6710DFOGY								
HBL6710DFOIV								
HBL6710GY								
HBL6710IV								
HBL6711DFOGY								
HBL6711GY	HBL6711DFOGY	T-29						
HBL6711IV								
HBL6712TXGY.   T-29								
HBL6712TXIV.   T-29								
HBL6714AGY         T-30         HBL6750CIV         T-28         HBL6P160DB         N-4         HBL7428WOG         B-65,O-22           HBL6714AIV         T-30         HBL6750DAGY         T-28         HBL6P320B         N-4         HBL7428WOR         B-65,O-22           HBL6715DFOIC         T-29         HBL6750GY         T-31,T-45         HBL6P320DB         N-4         HBL7428WOY         B-65,O-22           HBL6715DFOIV         T-29         HBL6750IV         T-31,T-45         HBL6PP320DB         N-4         HBL7428WOY         B-65,O-22           HBL6715DFOIV         T-29         HBL6750IV         T-31,T-45         HBL6PP320DB         N-4         HBL7428WOY         B-65,O-22           HBL6715DFOIV         T-29         HBL6750IV         T-30         HBL6PP31050MA         N-9         HBL7432         B-6           HBL6715DV         T-29         HBL6750TFIV         T-30         HBL6PS35015A         N-9         HBL7440V         B-8           HBL6717DFOGY         T-29         HBL6750WCGY         T-28         HBL6PS35015A         N-9         HBL7459V         B-8           HBL6717GY         T-29         HBL6750WCGY         T-28         HBL6PS350YL         N-9         HBL7460V         B-7           HBL6717GY								
HBL6714AIV         T-30         HBL6750DAGY         T-28         HBL69320B         N-4         HBL7428WOR         B-65,O-22           HBL6715DFOGY         T-29         HBL6750GY         T-31,T-45         HBL6P320DB         N-4         HBL7428WOY         B-65,O-22           HBL6715DFOW         T-29         HBL6750IV         T-31,T-45         HBL6PPS         N-9         HBL7432         B-6           HBL6715GY         T-29         HBL6750TFGY         T-30         HBL6PS050MA         N-9         HBL7433         B-7           HBL6715IV         T-29         HBL6750WCGY         T-30         HBL6PS35015A         N-9         HBL7433         B-7           HBL6717DFOGY         T-29         HBL6750WCGY         T-28         HBL6PS35015A         N-9         HBL7459V         B-8           HBL6717DFOIV         T-29         HBL6751A         T-28         HBL6PS350YL         N-9         HBL7469V         B-8           HBL6717GY         T-29         HBL6751DAGY         T-28         HBL6PS350YL         N-9         HBL7466V         B-7           HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NIV         T-29         HBL6746AG								
HBL6715DFOGY         T-29         HBL6750GY         T-31,T-45         HBL69320DB         N-4         HBL7428WOY         B-65,O-22           HBL6715DFOIV         T-29         HBL6750IV         T-31,T-45         HBL6PS         N-9         HBL7432         B-6           HBL6715GY         T-29         HBL6750TFGY         T-30         HBL6PS1050MA         N-9         HBL7433         B-7           HBL6715IV         T-29         HBL6750TFIV         T-30         HBL6PS35015A         N-9         HBL7440V         B-8           HBL6717DFOGY         T-29         HBL6750WCGY         T-28         HBL6PS350A         N-9         HBL7459V         B-8           HBL6717DFOIV         T-29         HBL6751A         T-28         HBL6PS350YL         N-9         HBL7469V         B-8           HBL6717GY         T-29         HBL6751DAGY         T-28         HBL6SS15         N-9         HBL7465V         B-6           HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NIV         T-29         HBL6756AIV         T-30         HBL6SS620         N-9         HBL7467         B-6           HBL6717CAGY         T-28         HBL6774AIV								
HBL6715GY         T-29         HBL6750TFGY         T-30         HBL6PS1050MA         N-9         HBL7433         B-7           HBL6715IV         T-29         HBL6750TFIV         T-30         HBL6PS35015A         N-9         HBL7440V         B-8           HBL6717DFOGY         T-29         HBL6750WCGY         T-28         HBL6PS350A         N-9         HBL7459V         B-8           HBL6717DFOIV         T-29         HBL6751A         T-28         HBL6PS350YL         N-9         HBL7464V         B-7           HBL6717GY         T-29         HBL6751DAGY         T-28         HBL6SS15         N-9         HBL7465V         B-6           HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NGY         T-29         HBL6756AIV         T-30         HBL6SS6         N-9         HBL7467         B-6           HBL6717NIV         T-29         HBL6774AIV         T-30         HBL6SS620         N-9         HBL7468         B-7           HBL6718DFOGY         T-28         HBL674AIV         T-30         HBL6W100C         N-6         HBL7484         B-7           HBL6718GY         T-29         HBL6786IV         T-30	HBL6715DFOGY	T-29						
HBL6715IV         T-29         HBL6750TFIV         T-30         HBL6PS35015A         N-9         HBL7440V         B-8           HBL6717DFOGY         T-29         HBL6750WCGY         T-28         HBL6PS350A         N-9         HBL7459V         B-8           HBL6717DFOIV         T-29         HBL6751A         T-28         HBL6PS350YL         N-9         HBL7464V         B-7           HBL6717GY         T-29         HBL6751DAGY         T-28         HBL6SS15         N-9         HBL7465V         B-6           HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NGY         T-29         HBL6756AIV         T-30         HBL6SS6         N-9         HBL7467         B-6           HBL6717NIV         T-29         HBL6774AGY         T-30         HBL6SS620         N-9         HBL7468         B-7           HBL6717TCAGY         T-28         HBL6774AIV         T-30         HBL6W100C         N-6         HBL7484         B-7           HBL6718DFOGY         T-29         HBL6786GY         T-30         HBL7002B         T-7         HBL7485         B-6           HBL6718GY         T-29         HBL67W08         C-7 <t< td=""><td></td><td></td><td></td><td></td><th></th><td></td><td></td><td></td></t<>								
HBL6717DFOGY         T-29         HBL6750WCGY         T-28         HBL6PS350A.         N-9         HBL7459V         B-8           HBL6717DFOIV         T-29         HBL6751A         T-28         HBL6PS350YL         N-9         HBL7464V         B-7           HBL6717GY         T-29         HBL6751DAGY         T-28         HBL6SS15         N-9         HBL7465V         B-6           HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NGY         T-29         HBL6756AIV         T-30         HBL6SS6         N-9         HBL7467         B-6           HBL6717NIV         T-29         HBL6774AGY         T-30         HBL6SS620         N-9         HBL7468         B-7           HBL6717TCAGY         T-28         HBL6774AIV         T-30         HBL6W100C         N-6         HBL7484         B-7           HBL6718DFOGY         T-29         HBL6786GY         T-30         HBL7002B         T-7         HBL7484V         B-7           HBL6718GY         T-29         HBL67W08         C-7         HBL7004W         T-7         HBL7485V         B-6           HBL6718IV         T-29         HBL67W09         C-7         HBL7								
HBL6717DFOIV         T-29         HBL6751A         T-28         HBL6PS350YL         N-9         HBL7464V         B-7           HBL6717GY         T-29         HBL6751DAGY         T-28         HBL6SS15         N-9         HBL7465V         B-6           HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NGY         T-29         HBL6756AIV         T-30         HBL6SS6         N-9         HBL7467         B-6           HBL6717NIV         T-29         HBL6774AGY         T-30         HBL6SS620         N-9         HBL7468         B-7           HBL6717TCAGY         T-28         HBL6774AIV         T-30         HBL6W100C         N-6         HBL7484         B-7           HBL6718DFOGY         T-29         HBL6786GY         T-30         HBL7002B         T-7         HBL7484V         B-7           HBL6718GY         T-29         HBL67W08         C-7         HBL7004IV         T-7         HBL7485V         B-6           HBL6718IV         T-29         HBL67W09         C-7         HBL7006IV         T-7         HBL7486         B-6           HBL6746HHGY         T-30         HBL67W47         C-7         HBL7006IV </td <td></td> <td></td> <td></td> <td></td> <th></th> <td></td> <td></td> <td></td>								
HBL6717GY         T-29         HBL6751DAGY         T-28         HBL6SS15         N-9         HBL7465V         B-6           HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NGY         T-29         HBL6756AIV         T-30         HBL6SS6         N-9         HBL7467         B-6           HBL6717NIV         T-29         HBL6774AGY         T-30         HBL6SS620         N-9         HBL7468         B-7           HBL6717TCAGY         T-28         HBL6774AIV         T-30         HBL6W100C         N-6         HBL7484         B-7           HBL6718DFOGY         T-29         HBL6786GY         T-30         HBL7002B         T-7         HBL7484V         B-7           HBL6718DFOIV         T-29         HBL6786IV         T-30         HBL7004IV         T-7         HBL7485         B-6           HBL6718GY         T-29         HBL67W08         C-7         HBL7004IV         T-7         HBL7486         B-6           HBL6718IV         T-29         HBL67W09         C-7         HBL7006IV         T-7         HBL7486         B-6           HBL6746HHGY         T-30         HBL67W47         C-7         HBL7006IV								
HBL6717IV         T-29         HBL6756AGY         T-30         HBL6SS1520         N-9         HBL7466         B-6           HBL6717NGY         T-29         HBL6756AIV         T-30         HBL6SS6         N-9         HBL7467         B-6           HBL6717NIV         T-29         HBL6774AGY         T-30         HBL6SS620         N-9         HBL7468         B-7           HBL6717TCAGY         T-28         HBL6774AIV         T-30         HBL6W100C         N-6         HBL7484         B-7           HBL6718DFOGY         T-29         HBL6786GY         T-30         HBL7002B         T-7         HBL7484V         B-7           HBL6718DFOIV         T-29         HBL6786IV         T-30         HBL7004IV         T-7         HBL7485         B-6           HBL6718GY         T-29         HBL67W08         C-7         HBL7004W         T-7         HBL7485V         B-6           HBL6718IV         T-29         HBL67W09         C-7         HBL7006IV         T-7         HBL7486         B-6           HBL6746HHHGY         T-30         HBL67W47         C-7         HBL7006W         T-7         HBL7486N         B-6								
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HBL6718DFOGY       T-29       HBL6786GY       T-30       HBL7002B       T-7       HBL7484V       B-7         HBL6718DFOIV       T-29       HBL6786IV       T-30       HBL7004IV       T-7       HBL7485       B-6         HBL6718GY       T-29       HBL67W08       C-7       HBL7004W       T-7       HBL7485V       B-6         HBL6718IV       T-29       HBL67W09       C-7       HBL7006IV       T-7       HBL7486       B-6         HBL6746HHHGY       T-30       HBL67W47       C-7       HBL7006W       T-7       HBL7486N       B-6								
HBL6718DFOIV       T-29       HBL6786IV       T-30       HBL7004IV       T-7       HBL7485       B-6         HBL6718GY       T-29       HBL67W08       C-7       HBL7004W       T-7       HBL7485V       B-6         HBL6718IV       T-29       HBL67W09       C-7       HBL7006IV       T-7       HBL7486       B-6         HBL6746HHHGY       T-30       HBL67W47       C-7       HBL7006W       T-7       HBL7486N       B-6								
HBL6718GY       T-29       HBL67W08       C-7       HBL7004W       T-7       HBL7485V       B-6         HBL6718IV       T-29       HBL67W09       C-7       HBL7006IV       T-7       HBL7486       B-6         HBL6746HHHGY       T-30       HBL67W47       C-7       HBL7006W       T-7       HBL7486N       B-6								
HBL6718IV       T-29       HBL67W09       C-7       HBL7006IV       T-7       HBL7486       B-6         HBL6746HHHGY       T-30       HBL67W47       C-7       HBL7006W       T-7       HBL7486N       B-6								
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NP113BK         O-12         NP147BK         O-12         NP24R         O-8         NP326I         O-14,Z-13           NP113GY         O-12         NP147GY         O-12         NP24W         O-8         NP326LA         O-14,Z-13           NP113I         O-12         NP147I         O-12         NP26         A-47,O-19,Z-12,AA-42         NP326W         O-14,Z-13           NP113LA         O-12         NP147W         O-12         NP262         O-9,Z-12,AA-42         NP33         O-8           NP113W         O-12         NP14BK         O-8         NP262AL         O-9         NP33         O-8           NP11AL         O-15         NP14GY         O-8         NP262BK         O-9,Z-12,AA-42         NP33W         O-8           NP11BK         O-15         NP14GY         O-8         NP262BK         O-9,Z-12,AA-42         NP33W         O-8           NP11GY         O-15         NP14W         O-8         NP262GY         D-16,O-9,Z-12,AA-42         NP34         O-8           NP11GY         O-15         NP14W         O-8,P-57,Y-18         NP262LA         D-16,O-9,Z-12,AA-42         NP34W         O-8           NP11GY         O-15         NP14W         O-8,P-57,Y-18         NP262LA								,
NP113GY         O-12         NP147GY         O-12         NP24W         O-8         NP326LA         O-14Z-13           NP113I         O-12         NP147I         O-12         NP26         A-47,O-19,Z-12,AA-42         NP326W         O-14,Z-13           NP113LA         O-12         NP147W         O-12         NP262         O-9,Z-12,AA-42         NP33         O-8           NP113W         O-12         NP14BK         O-8         NP262AL         O-9         NP33I         O-8           NP113W         O-15         NP14GY         O-8         NP262BK         O-9,Z-12,AA-42         NP33W         O-8           NP11BK         O-15         NP14GY         O-8         NP262BK         O-9,Z-12,AA-42         NP33W         O-8           NP11BK         O-15         NP14W         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34W         O-8           NP11GY         O-15         NP14W         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34W         O-8           NP11GY         O-15         NP14R         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34W         O-8           NP11GY         O-15         NP14R         O-8         NP262I         D-16,								
NP113LA         O-12         NP147W         O-12         NP262         O-9,Z-12,AA-42         NP33         O-8           NP113W         O-12         NP14BK         O-8         NP262AL         O-9         NP33I         O-8           NP11AL         O-15         NP14GY         O-8         NP262BK         O-9,Z-12,AA-42         NP33W         O-8           NP11BK         O-15         NP14I         O-8         NP262GY         D-16,O-9,Z-12,AA-42         NP34         O-8           NP11GY         O-15         NP14W         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34         O-8           NP11GY         O-15         NP14W         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34I         O-8           NP11GY         O-15         NP14W         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34I         O-8           NP11LA         O-15         NP14R         O-8,P-57,Y-18         NP262OW         O-9         NP38         O-14           NP11R         O-15         NP17         O-12         NP262W         D-16,O-9,Z-12         NP38         O-14           NP11R         O-15         NP17BK         O-12         NP262W         D-16,O-9,Z-12 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
NP113W         O-12         NP14BK         O-8         NP262AL         O-9         NP33I         O-8           NP11AL         O-15         NP14GY         O-8         NP262BK         O-9,Z-12,AA-42         NP33W         O-8           NP11BK         O-15         NP14I         O-8         NP262GY         D-16,O-9,Z-12,AA-42         NP34         O-8           NP11GY         O-15         NP14OW         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34I         O-8           NP11II         O-15         NP14R         O-8         NP262IA         D-16,O-9,Z-12,AA-42         NP34I         O-8           NP11II         O-15         NP14R         O-8         NP262IA         D-16,O-9,Z-12,AA-42         NP34II         O-8           NP11II         O-15         NP14R         O-8         NP262OW         O-9         NP38I         O-14           NP11II         O-15         NP14W         O-8,P-57,Y-18         NP262OW         O-9         NP38I         O-14           NP11II         O-15         NP14W         O-8,P-57,Y-18         NP262OW         O-9         NP38I         O-14           NP11II         O-15         NP14W         O-12         NP262IA         O-9								
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NP11BK         O-15         NP14I         O-8         NP262GY         D-16,O-9,Z-12,AA-42         NP34         O-8           NP11GY         O-15         NP14OW         O-8         NP262I         D-16,O-9,Z-12,AA-42         NP34I         O-8           NP11I         O-15         NP14R         O-8         NP262LA         D-16,O-9,Z-12         NP34W         O-8           NP11LA         O-15         NP14W         O-8,P-57,Y-18         NP262OW         O-9         NP38         O-14           NP11R         O-15         NP17         O-12         NP262R         O-9         NP38I         O-14           NP11W         O-15         NP17BK         O-12         NP262W         D-16,O-9,Z-12,AA-42         NP38LA         O-14           NP12         O-15         NP17GY         O-12         NP263         O-9,Z-12         NP38W         O-14           NP1214         O-12         NP17I         O-12         NP263AL         O-9         NP3AL         O-5           NP1214BK         O-12         NP17W         O-12         NP263BK         O-9,Z-12         NP3BK         O-5           NP1214GY         O-12         NP18         O-11,AA-42         NP263GY         O-9,Z-12         NP3								
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NP11I         O-15         NP14R         O-8         NP262LA         D-16,O-9,Z-12         NP34W         O-8           NP11LA         O-15         NP14W         O-8,P-57,Y-18         NP262OW         O-9         NP38         O-14           NP11R         O-15         NP17         O-12         NP262R         O-9         NP38I         O-14           NP11W         O-15         NP17BK         O-12         NP262W         D-16,O-9,Z-12,AA-42         NP38LA         O-14           NP12         O-15         NP17GY         O-12         NP263         O-9,Z-12         NP38W         O-14           NP1214         O-12         NP17I         O-12         NP263AL         O-9         NP3AL         O-5           NP1214BK         O-12         NP17W         O-12         NP263BK         O-9,Z-12         NP3BK         O-5           NP1214GY         O-12         NP18         O-11,AA-42         NP263GY         O-9,Z-12         NP3GY         O-5           NP1214W         O-12         NP182         O-13         NP263IA         O-9,Z-12         NP3LA         O-5           NP1226         O-11         NP182GY         O-13         NP263OW         O-9         NP3OW         O								
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NP1214BK       O-12       NP17W       O-12       NP263BK       O-9,Z-12       NP3BK       O-5         NP1214GY       O-12       NP18       O-11,AA-42       NP263GY       O-9,Z-12       NP3GY       O-5         NP1214I       O-12       NP182       O-13       NP263I       O-9,Z-12       NP3I       O-5         NP1214W       O-12       NP182BK       O-13       NP263LA       O-9,Z-12       NP3LA       O-5         NP1226       O-11       NP182GY       O-13       NP263OW       O-9       NP3OW       O-5         NP1226BK       O-11       NP182I       O-13       NP263R       O-9       NP3W       O-5						,		
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RCD308WTR		RCT201BR		RFS5W		RL42G11H9	
RCD309I RCD309LA		RCT201BZE		RFSQ2FDK		RL42G11HSM RL479HSM	
RCD309W		RCT201NI		RJ600 Z-18		RL5221	
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RCS1GY		RD603PDK		RJ620WTR Z-18,Z-2		RL8804	
RCS1I		RDS30		RJ62BKTR Z-18,Z-2		RL8806	
RCS1LA		RDS50		RJ62GYTR Z-18,Z-2 <sup>-</sup> RJ62ITR Z-18,Z-2 <sup>-</sup>		RL8812	
RCS2BK		RDVCL153PLA		RJ62LATRZ-18,Z-2		RL8822	
RCS2GY	E-19	RDVCL153PW		RJ62WTR Z-18,Z-2	1,Z-27	RM3004PA001 F-	
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RCS2LA		RDVFSQFLA RDVFSQFW		RJ650GYTR Z-18,Z-2 <sup>-</sup> RJ650ITR Z-18,Z-2 <sup>-</sup>		RP101W	
RCS3BK		RF151DTR		RJ650LATRZ-18,Z-2		RP102W	
RCS3GY		RF151R		RJ650WTR Z-18,Z-2		RP123I	
RCS3I		RF151TR RF201R		RJ65BKTR Z-18,Z-2 <sup>-</sup> RJ65GYTR Z-18,Z-2 <sup>-</sup>		RP123W	
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MM51320					S1R6PTACEHBRZ	Q-11	S1R8CVRBRS	Q-8
MW51330			S1PTBRSJ	Q-18	S1R6PTACEHNKL	Q-11	S1R8CVRBRZ	Q-8
RW51380   O.28   SIPTFFBL   O.18   SIR6PTBRS   O.11   SIR8JNC1   O.8   RW51470   O.28   SIPTFFBRS   O.18   SIR6PTBRZ   O.11   SIR8JNC1   O.8   RW51470   O.28   SIPTFFBRS   O.18   SIR6PTDEHALU   O.11   SIR8JNC1   O.8   RW51520   O.28   SIPTFFBRS   O.18   SIR6PTDEHALU   O.11   SIR8JNC1   O.8   RW51520   O.28   SIPTFFBRS   O.18   SIR6PTDEHBLK   O.11   SIR8JNC1   O.8   RW51530   O.28   SIPTFFGY   O.18   SIR6PTDEHBRS   O.11   SIR8JNC2   O.8   RW51810   O.28   SIPTFFGY   O.18   SIR6PTDEHBRS   O.11   SIR8JNC3   O.8   RW51300   O.27 AA-44   SIPTFT   O.19   SIR6PTDEHBRC   O.11   SIR8JNC3   O.8   RW57350   O.27 AA-44   SIPTFT   O.19   SIR6PTFEHBK   O.11   SIR8JNC4   O.8   RW57350   O.27 AA-44   SIPTGY   O.18   SIR6PTFFEHK   O.11   SIR8JNC5   O.8   RW57350   O.27 AA-44   SIPTGY   O.18   SIR6PTFFERS   O.11   SIR8JNC5   O.8   RW58350   O.27 AA-44   SIPTGY   O.18   SIR6PTFFEBS   O.11   SIR8JNC5   O.8   RW58350   O.27 AA-44   SIR4CPBADMTBK   P.15   SIR6PTFFBRZ   O.11   SIR8JNC7   O.8   SIRAPBAB   P.19   O.19   SIRACVRBUL   O.15   SIR6PTFFBR   O.11   SIRBJNC9   O.8   SIRAPBAB   P.19   O.19   SIRACVRBUR   O.15   SIR6PTFFINK   O.11   SIRBJNC9   O.8   SIRAPBAY   O.15   SIRAPBAY   O.15   SIRAPPT   O.12   SIRBPPT   O.8   SIRAPBAY   O.15   SIRAPPT								
RW51450			•					
RW51470								
RW51520         O-28         S1PTFERSJ         Q-18         S1R6PTDEHBLK         Q-11         S1R8JNC12         Q-8           RW51550         O-28         S1PTFFGYY         Q-18         S1R6PTDEHBRS         Q-11         S1R8JNC2         Q-8           RW57300         O-27 AA-44         S1PTFT         Q-19         S1R6PTDEHBRZ         Q-11         S1R8JNC3         Q-8           RW57300         O-27 AA-44         S1PTFT         Q-19         S1R6PTDEHNKL         Q-11         S1R8JNC3         Q-8           RW57350         O-27 AA-44         S1PTGYJ         Q-18         S1R6PTFFBLK         Q-11         S1R8JNC5         Q-8           RW58300         O-27 AA-44         S1PTGYJ         Q-18         S1R6PTFFBRS         Q-11         S1R8JNC7         Q-8           RW58350         O-27 AA-44         S1R4CPBAUMTEK         P-15         S1R6PTFFBRS         Q-11         S1R8JNC7         Q-8           S1AP4BL         P-19,0-19         S1R4CVRBRS         Q-15         S1R6PTFFBRZ         Q-11         S1R8JNC3         Q-8           S1AP4GY         P-19,0-19         S1R4CVRBRS         Q-15         S1R6PTFFBRZ         Q-11         S1R8BND3         Q-8           S1CFGE         P-19,0-19         S1R4CVRBRS <td></td> <td></td> <td></td> <td></td> <th></th> <td></td> <th></th> <td></td>								
MW51550								
RM51810         O-28         SIPIFEGYJ         Q-18         SIRRPTDEHINKL         Q-11         SIRBJNC3         Q-8           RW57300         O-27,AA-44         SIPIFIT         Q-19         SIRRPTDEHINKL         Q-11         SIRBJNC4         Q-8           RW57300         O-27,AA-44         SIPITGY         Q-18         SIRRPTFBLK         Q-11         SIRBJNC5         Q-8           RW5300         O-27,AA-44         SIPITGY         Q-18         SIRRPTFBLK         Q-11         SIRBJNC6         Q-8           RW58300         O-27,AA-44         SIRGCFBADMTBK         P-15         SIRRPTFBLK         Q-11         SIRBJNC8         Q-8           RW58350         O-27,AA-44         SIR4CFBADMTBK         P-15         SIRRPTFFBRZ         Q-11         SIRBJNC8         Q-8           RW58350         O-27,AA-44         SIR4CFBADMTBK         P-15         SIRRPTFFBRZ         Q-11         SIRBJNC8         Q-8           SIAP4BL         P-19,0-19         SIR4CVRBRS         Q-15         SIRRPTFFBRZ         Q-11         SIRBJNC9         Q-8           SICFB         P-19,0-19         SIR4CVRBRS         Q-15         SIRRPTFML         Q-11         SIRBSPSPU         Q-9           SICFB         P-19,0-19         SIR4C								
RW57300			-					
RW57350								
RW58750								
RW58300								
RW58350								
RM\s8750								
SIAPABL								
STAP4GY								
STAMPUB15								
S1CFCAL         P-19,Q-19         S1R4CVRNKL         Q-15         S1R6PTWZBLK         Q-11         S1R8PSPX         Q-9           S1CFCBL         P-19,Q-19         S1R4DW         Q-16         S1R6PTWZBRS         Q-11         S1R8PSPY         Q-9           S1CFCBRS         P-19,Q-19         S1R4PRTADMTBK         Q-16         S1R6PTWZBRZ         Q-11         S1R8PSPZ         Q-9           S1CFCGY         P-19,Q-19         S1R4PPT         Q-16,Q-19         S1R6PTWZNKL         Q-11         S1R8PSPZC         Q-9           S1CFCI         P-19,Q-19         S1R4PFIALU         Q-15         S1R6SPA         Q-13         S1R8PT1BLK         Q-7           S1DFTRAC         P-20,Q-20         S1R4PFIBLK         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DFTRAC         P-20,Q-20         S1R4PTBRS         Q-15         S1R6SPC         Q-13         S1R8PT1BRS         Q-7           S1DV1         P-19         S1R4PTBRS         Q-15         S1R6SPD         Q-13         S1R8PT1BRS         Q-7           S1FP15AL         P-19         S1R4PTGPT         Q-15         S1R6SPE         Q-13         S1R8PT1BKL         Q-7           S1FP15BL         P-20,Q-20         S1R4PTGML					S1R6PTNKL	Q-11	S1R8PSPV	Q-9
S1CFCBL         P-19,Q-19         S1R4DIV         Q-16         S1R6PTWZBRS         Q-11         S1R8PSPY         Q-9           S1CFCBRS         P-19,Q-19         S1R4FRPTADMTBK         Q-16         S1R6PTWZBRZ         Q-11         S1R8PSPZ         Q-9           S1CFCQY         P-19,Q-19         S1R4PTALU         Q-16         S1R6PTWZNKL         Q-11         S1R8PSPZC         Q-9           S1CFCI         P-19,Q-19         S1R4PTALU         Q-15         S1R6SPA         Q-13         S1R8PT1ALU         Q-7           S1DFMAX         P-20,Q-20         S1R4PTBLK         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DFTRAC         P-20,Q-20         S1R4PTBRS         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DFTRAC         P-20,Q-20         S1R4PTBRS         Q-15         S1R6SPD         Q-13         S1R8PT1BLK         Q-7           S1DFITAC         P-19         S1R4PTFITCHI         Q-15         S1R6SPE         Q-13         S1R8PT1NKL         Q-7           S1FP15AL         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPE         Q-13         S1R8PT2ALU         Q-7           S1FP15BR         P-20,Q-20         S1R4PTGMAD <td>S1CFB</td> <td>P-19</td> <td>S1R4CVRGRY</td> <td>Q-15</td> <th>S1R6PTWZALU</th> <td>Q-11</td> <th>S1R8PSPW</th> <td> Q-9</td>	S1CFB	P-19	S1R4CVRGRY	Q-15	S1R6PTWZALU	Q-11	S1R8PSPW	Q-9
S1CFCBRS.         P-19,Q-19         S1R4FRPTADMTBK         Q-16         S1R6PTWZBRZ.         Q-11         S1R8PSPZ.         Q-9           S1CFCGY.         P-19,Q-19         S1R4PPT         Q-16,Q-19         S1R6PTWZNKL         Q-11         S1R8PSPZC.         Q-9           S1CFCI.         P-19,Q-19         S1R4PTALU         Q-15         S1R6SPA         Q-13         S1R8PT1BLK         Q-7           S1DFMAX.         P-20,Q-20         S1R4PTBRS.         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DFMAX.         P-20,Q-20         S1R4PTBRS.         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DIV1         P-19         S1R4PTBRZ.         Q-15         S1R6SPD         Q-13         S1R8PT1BRS.         Q-7           S1FBCLIP5PK         P-19         S1R4PTFIT         Q-15         S1R6SPE         Q-13         S1R8PT1BRZ.         Q-7           S1FP15AL         P-20,Q-20         S1R4PTFITCHI.         Q-15         S1R6SPE         Q-13         S1R8PT2BLK         Q-7           S1FP15BR         P-20,Q-20         S1R4PTGRY.         Q-15         S1R6SPE         Q-13         S1R8PT2BLK         Q-7           S1FP15BRS         P-20,Q-20 <td< td=""><td>S1CFCAL</td><td>.P-19,Q-19</td><td></td><td></td><th>S1R6PTWZBLK</th><td>Q-11</td><th>S1R8PSPX</th><td> Q-9</td></td<>	S1CFCAL	.P-19,Q-19			S1R6PTWZBLK	Q-11	S1R8PSPX	Q-9
S1CFCGY.         P-19,Q-19         S1R4PPT         Q-16,Q-19         S1R6PTWZNKL         Q-11         S1R8PSPZC.         Q-9           S1CFCI.         P-19,Q-19         S1R4PTALU         Q-15         S1R6SPA         Q-13         S1R8PT1ALU         Q-7           S1DFMAX.         P-20,Q-20         S1R4PTBLK         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DFTRAC         P-20,Q-20         S1R4PTBRS         Q-15         S1R6SPD         Q-13         S1R8PT1BRS         Q-7           S1DIV1         P-19         S1R4PTBRZ         Q-15         S1R6SPD         Q-13         S1R8PT1BRZ         Q-7           S1FBCLIP5PK         P-19         S1R4PTFIT         Q-15         S1R6SPE         Q-13         S1R8PT1BRZ         Q-7           S1FP15AL         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPE         Q-13         S1R8PT1NKL         Q-7           S1FP15BR         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPE         Q-13         S1R8PT2ALU         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPF         Q-13         S1R8PT2ALU         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTQUAD					S1R6PTWZBRS	Q-11	S1R8PSPY	Q-9
S1CFCI         P-19,Q-19         S1R4PTALU         Q-15         S1R6SPA         Q-13         S1R8PT1ALU         Q-7           S1DFMAX         P-20,Q-20         S1R4PTBLK         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DFTRAC         P-20,Q-20         S1R4PTBRS         Q-15         S1R6SPC         Q-13         S1R8PT1BRS         Q-7           S1DIV1         P-19         S1R4PTBRZ         Q-15         S1R6SPD         Q-13         S1R8PT1BRZ         Q-7           S1FBCLIP5PK         P-19         S1R4PTFIT         Q-15         S1R6SPE         Q-13         S1R8PT1BRZ         Q-7           S1FP15AL         P-20,Q-20         S1R4PTFITCHI         Q-15         S1R6SPE         Q-13         S1R8PT1NKL         Q-7           S1FP15BL         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPF         Q-13         S1R8PT2BL         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPG         Q-13         S1R8P72BRS         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH         Q-13         S1R8P72BRZ         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADBLK			S1R4FRPTADMTBK	Q-16			S1R8PSPZ	Q-9
S1DFMAX         P-20,Q-20         S1R4PTBLK         Q-15         S1R6SPB         Q-13         S1R8PT1BLK         Q-7           S1DFTRAC         P-20,Q-20         S1R4PTBRS         Q-15         S1R6SPC         Q-13         S1R8PT1BRS         Q-7           S1DIV1         P-19         S1R4PTBRZ         Q-15         S1R6SPD         Q-13         S1R8PT1BRZ         Q-7           S1FBCLIP5PK         P-19         S1R4PTFIT         Q-15         S1R6SPE         Q-13         S1R8PT1BRZ         Q-7           S1FP15AL         P-20,Q-20         S1R4PTFIT         Q-15         S1R6SPEXT         Q-12         S1R8PT1NKL         Q-7           S1FP15BL         P-20,Q-20         S1R4PTGYI         Q-15         S1R6SPEXT         Q-12         S1R8PT2BLK         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTGWIA         Q-15         S1R6SPF         Q-13         S1R8PT2BLK         Q-7           S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPG         Q-13         S1R8PT2BRS         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADALU         Q-15         S1R6SPH25         Q-13         S1R8PT3NL         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBRS<								
S1DFTRAC.         P-20,Q-20         S1R4PTBRS.         Q-15         S1R6SPC.         Q-13         S1R8PT1BRS.         Q-7           S1DIV1         P-19         S1R4PTBRZ.         Q-15         S1R6SPD.         Q-13         S1R8PT1BRZ.         Q-7           S1FBCLIP5PK         P-19         S1R4PTFIT.         Q-15         S1R6SPE.         Q-13         S1R8PT1BRZ.         Q-7           S1FP15AL         P-20,Q-20         S1R4PTFIT.         Q-15         S1R6SPE.         Q-13         S1R8PT2BLU.         Q-7           S1FP15BL         P-20,Q-20         S1R4PTGRY.         Q-15         S1R6SPF.         Q-13         S1R8PT2BLK.         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPG.         Q-13         S1R8PT2BRS.         Q-7           S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH.         Q-13         S1R8PT2BRS.         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADBLK.         Q-15         S1R6SPH.5         Q-13         S1R8PT2BKL.         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBRS.         Q-15         S1R6SPHC2.         Q-13         S1R8PT3BLK.         Q-7           S1FP34GY         P-20,Q-20 <td></td> <td></td> <td></td> <td></td> <th></th> <td></td> <th></th> <td></td>								
S1DIV1         P-19         S1R4PTBRZ         Q-15         S1R6SPD         Q-13         S1R8PT1BRZ         Q-7           S1FBCLIP5PK         P-19         S1R4PTFIT         Q-15         S1R6SPE         Q-13         S1R8PT1NKL         Q-7           S1FP15AL         P-20,Q-20         S1R4PTFITCHI         Q-15         S1R6SPEXT         Q-12         S1R8PT2ALU         Q-7           S1FP15BL         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPF         Q-13         S1R8PT2BLK         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTNKL         Q-15         S1R6SPG         Q-13         S1R8PT2BLK         Q-7           S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH         Q-13         S1R8PT2BRS         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADALU         Q-15         S1R6SPH25         Q-13         S1R8PT3BL         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBLK         Q-15         S1R6SPHC2         Q-13         S1R8PT3BLK         Q-7           S1FP34GY         P-20,Q-20         S1R4PTQUADBRS         Q-15         S1R6SPHC4         Q-13         S1R8PT3BLK         Q-7           S1FRP4GY         P-20,Q-20         S								
S1FBCLIP5PK         P-19         S1R4PTFIT         Q-15         S1R6SPE         Q-13         S1R8PT1NKL         Q-7           S1FP15AL         P-20,Q-20         S1R4PTFITCHI         Q-15         S1R6SPEXT         Q-12         S1R8PT2ALU         Q-7           S1FP15BL         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPF         Q-13         S1R8PT2BLK         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTNKL         Q-15         S1R6SPG         Q-13         S1R8PT2BRS         Q-7           S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH         Q-13         S1R8PT2BRS         Q-7           S1FP34AL         P-20,Q-20         S1R4PTQUADALU         Q-15         S1R6SPH25         Q-13         S1R8PT2NKL         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADBRK         Q-15         S1R6SPHC2         Q-13         S1R8PT3BLK         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBRS         Q-15         S1R6SPHC4         Q-13         S1R8PT3BLK         Q-7           S1FR94GY         P-20,Q-20         S1R4PTQUADBRZ         Q-15         S1R6SPI         Q-13         S1R8PT3BRS         Q-7           S1FRP4GY         Q-19								
S1FP15AL         P-20,Q-20         S1R4PTFITCHI         Q-15         S1R6SPEXT         Q-12         S1R8PT2ALU         Q-7           S1FP15BL         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPF         Q-13         S1R8PT2BLK         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTNKL         Q-15         S1R6SPG         Q-13         S1R8PT2BRS         Q-7           S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH         Q-13         S1R8PT2BRS         Q-7           S1FP34AL         P-20,Q-20         S1R4PTQUADALU         Q-15         S1R6SPH25         Q-13         S1R8PT2BKZ         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADBLK         Q-15         S1R6SPH25         Q-13         S1R8PT3ALU         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBRS         Q-15         S1R6SPHC2         Q-13         S1R8PT3BLK         Q-7           S1FR94GY         P-20,Q-20         S1R4PTQUADBRZ         Q-15         S1R6SPI         Q-13         S1R8PT3BRS         Q-7           S1FRP4GY         Q-19         S1R4PTQUADMKL         Q-15         S1R6SPJ         Q-13         S1R8PT3BKZ         Q-7           S1FRP1JB         Q-8,Q-12,Q-19 </td <td></td> <td></td> <td></td> <td></td> <th></th> <td></td> <th></th> <td></td>								
S1FP15BL         P-20,Q-20         S1R4PTGRY         Q-15         S1R6SPF         Q-13         S1R8PT2BLK         Q-7           S1FP15BRS         P-20,Q-20         S1R4PTNKL         Q-15         S1R6SPG         Q-13         S1R8PT2BRS         Q-7           S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH         Q-13         S1R8PT2BRZ         Q-7           S1FP34AL         P-20,Q-20         S1R4PTQUADALU         Q-15         S1R6SPH25         Q-13         S1R8PT2NKL         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADBLK         Q-15         S1R6SPHC2         Q-13         S1R8PT3ALU         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBRS         Q-15         S1R6SPHC4         Q-13         S1R8PT3BLK         Q-7           S1FR94GY         P-20,Q-20         S1R4PTQUADBRZ         Q-15         S1R6SPI         Q-13         S1R8PT3BRS         Q-7           S1FRP4GY         Q-19         S1R4PTQUADMKL         Q-15         S1R6SPJ         Q-13         S1R8PT3BRZ         Q-7           S1FRPTJB         Q-8,Q-12,Q-19         S1R4SP2X2DUPLEX         S1R6SPL         Q-13         S1R8PTSITL         Q-8           S1PFB         P-19         P-15,P-49,Q-1								
S1FP15BRS         P-20,Q-20         S1R4PTNKL         Q-15         S1R6SPG         Q-13         S1R8PT2BRS         Q-7           S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH         Q-13         S1R8PT2BRZ         Q-7           S1FP34AL         P-20,Q-20         S1R4PTQUADALU         Q-15         S1R6SPH25         Q-13         S1R8PT2NKL         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADBLK         Q-15         S1R6SPHC2         Q-13         S1R8PT3ALU         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBRS         Q-15         S1R6SPHC4         Q-13         S1R8PT3BLK         Q-7           S1FR94GY         P-20,Q-20         S1R4PTQUADBRZ         Q-15         S1R6SPI         Q-13         S1R8PT3BRS         Q-7           S1FRP4BL         Q-19         S1R4PTQUADGRY         Q-15         S1R6SPJ         Q-13         S1R8PT3BRZ         Q-7           S1FRP4GY         Q-19         S1R4PTQUADNKL         Q-15         S1R6SPK         Q-13         S1R8PT3NKL         Q-7           S1FRPTJB         Q-8,Q-12,Q-19         S1R4SP2X2DUPLEX         S1R6SPL         Q-13         S1R8PTFIT         Q-8           S1PT3IMAL         Q-18         S1R4SP2X2DU								
S1FP15GY         P-20,Q-20         S1R4PTQUAD         Q-15         S1R6SPH         Q-13         S1R8PT2BRZ         Q-7           S1FP34AL         P-20,Q-20         S1R4PTQUADALU         Q-15         S1R6SPH25         Q-13         S1R8PT2NKL         Q-7           S1FP34BL         P-20,Q-20         S1R4PTQUADBLK         Q-15         S1R6SPHC2         Q-13         S1R8PT3ALU         Q-7           S1FP34BRS         P-20,Q-20         S1R4PTQUADBRS         Q-15         S1R6SPHC4         Q-13         S1R8PT3BLK         Q-7           S1FP34GY         P-20,Q-20         S1R4PTQUADBRZ         Q-15         S1R6SPI         Q-13         S1R8PT3BRS         Q-7           S1FRP4BL         Q-19         S1R4PTQUADGRY         Q-15         S1R6SPJ         Q-13         S1R8PT3BRZ         Q-7           S1FRP4GY         Q-19         S1R4PTQUADNKL         Q-15         S1R6SPK         Q-13         S1R8PT3NKL         Q-7           S1FRPTJB         Q-8,Q-12,Q-19         S1R4SP2X2DUPLEX         S1R6SPL         Q-13         S1R8PTFIT         Q-8           S1PT3IMAL         Q-18         S1R4SP2X2DUPLEXTJ         S1R6SPN         Q-13         S1R8PTFIT1CHI         Q-8           S1PT3IMALJ         Q-18         P-15,P-49,Q-16								
S1FP34AL       P-20,Q-20       S1R4PTQUADALU       Q-15       S1R6SPH25       Q-13       S1R8PT2NKL       Q-7         S1FP34BL       P-20,Q-20       S1R4PTQUADBLK       Q-15       S1R6SPHC2       Q-13       S1R8PT3ALU       Q-7         S1FP34BRS       P-20,Q-20       S1R4PTQUADBRS       Q-15       S1R6SPHC4       Q-13       S1R8PT3BLK       Q-7         S1FR94GY       P-20,Q-20       S1R4PTQUADBRZ       Q-15       S1R6SPI       Q-13       S1R8PT3BRS       Q-7         S1FRP4BL       Q-19       S1R4PTQUADGRY       Q-15       S1R6SPJ       Q-13       S1R8PT3BRZ       Q-7         S1FRP4GY       Q-19       S1R4PTQUADNKL       Q-15       S1R6SPK       Q-13       S1R8PT3NKL       Q-7         S1FRPTJB       Q-8,Q-12,Q-19       S1R4SP2X2DUPLEX       S1R6SPL       Q-13       S1R8PTFIT       Q-8         S1PFB       P-19       P-15,P-49,Q-16       S1R6SPM       Q-13       S1R8PTFIT1CHI       Q-8         S1PT3IMAL       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8								
S1FP34BL       P-20,Q-20       S1R4PTQUADBLK.       Q-15       S1R6SPHC2.       Q-13       S1R8PT3ALU.       Q-7         S1FP34BRS       P-20,Q-20       S1R4PTQUADBRS       Q-15       S1R6SPHC4.       Q-13       S1R8PT3BLK.       Q-7         S1FP34GY       P-20,Q-20       S1R4PTQUADBRZ       Q-15       S1R6SPI       Q-13       S1R8PT3BRS.       Q-7         S1FRP4BL       Q-19       S1R4PTQUADGRY       Q-15       S1R6SPJ       Q-13       S1R8PT3BRZ.       Q-7         S1FRP4GY       Q-19       S1R4PTQUADNKL       Q-15       S1R6SPK       Q-13       S1R8PT3NKL       Q-7         S1FRPTJB       Q-8,Q-12,Q-19       S1R4SP2X2DUPLEX       S1R6SPL       Q-13       S1R8PTFIT       Q-8         S1PFB       P-19       P-15,P-49,Q-16       S1R6SPM       Q-13       S1R8PTFIT1       Q-8         S1PT3IMAL       Q-18       S1R4SP2X2DUPLEXTJ       S1R6SPN       Q-13       S1R8PTFIT1CHI       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8								
S1FP34BRS       P-20,Q-20       S1R4PTQUADBRS       Q-15       S1R6SPHC4       Q-13       S1R8PT3BLK       Q-7         S1FP34GY       P-20,Q-20       S1R4PTQUADBRZ       Q-15       S1R6SPI       Q-13       S1R8PT3BRS       Q-7         S1FRP4BL       Q-19       S1R4PTQUADGRY       Q-15       S1R6SPJ       Q-13       S1R8PT3BRZ       Q-7         S1FRP4GY       Q-19       S1R4PTQUADNKL       Q-15       S1R6SPK       Q-13       S1R8PT3NKL       Q-7         S1FRPTJB       Q-8,Q-12,Q-19       S1R4SP2X2DUPLEX       S1R6SPL       Q-13       S1R8PTFIT       Q-8         S1PFB       P-19       P-15,P-49,Q-16       S1R6SPM       Q-13       S1R8PTFIT1       Q-8         S1PT3IMAL       Q-18       S1R4SP2X2DUPLEXTJ       S1R6SPN       Q-13       S1R8PTFIT1CHI       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8								
S1FP34GY       P-20,Q-20       S1R4PTQUADBRZ       Q-15       S1R6SPI       Q-13       S1R8PT3BRS       Q-7         S1FRP4BL       Q-19       S1R4PTQUADGRY       Q-15       S1R6SPJ       Q-13       S1R8PT3BRZ       Q-7         S1FRP4GY       Q-19       S1R4PTQUADNKL       Q-15       S1R6SPK       Q-13       S1R8PT3NKL       Q-7         S1FRPTJB       Q-8,Q-12,Q-19       S1R4SP2X2DUPLEX       S1R6SPL       Q-13       S1R8PTFIT       Q-8         S1PFB       P-19       P-15,P-49,Q-16       S1R6SPM       Q-13       S1R8PTFIT1       Q-8         S1PT3IMAL       Q-18       S1R4SP2X2DUPLEXTJ       S1R6SPN       Q-13       S1R8PTFIT1CHI       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8								
S1FRP4BL       Q-19       S1R4PTQUADGRY       Q-15       S1R6SPJ       Q-13       S1R8PT3BRZ       Q-7         S1FRP4GY       Q-19       S1R4PTQUADNKL       Q-15       S1R6SPK       Q-13       S1R8PT3NKL       Q-7         S1FRPTJB       Q-8,Q-12,Q-19       S1R4SP2X2DUPLEX       S1R6SPL       Q-13       S1R8PTFIT       Q-8         S1PFB       P-19       P-15,P-49,Q-16       S1R6SPM       Q-13       S1R8PTFIT1       Q-8         S1PT3IMAL       Q-18       S1R4SP2X2DUPLEXTJ       S1R6SPN       Q-13       S1R8PTFIT1CHI       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8								
S1FRP4GY       Q-19       S1R4PTQUADNKL       Q-15       S1R6SPK       Q-13       S1R8PT3NKL       Q-7         S1FRPTJB       Q-8,Q-12,Q-19       S1R4SP2X2DUPLEX       S1R6SPL       Q-13       S1R8PTFIT       Q-8         S1PFB       P-19       P-15,P-49,Q-16       S1R6SPM       Q-13       S1R8PTFIT1       Q-8         S1PT3IMAL       Q-18       S1R4SP2X2DUPLEXTJ       S1R6SPN       Q-13       S1R8PTFIT1CHI       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8								
S1FRPTJB       Q-8,Q-12,Q-19       S1R4SP2X2DUPLEX       S1R6SPL       Q-13       S1R8PTFIT       Q-8         S1PFB       P-19       P-15,P-49,Q-16       S1R6SPM       Q-13       S1R8PTFIT1       Q-8         S1PT3IMAL       Q-18       S1R4SP2X2DUPLEXTJ       S1R6SPN       Q-13       S1R8PTFIT1CHI       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT       Q-13       S1R8PTFIT2       Q-8								
S1PFB.       P-19       P-15,P-49,Q-16       S1R6SPM.       Q-13       S1R8PTFIT1.       Q-8         S1PT3IMAL       Q-18       S1R4SP2X2DUPLEXTJ.       S1R6SPN.       Q-13       S1R8PTFIT1CHI.       Q-8         S1PT3IMALJ       Q-18       P-15,P-49,Q-16       S1R6SPT.       Q-13       S1R8PTFIT2.       Q-8	S1FRPTJB Q-8.	,Q-12,Q-19						
S1PT3IMAL         Q-18         S1R4SP2X2DUPLEXTJ         S1R6SPN         Q-13         S1R8PTFIT1CHI         Q-8           S1PT3IMALJ         Q-18         P-15,P-49,Q-16         S1R6SPT         Q-13         S1R8PTFIT2         Q-8								
	S1PT3IMAL	Q-18			S1R6SPN	Q-13		
S1PT3IMBL         Q-18         S1R4SP2X2STYLE         P-15,P-49,Q-16         S1R6SPU         Q-13         S1R8PTFIT2CHI         Q-8								
	S1PT3IMBL	Q-18	S1R4SP2X2STYLE P-15,P-49	),Q-16	S1R6SPU	Q-13	S1R8PTFIT2CHI	Q-8

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SIRBPTZZALUL								
SIRBPTZZEBIK								
SIRBRITZZERS								
SIRBPITZANIL	S1R8PTZZ2BRS	Q-7	S1TFCI	P-19,Q-19			SBP4	O-5
SIRBPIZZSBLK								
SIRBPIZZISBIK   Q-7   S2725   P-22-P-21-6   SA6686   P-35   SSBP14   H-12								
SIRBPIZZSBR								
SIRPITIZANIL   Q-7   S3061   P-30   SA7   A-47.B-50.0-   SETIL   H-12   SIRPILIGO75ALU   Q-12   S3092   P-22   SA720   Q-7   SETIL   H-12   SIRPILIGO75ALU   Q-12   S3082   P-22   SA28   SA723   A-49.0-7   SCI 0.   Y-14   SIRPILIGO75BLX   Q-12   S3084   P-26.P-27   SA8   A-47.B-50.0-6   SC3098A   P-35.U-16   SIRPILIGO75BRS   Q-12   S3084   P-26.P-27   SA82   A-47.B-50.0-6   SC3098A   P-35.U-16   SIRPILIGO75BRZ   Q-12   S3085   P-26.P-27   SA42   Q-15   SC6100   H-13   SIRPILIGO75KKL   Q-12   S3182   P-23.P-28   SA434   Q-15   SC6100   H-13   SIRPILIGO75KKL   Q-12   S3325   P-22.P-22.P-28   SA434   Q-15   SC650   H-13   SIRPILIGO75KKL   Q-12   S3325   P-22.P-22.P-28   SA434   B-86,G-15,G-36   SC06   H-13   SIRPILIGERS   Q-12   S3255   P-22.P-22.P-28   SA434   B-86,G-15,G-36   SC05   H-13   SIRPILIGERS   Q-12   S3255   P-22.P-22.P-28   SA434   B-86,G-15,G-36   SC05   H-13   SIRPILIGERS   Q-12   S3255   P-22.P-22.P-28   SA434   B-86,G-15,G-36   SC05   H-13   SIRPILIGERS   Q-12   S3255   P-22.P-22.P-28   SA434   B-86,G-15,G-36   SC05   H-13   SIRPILIGERS   Q-12   S3725   P-22.P-22.P-28   SA4010M   Q-15   SC5   SC10   Q-15   SIRPILIGERS   Q-12   S3725   P-22.P-22.P-28   SA4010M   Q-15   SC10   Q-15   SIRPILIGERS   Q-12   S3725   P-22.P-22.P-28   SA4010M   Q-15   SC10   Q-15   SIRPILIGERS   Q-12   S3725   P-22.P-27.U-16   SAC12   Q-15   SC10   Q-15   SIRPILIGERS   Q-12   S3725   P-22.P-27.U-16   SAC12   Q-15   SC10   Q-15   SIRPILIGERS   Q-12   S3725   P-22.P-27.U-16   SAC12   Q-15   SC10   Q-15   SIRPILIGERS   Q-12   SC10   Q-15   SIRPILIGERS   Q-12   SC10   Q-15   SAC12   Q-15   SC10   Q-15   SIRPILIGERS   Q-12   SC10   Q-15   SAC12   Q-15   SIRPILIGERS   Q-12   SC10   Q-15   SAC12   Q-15   SIRPILIGERS   Q-12   SC10   Q-15   SAC12   Q	S1R8PTZZ3BRS	Q-7	S2825 P	-25,P-27,U-16	SA6687		SBSB1A	H-12
SIFFFIT2    0.12   S3079					SA6688	P-35		
SIFPLUGOTSELK								
SIRPLUGOTSBIR								
SIRPLUGOTSBNL   C-12   S3085   P-26,P-27   SAA12   G-15   SCB100   H-13			S3083	P-26,P-27			SC3098A	P-35,U-16
SIRPLIGOTSNIKL   O-12   S3362   P-22 P-28 P-28   SAA34   G-15   SCBSO   H-13   SIRPLIGEBUR   O-12   S3425   P-22 P-28 P-28   SAB100   G-15,G-36   SCBC   H-13   SIRPLIGEBUR   O-12   S3425   P-28 P-28 P-28   SAB12   B-86,G-15,G-36   SCC06   H-13   SIRPLIGEBUR   O-12   S3625   P-22 P-28 P-28   SAB24   B-86,G-15,G-36   SCC06   H-13   SIRPLIGEBUR   O-12   S3625   P-22 P-28,P-28   SAB24   B-86,G-15,G-36   SCC06   H-13   SIRPLIGEBUR   O-12   S3625   P-22,P-28,P-28   SAC1000   G-15,G-36   SCH1   O-5   SIRPLIGEBUR   O-15   SIRPLIGEBUR								
SIRPLIGEALU   O-12   S3325   P-22   P-28   P-28   SAB100   G-15,G-36   SCDC   H-13   SIRPLIGEBRS   O-12   S3325   P-22   P-28   P-28   SAB14   B-88,G-15,G-36   SCC050   H-13   SIRPLIGEBRS   O-12   S3325   P-22   P-28   P-28   SAB34   B-88,G-15,G-36   SCC050   H-13   SIRPLIGEBRS   O-12   S3925   P-25   P-27   I-16   SAC100   G-15,G-36   SCD11   O-5   SIRPLIGEBRS   O-12   S3925   P-25   P-27   I-16   SAC100   G-15,G-36   SCD11   O-15   SIRPLIGEBRS   O-12   S3925   P-25   P-27   I-16   SAC100   G-15,G-36   SCH11   O-15   SISFBM   P-19   S3825   P-25   P-27   I-16   SAC12   G-15   SCH13   O-8   SISFBAW   P-19   S3825   P-25   P-27   I-16   SAC12   G-15   SCH13   O-8   SISFBAWCR   P-19   S3826   P-25   P-27   I-16   SAC12M   G-15   SCH2   O-5   SISFBAWCR   P-19   S3825   P-22   P-23   P-28   SAC34   G-15   SCH2   O-5   SISFBAWCR   P-19   S3925   P-22   P-23   P-28   SAC34   G-15   SCH2   O-5   SISFBAWCR   P-20   S5002   P-21   SAC12M   G-15   SCH26   O-9.2   P-21   SISP3IMC   P-20   P-20   S5003   P-31   SAC15M   G-15   SCH26   O-9.2   P-21   SISP3IMC   P-20   P-20   S5007   P-31   SB1   D-16,O-5,AA-42   SCH7   O-6   SISP4W4   P-20   P-20   S5012   P-31   SB12   D-16,O-5,AA-42   SCH7   O-6   SISP4W4   P-20   P-20   S5016   P-22   SB13   SB12   O-15   SCH72   O-7   SISP4W40   P-20   P-20   S5016   P-22   SB13   SB14   O-8   SCH82   O-6   SISP4WAPA   P-20   P-20   S5016   P-22   SB13   SB14   O-8   SCH82   O-6   SISP4WAPA   P-20   P-20   S5016   P-22   SB13   SB14   O-8   SCH82   O-6   SISP4WAPA   P-20   P-20   S5017   P-25   SB13   SB14   O-8   SCH82   O-6   SISP4WAPA   P-20   P-20   S5016   P-22   SB13   SB14   O-8   SCH82   O-6   SISP4WAPA   P-20   P-20   S5016   P-22   SB13   SB14   O-8   SCH82   O-6   SISP4WAPA   P-20   P-20   S5020   P-31   SB2   D-16,O-5,AA-42   SCB80M2   H-12   SISPAWAPA   P-20   P-20   S5020   P-31   SB2   D-16,O-5,AA-42   SCB80M2   H-12   SISPAWAPA   P-20   P-20   S6020   P-31   SB2   D-16,O-5,AA-42   SCB80M2   H-12   SISPAWAPA   P-20   P-20   S6020   P-31   SB2   P-25   P-26   P-27   SB2								
SIRPLUGZBLK   Q-12   S3425			S3325 F	-22,P-23,P-28				
SIRPLUG2BRZ			S3425	P-28,U-16				
SIRPLUCZNIKL   O-12   S3725   P-22P-23,P-28   SAC100NM   G-15   SCH12   O-15   SISFB   P-19   S3813   P-25,P-27,U-16   SAC12   G-15   SCH13   O-8   SISFBAV   P-19   S3825   P-25,P-27,U-16   SAC125   G-15,G-36   SCH18   O-11   SISFBAVCR   P-19   S3826   P-25,P-27,U-16   SAC125   G-15,G-36   SCH23   O-8   SISFD   P-10,0-20   S5002   P-31   SAC125   SAC34   G-15   SCH23   O-8   SISFD   P-20,0-20   S5003   P-31   SAC34NM   G-15   SCH26   O-9,2-12   SISPBIM   P-20,0-20   S5003   P-31   SAD155   G-15,G-36   SCH262   O-9,2-12   SISPBIMC   P-20,0-20   S5010   P-31   SAD155   G-15,G-36   SCH262   O-9,2-12   SISPBIMC   P-20,0-20   S5010   P-31   SB1   D-16,O-5,AA-42   SCH70   O-5   SISP4X41   P-20,0-20   S5012   P-31   SB1   D-16,O-5,AA-42   SCH70   O-7   SISP4X415   P-20,0-20   S5013   P-31   SB126   O-11,Z-13,AA-42   SCH723   O-7   SISP4X416   P-20,0-20   S5016   P-22,P-31   SB126   O-11,Z-13,AA-42   SCH723   O-7   SISP4X416   P-20,0-20   S5017A   P-31   SB14   O-8   SCH82   O-6   SISP4X4PA   P-20,0-20   S5017G   P-25,P-31   SB13   A-A4-42   SCH8   O-6   SISP4X4PA   P-20,0-20   S5017G   P-25,P-31   SB13   A-A4-42   SCH80   H-12   SISP4X4SYSC   P-20,0-20   S5020   P-31   SB2   D-16,O-5,AA-42   SCSB0M   H-12   SISP4X4SYSC   P-20,0-20   S5020   P-31   SB2   D-16,O-5,AA-42   SCSB0M   H-12   SISP4X4SYSC   P-20,0-20   SA13A   O-8   SB20   D-16,O-9,2-12,AA-42   SDSB1A   H-12   SISPAMM20   P-20,0-20   SA13A   O-8   SB3083   P-25,P-26,P-27   SE2730A   B-39   SISPDUM   P-20,0-20   SA245   P-22,P-23,P-28   SB3085   P-25,P-26,P-27   SE2730A   B-39   SISPDUM   P-20,0-20   SA245   P-22,P-23,P-28   SB3085   P-25,P-26,P-27   SEC100BA   X-74   SISPEXT1   P-20,0-20   SA245   P-22,P-23,P-28   SB3085   P-25,P-26,P-27   SEC100BA   X-74   SISPEXT2   P-20,0-20   SA2625   P-22,P-23,P-28   SB3085   P-25,P-26,P-27   SEC30BA   X-74   SISPEXT2   P-20,0-20   SA2085   P-22,P-23,P-28   SB3085   P-25,P-26,P-27   SEC30BA   X-74   SISPEXT3   P-20,0-20   SA2085   P-22,P-23,P-28   SB3085   P-25,P-26,P-27   SEC30BA   X-74   SISPEXT3   P-20,0-20   SA3084			S3525	2-22,P-23,P-28				
SISFB			S3725 F	-25,P-27,U-16 -22 P-23 P-28				
SISFBAVCR	S1SFB	P-19	S3813 P	-25,P-27,U-16				
SISPECR						,		
\$18P P.20,0-20 \$5002 P.31 \$AC34NM G-15 \$C126 O-92.712 \$18P3IM P.20,0-20 \$5003 P.31 \$AD155 G-15,G-36 \$C1262 O-92.712 \$18P3IMC P.20,0-20 \$5007 P.31 \$AD150 G-15,G-36 \$C1262 O-92.712 \$18P3IMC P.20,0-20 \$5010 P.31 \$B1 D-16,5,A-42 \$CH7 O-6 \$18P4IM P.20,0-20 \$5011 P.31 \$B1 D-16,S-A-42 \$CH7 O-6 \$18P4X4 P.20,0-20 \$5013 P.31 \$B12 O-15 \$CH702 O-7 \$18P4X415 P.20,0-20 \$5013 P.31 \$B12 O-15 \$CH702 O-7 \$18P4X430 P.20,0-20 \$5016 P.22,P-31 \$B13 O-8A-42 \$CH723 O-7 \$18P4X430 P.20,0-20 \$5017A P.31 \$B14 O-8 \$CH82 O-15 \$CH82 O-6 \$18P4X4C P.20,0-20 \$5017A P.31 \$B14 O-8 \$CH82 O-6 \$18P4X4C P.20,0-20 \$5017A P.31 \$B14 O-8 \$CH82 O-6 \$18P4X4PA P.20,0-20 \$5017G P.25,P-31 \$B18 A-42 \$CSB0M H-12 \$18P4X4PAC P.20,0-20 \$5020 P.31 \$B2 D-16,O-5,A-42 \$CSB0M H-12 \$18P4X4SYS P.20,0-20 \$5020 P.31 \$B2 D-16,O-5,A-42 \$CSB0M H-12 \$18P4X4SYS P.20,0-20 \$5020 P.31 \$B23 O-8 \$CTL0 H-12 \$18P4X4SYS P.20,0-20 \$5030 P.31 \$B26 A-47,D-16,O-9,Z-12,A-42 \$DSB1A H-12 \$18P4X4SYS P.20,0-20 \$A1 D-16,O-5 \$B262 D-16,O-5,Z-12,A-42 \$DSB1A H-12 \$18PAXMW20 P.20,0-20 \$A1 D-16,O-5 \$B262 D-16,O-9,Z-12,A-42 \$DSB1A H-12 \$18PAXMW20 P.20,0-20 \$A2 D-16,O-5 \$B3083 P-25,P-26,P-27 \$E2730A B-39 \$18PDUM P.20,0-20 \$A23 O-8 \$B3083W P.25,P-26,P-27 \$E2730A B-39 \$18PDUM P.20,0-20 \$A2425 P.25,P-27,U-16 \$B3083W P-25,P-26,P-27 \$E2730A B-39 \$18PDUM P.20,0-20 \$A2425 P.25,P-27,U-16 \$B3083W P-25,P-26,P-27 \$E2730A B-39 \$18PDX1C P.20,0-20 \$A2425 P.25,P-27,U-16 \$B3084W UFD U-16 \$EC100BSMH9 X.75 \$18PEXT1 P.20,0-20 \$A2625 P.22,P-23,P-28 \$B3084W P.25,P-26,P-27 \$EC100BA C-11,X-74 \$18PEXT1C P.20,0-20 \$A3082 P.22,P-23,P-28 \$B3085W P.25,P-26,P-27 \$EC100BA X.74 \$18PEXT3 P.20,0-20 \$A3083 P.25,P-26,P-27 \$B5085W P.25,P-26,P-27 \$EC366A X.74 \$18PEXT3 P.20,0-20 \$A3083W P.25,P-26,P-27 \$B5085W P.25,P-26,P-27 \$EC366A X.74 \$18PEXT3 P.20,0-20 \$A3083W P.25,P-26,P-27 \$B6 O-5 \$EC50B36 X.75 \$18PEXT4 P.20,0-20 \$A3083W P.25,P-26,P-27 \$B6 O-5 \$EC50BA X.74 \$18PEXT3 P.20,0-20 \$A3083W P.25,P-26,P-27 \$B6 O-5 \$EC50BA X.74 \$18PEXT3 P.20,0-20 \$A3085W P.25,P-26,P-27 \$B6 O-5 \$EC50BA X.74 \$18PEXT3 P.20,0-20 \$A3088W P.25,P-26,P-27 \$B6 O-5 \$EC50			S3826 P	-25,P-27,U-16				
SISP3IM								
SISPAIM.   P-20,0-20   S5010   P-31   SB1   D-16,0-5,AA-42   SCH7   O-6   SISPAYA4   P-20,0-20   S5012   P-31   SB12   O-15   SCH702   O-7   SISPAYA15   P-20,0-20   S5016   P-32   SB12   O-17   SISPAYA42   SCH723   O-7   SISPAYA6   P-20,0-20   S5016   P-22,P-31   SB13   O-8,AA-42   SCH8   O-6   SISPAYA6   P-20,0-20   S5017A   P-31   SB14   O-8   SCH82   O-6   SISPAYAPA   P-20,0-20   S5017G   P-25,P-31   SB18   A-4-2   SCH8   O-6   SISPAYAPA   P-20,0-20   S5017G   P-25,P-31   SB18   A-4-2   SCB90   H-12   SISPAYAPA   P-20,0-20   S5020   P-31   SB2   D-16,O-5,AA-42   SCB90M2   H-12   SISPAYAPA   P-20,0-20   S5025   P-31   SB23   O-8   SCT10   H-12   SISPAYAPA   P-20,0-20   S5020   P-31   SB23   O-8   SCT10   H-12   SISPAYAPA   P-20,0-20   S5030   P-31   SB23   O-8   SCT10   H-12   SISPAYAPA   P-20,0-20   SA13   D-16,O-5   SB262   D-16,O-9,Z-12   SCTL0M2   H-12   SISPAMM20   P-20,0-20   SA13   D-16,O-5   SB262   D-16,O-9,Z-12   SCTL0M2   H-12   SISPAMM20   P-20,0-20   SA24   D-16,O-5   SB262   D-16,O-9,Z-12   SCTL0M2   H-12   SISPAMM20   P-20,0-20   SA23   D-8   SB3   D-5   SE2720   B-39   SISPDU   P-20,0-20   SA23   D-8   SB3083   P-25,P-26,P-27   SE2730   B-39   SISPDUSI   P-20,0-20   SA2425   P-25,P-27,U-16   SB3083W   P-25,P-28   SEC100BA   C-11,X-74   SISPEXT1   P-20,0-20   SA2625   P-22,P-23,P-28   SB3084W   P-25,P-28   SEC100BA   C-11,X-74   SISPEXT2   P-20,0-20   SA2625   P-22,P-23,P-28   SB3084W   P-25,P-28   SEC105BA   X-74   SISPEXT2   P-20,0-20   SA2925   P-22,P-23,P-28   SB3084W   P-25,P-28   SEC105BA   X-74   SISPEXT4   P-20,0-20   SA3083   P-25,P-28   SB3085   P-25,P-26,P-27   SEC38GA   X-74   SISPEXT4   P-20,0-20   SA3083   P-25,P-28   SB3085   P-25,P-28   SEC50BA5   X-75   SISPEXT4   P-20,0-20   SA3083   P-25,P-28   SB3085W   P-25,P-28   SEC50BA5   X-75   SISPEXT4   P-20,0-20   SA3083   P-25,P-28   SB3085W   P-25,P-28   SEC50BA5   X-75   SISPEXT4   P-20,0-20   SA3083   P-25,P-28   SB3085W   P-25,P-28   SEC50BA   X-74   SISPEXT4   P-20,0-20   SA3084W   P-25,P-28   SB7   A-47,B-50,O-6AA-42   SEC60	S1SP3IMP-2	20,Q-20	S5003	P-31				
S1SP4X4								
S15P4X415								
S15P4X490								
\$1\$P4X4PA	S1SP4X430P-2	20,Q-20	S5016	P-22,P-31	SB13	O-8,AA-42	SCH8	O-6
\$15P4X4PAC. P.20,Q-20 \$5025. P.31 \$B2. D-16,O-5,AA-42 \$CSB0M2. H-12 \$15P4X4SYS. P.20,Q-20 \$5025. P.31 \$B23. O-8 \$CTLO. H-12 \$15P4X4SYSC. P.20,Q-20 \$5030. P.31 \$B23. O-8 \$CTLO. H-12 \$15PAMM20. P.20,Q-20 \$A1. D-16,O-5 \$B262. D-16,O-9,Z-12,AA-42 \$DSB1A. H-12 \$15PAMM20. P.20,Q-20 \$A13A. O-8 \$B3. O-5 \$E2720A. B-39 \$15PDU. P.20,Q-20 \$A2. D-16,O-5 \$B3083. P-25,P-26,P-27 \$E2730A. B-39 \$15PDU2IM. P.20,Q-20 \$A2. D-16,O-5 \$B3083. P-25,P-26,P-27 \$E2730A. B-39 \$15PDU2IM. P.20,Q-20 \$A2. D-16,O-5 \$B3083W. P-25,P-28 \$EC100BA. C-11,X-74 \$15PDUSL. P.20,Q-20 \$A2425. P.25,P-27,U-16 \$B3083W-UFD. U-16 \$EC100BSMH9. X-75 \$15PEXT1 P.20,Q-20 \$A2625. P.22,P-23,P-28 \$B3084W. P-25,P-26,P-27 \$EC100GA. C-11,X-74 \$15PEXT1C. P.20,Q-20 \$A2625. P.22,P-23,P-28 \$B3084W. UFD. U-16 \$EC38BA. X-74 \$15PEXT2 P.20,Q-20 \$A2925. P-22,P-23,P-28 \$B3084W. UFD. U-16 \$EC38BA. X-74 \$15PEXT2 P.20,Q-20 \$A3082. P-22,P-23,P-28 \$B3084W. UFD. U-16 \$EC38BA. X-74 \$15PEXT4 P.20,Q-20 \$A3082. P-22,P-23,P-28 \$B3085W. P-25,P-26,P-27 \$EC36GA. X-74 \$15PEXT4 P.20,Q-20 \$A3083. P-25,P-26,P-27 \$B3085W. P-25,P-26,P-27 \$EC50B356. X-75 \$15PEXT4 P.20,Q-20 \$A3083. P-25,P-26,P-27 \$B3085W. UFD. U-16 \$EC50B356. X-75 \$15PEXT4 P.20,Q-20 \$A3083. P-25,P-26,P-27 \$B3085W. UFD. U-16 \$EC50B356. X-75 \$15PEXT4 P.20,Q-20 \$A3083W. P-25,P-28 \$B4. Q-5 \$EC50B252 X-75 \$15PEXT4 P.20,Q-20 \$A3083W. P-25,P-28 \$B3085W. UFD. U-16 \$EC50B356. X-74 \$15PFFBL P.20,Q-20 \$A3083W. P-25,P-26,P-27 \$B6. Q-5 \$EC50B356. X-74 \$15PFFBL P.20,Q-20 \$A3084W. P-25,P-28 \$B7. A-47,B-50,O-6,A-42 \$EC75B352 X-75 \$15PFFBRS. P.20,Q-20 \$A3084W. P-25,P-26,P-27 \$B70. B-50,O-6,A-42 \$EC75B36. X-74 \$15PFFBL P.20,Q-20 \$A3085W. P-25,P-26,P-27 \$B70. B-50,O-6,A-42 \$EC75B352 X-75 \$15PFFBRS. P.20,Q-20 \$A3085W. P-25,P-26,P-27 \$B70. B-50,O-6,A-42 \$EC75B36. X-74 \$15PFFBRS. P.20,Q-20 \$A3085W. P-25,P-26,P-27 \$B70. B-50,O-6,A-42 \$EC75B352 X-75 \$15PFFBRS. P.20,Q-20 \$A3085W. P-25,P-26,P-27 \$B70. B-50,O-6,A-42 \$EC75B36. X-74 \$15PFFBRS. P.20,Q-20 \$A3085W. P-25,P-26,P-27 \$B20. B-50,O-6,A-42 \$EC75B36. X-74 \$15PFFBRS. P.20,Q-20 \$A3085W. P-25,P-26,P-27 \$B20. B-5								
\$\text{S1SP4X4SYS}\$ \ \text{P-20,0-20} \ \text{S5025} \ \text{P-31} \ \text{SB23} \ \text{O-8} \ \text{SCTL0} \ \text{H-12} \ \text{S1SP4X4SYSC} \ \text{P-20,0-20} \ \text{S6030} \ \text{P-31} \ \text{SB26} \ \text{A-47,D-16,O-9,Z-12} \ \text{SCTL0M2} \ \text{H-12} \ \text{S1SPAMM20} \ \text{P-20,0-20} \ \text{SA1} \ \text{A-10-16,O-5} \ \text{SB262} \ \text{D-16,O-9,Z-12,A-42} \ \text{SDSB1A} \ \text{H-12} \ \text{S1SPAMM20C} \ \text{P-20,0-20} \ \text{SA13A} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \								
S1SPAMM20         P-20,Q-20         SA1         D-16,O-5         SB262         D-16,O-9,Z-12,AA-42         SDSB1A         H-12           S1SPAMM20C         P-20,Q-20         SA13A         O-8         SB3         O-5         SE2720A         B-39           S1SPDU         P-20,Q-20         SA2         D-16,O-5         SB3083         P-25,P-26,P-27         SE2730A         B-39           S1SPDU2IM         P-20,Q-20         SA23         O-8         SB3083W         P-25,P-28         SEC100BA         C-11,X-74           S1SPDUSL         P-20,Q-20         SA2425         P-25,P-27,U-16         SB3083W-UFD         U-16         SEC100BAMH9         X-75           S1SPEXT1         P-20,Q-20         SA2525         P-22,P-23,P-28         SB3084W         P-25,P-26,P-27         SEC100GA         C-11,X-74           S1SPEXT2         P-20,Q-20         SA2725         P-22,P-23,P-28         SB3084W-UFD         U-16         SEC38BA         X-74           S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3085W         P-25,P-26,P-27         SEC38GA         X-74           S1SPEXT3         P-20,Q-20         SA3082         P-22,P-23,P-28         SB3085W         P-25,P-28         SEC50B252         X-75								
S1SPAMM20C         P-20,Q-20         SA13A         O-8         SB3         O-5         SE2720A         B-39           S1SPDU         P-20,Q-20         SA2         D-16,O-5         SB3083         P-25,P-26,P-27         SE2730A         B-39           S1SPDU2IM         P-20,Q-20         SA23         O-8         SB3083W         P-25,P-28         SEC100BA         C-11,X-74           S1SPDUSIL         P-20,Q-20         SA2425         P-25,P-27,U-16         SB3083W-UFD         U-16         SEC100BSMH9         X-75           S1SPEXT1         P-20,Q-20         SA2625         P-22,P-23,P-28         SB3084W         P-25,P-26,P-27         SEC100GA         C-11,X-74           S1SPEXT1C         P-20,Q-20         SA2625         P-25,P-20,T-16         SB3084W         P-25,P-26,P-27         SEC100GA         C-11,X-74           S1SPEXT2         P-20,Q-20         SA2625         P-22,P-23,P-28         SB3084W         P-25,P-28         SEC125BSMH13         X-75           S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3084W-UFD         U-16         SEC38BA         X-74           S1SPEXT4C         P-20,Q-20         SA3082         P-22,P-23,P-28         SB3085W         P-25,P-28         SEC50B252         X-75								
S1SPDU         P-20,Q-20         SA2         D-16,O-5         SB3083         P-25,P-26,P-27         SE2730A         B-39           S1SPDU2IM         P-20,Q-20         SA23         O-8         SB3083W         P-25,P-28         SEC100BA         C-11,X-74           S1SPDUSL         P-20,Q-20         SA2425         P-25,P-27,U-16         SB3083W-UFD         U-16         SEC100BSMH9         X-75           S1SPEXT1         P-20,Q-20         SA2525         P-22,P-23,P-28         SB3084W         P-25,P-26,P-27         SEC100GA         C-11,X-74           S1SPEXT1C         P-20,Q-20         SA2625         P-25,P-27,U-16         SB3084W         P-25,P-26,P-27         SEC100GA         C-11,X-74           S1SPEXT2         P-20,Q-20         SA2725         P-22,P-23,P-28         SB3084W         P-25,P-28         SEC125SBMH13         X-75           S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3085W         P-25,P-26,P-27         SEC38BA         X-74           S1SPEXT3         P-20,Q-20         SA3083         P-22,P-23,P-28         SB3085W         P-25,P-28         SEC508525         X-75           S1SPEXT4C         P-20,Q-20         SA3083W         P-25,P-28         SB4         O-5         SEC50856         X-75 <td></td> <td></td> <td>-</td> <td>-,</td> <td></td> <td></td> <td></td> <td></td>			-	-,				
S1SPDU2IM         P-20,Q-20         SA23         O-8         SB3083W         P-25,P-28         SEC100BA         C-11,X-74           S1SPDUSL         P-20,Q-20         SA2425         P-25,P-27,U-16         SB3083W-UFD         U-16         SEC100BSMH9         X-75           S1SPEXT1         P-20,Q-20         SA2625         P-22,P-23,P-28         SB3084         P-25,P-26,P-27         SEC100GA         C-11,X-74           S1SPEXT1C         P-20,Q-20         SA2625         P-25,P-27,U-16         SB3084W         P-25,P-28         SEC125BSMH13         X-75           S1SPEXT2         P-20,Q-20         SA2725         P-22,P-23,P-28         SB3084W-UFD         U-16         SEC38BA         X-74           S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3085         P-25,P-26,P-27         SEC38GA         X-74           S1SPEXT3         P-20,Q-20         SA3082         P-22,P-23,P-28         SB3085W         P-25,P-28         SEC50B252         X-75           S1SPEXT4         P-20,Q-20         SA3083W         P-25,P-26,P-27         SB3085W-UFD         U-16         SEC50BA         X-74           S1SPFFAL         P-20,Q-20         SA3083W-UFD         U-16         SB5         O-5         SEC50BA         X-74 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td>							-	
S1SPEXT1         P-20,Q-20         SA2525         P-22,P-23,P-28         SB3084         P-25,P-26,P-27         SEC100GA         C-11,X-74           S1SPEXT1C         P-20,Q-20         SA2625         P-25,P-27,U-16         SB3084W         P-25,P-28         SEC125BSMH13         X-75           S1SPEXT2         P-20,Q-20         SA2725         P-22,P-23,P-28         SB3084W-UFD         U-16         SEC38BA         X-74           S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3085S         P-25,P-26,P-27         SEC38GA         X-74           S1SPEXT3         P-20,Q-20         SA3082         P-22,P-23,P-28         SB3085W         P-25,P-26,P-27         SEC50B252         X-75           S1SPEXT4         P-20,Q-20         SA3083         P-25,P-26,P-27         SB3085W-UFD         U-16         SEC50B356         X-75           S1SPEXT4C         P-20,Q-20         SA3083W-UFD         U-16         SB5         O-5         SEC50BA         X-74           S1SPFFAL         P-20,Q-20         SA3084W-UFD         U-16         SB5         O-5         SEC50BA         X-74           S1SPFFBRS         P-20,Q-20         SA3084W-UFD         U-16         SB7         A-47,B-50,O-6,AA-42         SEC75B452         X-75 <td></td> <td></td> <td>SA23</td> <td>O-8</td> <td></td> <td></td> <td>SEC100BA</td> <td>C-11,X-74</td>			SA23	O-8			SEC100BA	C-11,X-74
S1SPEXT1C         P-20,Q-20         SA2625         P-25,P-27,U-16         SB3084W         P-25,P-28         SEC125BSMH13         X-75           S1SPEXT2         P-20,Q-20         SA2725         P-22,P-23,P-28         SB3084W-UFD         U-16         SEC38BA         X-74           S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3085         P-25,P-26,P-27         SEC38GA         X-74           S1SPEXT3         P-20,Q-20         SA3082         P-22,P-23,P-28         SB3085W         P-25,P-28         SEC50B252         X-75           S1SPEXT4         P-20,Q-20         SA3083         P-25,P-26,P-27         SB3085W-UFD         U-16         SEC50B356         X-75           S1SPEXT4C         P-20,Q-20         SA3083W-UFD         U-16         SB5         O-5         SEC50BA         X-74           S1SPFFAL         P-20,Q-20         SA3084W-UFD         U-16         SB5         O-5         SEC50BA         X-74           S1SPFFBBL         P-20,Q-20         SA3084W-P-25,P-26,P-27         SB6         O-5         SEC75BA52         X-75           S1SPFFFBL         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-47,B-50,O-6,AA-42         SEC75BA52         X-75           S1SPFFTBL <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
S1SPEXT2         P-20,Q-20         SA2725         P-22,P-23,P-28         SB3084W-UFD         U-16         SEC38BA         X-74           S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3085         P-25,P-26,P-27         SEC38GA         X-74           S1SPEXT3         P-20,Q-20         SA3082         P-22,P-23,P-28         SB3085W         P-25,P-28         SEC50B252         X-75           S1SPEXT4         P-20,Q-20         SA3083W         P-25,P-26,P-27         SB3085W-UFD         U-16         SEC50B356         X-75           S1SPEXT4C         P-20,Q-20         SA3083W         P-25,P-28         SB4         O-5         SEC50BA         X-74           S1SPFFAL         P-20,Q-20         SA3083W-UFD         U-16         SB5         O-5         SEC50GA         X-74           S1SPFFBL         P-20,Q-20         SA3084W-UFD         U-16         SB5         O-5         SEC75B352         X-75           S1SPFFFBL         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-47,B-50,O-6,AA-42         SEC75B452         X-75           S1SPFFTBL         P-20,Q-20         SA3085W-UFD         U-16         SB701         A-50         SEC75BA         X-74           S1SPFFTBL		,						
S1SPEXT2C         P-20,Q-20         SA2925         P-22,P-23,P-28         SB3085         P-25,P-26,P-27         SEC38GA         X-74           S1SPEXT3         P-20,Q-20         SA3082         P-22,P-23,P-28         SB3085W         P-25,P-28         SEC50B252         X-75           S1SPEXT4         P-20,Q-20         SA3083         P-25,P-26,P-27         SB3085W-UFD         U-16         SEC50B356         X-75           S1SPEXT4C         P-20,Q-20         SA3083W         P-25,P-28         SB4         O-5         SEC50BA         X-74           S1SPFFAL         P-20,Q-20         SA3084W-UFD         U-16         SB5         O-5         SEC50GA         X-74           S1SPFFBRS         P-20,Q-20         SA3084W         P-25,P-26,P-27         SB6         O-5         SEC75B352         X-75           S1SPFFGY         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-47,B-50,O-6,AA-42         SEC75B452         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-26,P-27         SB720         B-52,O-7         SEC75GA         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-28         SB771         O-18         SEC75RGA         X-74           S1SPFFTBRS<								
S1SPEXT4         P-20,Q-20         SA3083         P-25,P-26,P-27         SB3085W-UFD         U-16         SEC50B356         X-75           S1SPEXT4C         P-20,Q-20         SA3083W         P-25,P-28         SB4         O-5         SEC50BA         X-74           S1SPFFAL         P-20,Q-20         SA3083W-UFD         U-16         SB5         O-5         SEC50GA         X-74           S1SPFFBL         P-20,Q-20         SA3084W         P-25,P-26,P-27         SB6         O-5         SEC75B352         X-75           S1SPFFBRS         P-20,Q-20         SA3084W         P-25,P-28         SB7         A-47,B-50,O-6,AA-42         SEC75B452         X-75           S1SPFFGY         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-50         SEC75BA         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-26,P-27         SB720         B-52,O-7         SEC75GA         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-28         SB771         O-18         SEC75RGA         X-74           S1SPFFTBRS         P-20,Q-20         SA3085W-UFD         U-16         SB8         A-47,B-50,O-6,AA-42         SECM12B         X-74           S1SPFFTGY         P	S1SPEXT2CP-2	20,Q-20	SA2925 F	-22,P-23,P-28	SB3085	. P-25,P-26,P-27	SEC38GA	X-74
S1SPEXT4C         P-20,Q-20         SA3083W         P-25,P-28         SB4         O-5         SEC50BA         X-74           S1SPFFAL         P-20,Q-20         SA3083W-UFD         U-16         SB5         O-5         SEC50GA         X-74           S1SPFFBL         P-20,Q-20         SA3084         P-25,P-26,P-27         SB6         O-5         SEC75B352         X-75           S1SPFFBRS         P-20,Q-20         SA3084W         P-25,P-28         SB7         A-47,B-50,O-6,AA-42         SEC75B452         X-75           S1SPFFGY         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-50         SEC75BA         X-74           S1SPFFTAL         P-20,Q-20         SA3085         P-25,P-26,P-27         SB720         B-52,O-7         SEC75GA         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-28         SB771         O-18         SEC75RGA         X-74           S1SPFFTBRS         P-20,Q-20         SA3085W-UFD         U-16         SB8         A-47,B-50,O-6,AA-42         SECM12B         X-74           S1SPFFTGY         P-20,Q-20         SA3182         P-23,P-28         SB82         O-6,AA-42         SECM12G         X-74           S1SPMAX         P-20,Q-20 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
S1SPFFAL         P-20,Q-20         SA3083W-UFD         U-16         SB5         O-5         SEC50GA         X-74           S1SPFFBL         P-20,Q-20         SA3084         P-25,P-26,P-27         SB6         O-5         SEC75B352         X-75           S1SPFFBRS         P-20,Q-20         SA3084W         P-25,P-28         SB7         A-47,B-50,O-6,AA-42         SEC75B452         X-75           S1SPFFGY         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-50         SEC75BA         X-74           S1SPFFTAL         P-20,Q-20         SA3085         P-25,P-26,P-27         SB720         B-52,Q-7         SEC75GA         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-28         SB771         Q-18         SEC75RGA         X-74           S1SPFFTBRS         P-20,Q-20         SA3085W-UFD         U-16         SB8         A-47,B-50,Q-6,AA-42         SECM12B         X-74           S1SPFFTGY         P-20,Q-20         SA3182         P-23,P-28         SB82         Q-6,AA-42         SECM12G         X-74           S1SPMAX         P-20,Q-20         SA3625         P-25,P-27,U-16         SB826         Q-11,Z-13         SECM16B         X-74           S1SPMAXC         P-								
S1SPFFBL         P-20,Q-20         SA3084         P-25,P-26,P-27         SB6         O-5         SEC75B352         X-75           S1SPFFBRS         P-20,Q-20         SA3084W         P-25,P-28         SB7         A-47,B-50,O-6,AA-42         SEC75B452         X-75           S1SPFFGY         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-50         SEC75BA         X-74           S1SPFFTAL         P-20,Q-20         SA3085         P-25,P-26,P-27         SB720         B-52,Q-7         SEC75GA         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-28         SB771         Q-18         SEC75RGA         X-74           S1SPFFTBRS         P-20,Q-20         SA3085W-UFD         U-16         SB8         A-47,B-50,Q-6,AA-42         SECM12B         X-74           S1SPFFTGY         P-20,Q-20         SA3182         P-23,P-28         SB82         Q-6,AA-42         SECM12G         X-74           S1SPMAX         P-20,Q-20         SA3625         P-25,P-27,U-16         SB826         Q-11,Z-13         SECM16B         X-74           S1SPMAXC         P-20,Q-20         SA3725         P-22,P-23,P-28         SBP1         Q-5         SECM16G         X-74				,				
S1SPFFGY         P-20,Q-20         SA3084W-UFD         U-16         SB701         A-50         SEC75BA         X-74           S1SPFFTAL         P-20,Q-20         SA3085         P-25,P-26,P-27         SB720         B-52,Q-7         SEC75GA         X-74           S1SPFFTBL         P-20,Q-20         SA3085W         P-25,P-28         SB771         Q-18         SEC75RGA         X-74           S1SPFFTBRS         P-20,Q-20         SA3085W-UFD         U-16         SB8         A-47,B-50,Q-6,AA-42         SECM12B         X-74           S1SPFFTGY         P-20,Q-20         SA3182         P-23,P-28         SB82         Q-6,AA-42         SECM12G         X-74           S1SPMAX         P-20,Q-20         SA3625         P-25,P-27,U-16         SB826         Q-11,Z-13         SECM16B         X-74           S1SPMAXC         P-20,Q-20         SA3725         P-22,P-23,P-28         SBP1         Q-5         SECM16G         X-74	S1SPFFBLP-2	20,Q-20						
S1SPFFTAL       P-20,Q-20       SA3085       P-25,P-26,P-27       SB720       B-52,O-7       SEC75GA       X-74         S1SPFFTBL       P-20,Q-20       SA3085W       P-25,P-28       SB771       O-18       SEC75RGA       X-74         S1SPFFTBRS       P-20,Q-20       SA3085W-UFD       U-16       SB8       A-47,B-50,O-6,AA-42       SECM12B       X-74         S1SPFFTGY       P-20,Q-20       SA3182       P-23,P-28       SB82       O-6,AA-42       SECM12G       X-74         S1SPMAX       P-20,Q-20       SA3625       P-25,P-27,U-16       SB826       O-11,Z-13       SECM16B       X-74         S1SPMAXC       P-20,Q-20       SA3725       P-22,P-23,P-28       SBP1       O-5       SECM16G       X-74								
S1SPFFTBL       P-20,Q-20       SA3085W       P-25,P-28       SB771       O-18       SEC75RGA       X-74         S1SPFFTBRS       P-20,Q-20       SA3085W-UFD       U-16       SB8       A-47,B-50,O-6,AA-42       SECM12B       X-74         S1SPFFTGY       P-20,Q-20       SA3182       P-23,P-28       SB82       O-6,AA-42       SECM12G       X-74         S1SPMAX       P-20,Q-20       SA3625       P-25,P-27,U-16       SB826       O-11,Z-13       SECM16B       X-74         S1SPMAXC       P-20,Q-20       SA3725       P-22,P-23,P-28       SBP1       O-5       SECM16G       X-74								
S1SPFFTBRS.       P-20,Q-20       SA3085W-UFD.       U-16       SB8.       A-47,B-50,O-6,AA-42       SECM12B.       X-74         S1SPFFTGY.       P-20,Q-20       SA3182.       P-23,P-28       SB82.       O-6,AA-42       SECM12G.       X-74         S1SPMAX.       P-20,Q-20       SA3625.       P-25,P-27,U-16       SB826.       O-11,Z-13       SECM16B.       X-74         S1SPMAXC       P-20,Q-20       SA3725.       P-22,P-23,P-28       SBP1.       O-5       SECM16G.       X-74					SB771	O-18	SEC75RGA	X-74
\$1\$PMAX.       P-20,Q-20       \$A3625.       P-25,P-27,U-16       \$B826.       O-11,Z-13       \$ECM16B.       X-74         \$1\$PMAXC.       P-20,Q-20       \$A3725.       P-22,P-23,P-28       \$BP1.       O-5       \$ECM16G.       X-74	S1SPFFTBRSP-2	20,Q-20						
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SECM32B		SFBEI		SFRCBKFFW		SFRCRGY	
SECM32G		SFBG10		SFRCBKGY		SFRCRRAL	
SECM40B		SFBGBK		SFRCBKRAL		SFRCRRBK	
SECM40G		SFBGEI		SFRCBKRBK		SFRCRREI	,
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SECP13GA		SFBGW		SFRCBKRW		SFRCRRW	
SECP16BA		SFBGYT-46,		SFRCBKW		SFRCRW	
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SECP29GA		SFC5EBK		SFRCBRGY Y-7,Z		SFRCWFF	
SECP36BA	X-74	SFC5EW		SFRCBRLAZ		SFRCWFFAL	
SECP36GA		SFC6BK		SFRCBROW	Y-7	SFRCWFFBK	Y-7,Z-10
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SECP7GA		SFF3GAL		SFRCBW		SFRCWFFGY	
SECP9BA		SFF3GBK		SFRCGNAL		SFRCWFFLA	
SECP9GA		SFF3GEI		SFRCGNBK		SFRCWFFW	
SEHBL3		SFF3GGY		SFRCGNEI		SFRCWGY	
SF14SJAL		SFF3GW		SFRCGNFFBKY-7,Z-		SFRCWRBK	
SF14SJBK		SFFALXT-46,		SFRCGNFFEI		SFRCWREI	
SF14SJEI		SFFBX		SFRCGNFFGY		SFRCWRGY	
SF14SJGY		SFFEX		SFRCGNFFLA		SFRCWRLA	
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SF35FFAL		SFFGXT-46,\		SFRCGNRGYY-7,Z		SFRCYFF	
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SF35GFFEI		SFGRFW		SFRCORFFAL		SFRCYRAL SFRCYRBK	
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SFUSBAA3BK	Y-5	SHC1028	.X-70	SHC1064	.X-71	SNAP1201LANA	D-8
SFUSBAAB	Y-5	SHC1028ZP	.X-70	SHC1065	.X-71	SNAP1201PLBKNA	D-8
SFUSBAAOW	Y-5	SHC1029	.X-70	SHC1066	.X-71	SNAP1201PLINA	D-8
SFUSBAAW		SHC1030	.X-70	SHC1067	.X-71	SNAP1201PLRNA	D-8
SFUSBAB3BK	Y-5	SHC1030ZP		SHC1068		SNAP1201PLWNA	D-8
SFUSBABB	Y-5	SHC1031		SHC1069		SNAP1201RNA	D-8
SFUSBABOW		SHC1031ZP		SHC1070	.X-71	SNAP1201WNA	D-8
SFUSBABW P-57,Y-	5,Y-18	SHC1032		SHC1071	.X-71	SNAP1203BKNA	D-8
SHC1001CR		SHC1032ZP		SHC1072		SNAP1203BRNA	D-8
SHC1002		SHC1033		SHC1073		SNAP1203GYNA	
SHC1002CR		SHC1033ZP		SHC1074		SNAP1203ILBKNA	
SHC1003		SHC1034		SHC1076		SNAP1203ILINA	
SHC1003CR		SHC1034ZP		SHC1077		SNAP1203ILRNA	
SHC1003SS		SHC1035CR C-12,H-15		SHC1078		SNAP1203ILWNA	
SHC1004		SHC1035SS		SHC1079		SNAP1203INA	
SHC1004CR		SHC1035ZP		SHC1080		SNAP1203LANA	
SHC1004SS		SHC1036		SHC1081		SNAP1203RNA	
SHC1005		SHC1036CR C-12,H-15		SHC1086		SNAP1203WNA	
SHC1005CR		SHC1036SS		SHC1088		SNAP1221BKNA	
SHC1006CR		SHC1037		SHC1089		SNAP1221BRNA	
SHC1007		SHC1037CRC-12,F-11,H-15		SHC1090		SNAP1221GYNA	
SHC1008		SHC1037SS		SHC1091		SNAP1221ILBKNASNAP1221ILINA	
SHC1008ZP		SHC10372P		SHC1092		SNAP1221ILINA	
SHC1009		SHC1038CR		SHC1094		SNAP1221ILWNA	
SHC1009CR		SHC1038SS		SHC1095		SNAP1221INA	
SHC1009SS		SHC1038ZP		SHC1097ZP		SNAP1221LANA	
SHC1010		SHC1039		SHC1098ZP		SNAP1221PLBKNA	
SHC1010CR		SHC1039CR		SHC1099ZP		SNAP1221PLINA	
SHC1010ZP		SHC1040		SHC2005CR		SNAP1221PLRNA	
SHC1011		SHC1040CR		SHC2008CR		SNAP1221PLWNA	
SHC1011CR	.X-70	SHC1041	,	SHC2010CR	.X-70	SNAP1221RNA	
SHC1011SS		SHC1041CR	1.X-70	SHC2011CR		SNAP1221WNA	
SHC1012		SHC1041SS		SHC2012CR	.X-70	SNAP1223BKNA	D-8
SHC1012CR	.X-70	SHC1042	.X-70	SHC2021CR	.X-70	SNAP1223BRNA	D-8
SHC1012SS	.X-70	SHC1042CR	1,X-70	SHC2022CR	.X-70	SNAP1223GYNA	D-8
SHC1012ZP	.X-70	SHC1042SS	.X-70	SHC2023CR	.X-70	SNAP1223ILBKNA	D-8
SHC1015	.X-70	SHC1043	.X-70	SHC2024CR	.X-70	SNAP1223ILINA	D-8
SHC1016	.X-70	SHC1043CR	1,X-70	SHC2035CR	.X-70	SNAP1223ILRNA	D-8
SHC1017	.X-70	SHC1043SS	.X-70	SHC2036CR	.X-70	SNAP1223ILWNA	
SHC1018		SHC1043ZP		SHC2037CR		SNAP1223INA	
SHC1019		SHC1044		SHC2038CR		SNAP1223LANA	D-8
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SHC1020		SHC1044SS		SHC2041CR		SNAP1223WNA	
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SAMP2103ILWNA   D-9   SNAP2152C2ITFA   A-18   SNAP2162C1RTPA   A-18   SNAP2172GYTFA   A-13,M-6   SNAP2103INA   D-9   SNAP2152C2LATRA   A-18   SNAP2162C1R   A-18   SNAP2172GYTFA   A-13,M-6   SNAP2103INA   D-9   SNAP2152C2R   A-18   SNAP2162CTTRA   A-18   SNAP2172GYTFA   A-13,M-6   SNAP2103INA   D-9   SNAP2152C2R   A-18   SNAP2162CTW   A-18   SNAP2172LA   A-13,M-6   SNAP2103INA   D-9   SNAP2152C2R   A-18   SNAP2162CTW   A-18   SNAP2172LA   A-13,M-6   SNAP2121BINA   D-9   SNAP2152CZW   A-18   SNAP2162CZ   A-18   SNAP2172[GL   A-13,M-6,N-13   SNAP2121BINA   D-9   SNAP2152CZW   A-18   SNAP216CZ   A-18   SNAP2172[GL   A-13,M-6,N-13   SNAP2121BINA   D-9   SNAP2152CZW   A-16   SNAP216CZ   A-18   SNAP2172[GL   A-13,M-6,N-13   SNAP2121BINA   D-9   SNAP2152CYX   A-15   SNAP216CZBKTRA   A-18   SNAP2172[GTRA   A-13,M-6,N-13   SNAP2121BINA   D-9   SNAP2152CYX   A-15   SNAP216CZBKTRA   A-18   SNAP2172LL   A-13,M-6   SNAP2121BINA   D-9   SNAP2152CYX   A-15   SNAP216CZBKTRA   A-18   SNAP2172LTRA   A-13,M-6   SNAP2121BINA   D-9   SNAP2152CYX   A-15   SNAP216CZGN   A-18   SNAP2172BINA   A-13,M-6   SNAP2121BINA   D-9   SNAP2152CYX   A-15   SNAP216CZGN   A-18   SNAP2172BINA   A-13,M-6   SNAP2121BINA   D-9   SNAP2152CYX   A-15   SNAP216CZGN   A-18   SNAP2172BINA   A-13,M-6   SNAP2121BINA   D-9   SNAP2152CYX   A-15   SNAP216CZGY   A-18   SNAP2172BINA   A-13,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2121BINA   D-9   SNAP2152CI   A-15,M-6   SNAP2122BINA   D-9   SNAP2152CI   A-15   SNAP216CCZ   A-18   SNAP2172BINA   A-15   SNAP216CCZ   A-18   SNAP2172BINA   A-15   SNAP2152BINA   D-9   SNAP2152BINA   A-15   SNAP216CCZ   A-18								
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SNAP2121PLINA         D-9         SNAP2152IGITRA         A-15,N-13         SNAP2162C2LA         A-18         SNAP2172LASCTRA         A-13,M-6           SNAP2121PLRNA         D-9         SNAP2152IGITRA         A-15,N-13         SNAP2162C2LATRA         A-18         SNAP2172LTRA         A-13,M-6           SNAP2121PLWNA         D-9         SNAP2152ILTRA         A-15         SNAP2162C2TRA         A-18         SNAP2172TRA         A-13,M-6           SNAP2121WNA         D-9         SNAP2152INA         A-15         SNAP2162C2W         A-18         SNAP2172RA         A-13,M-6,N-13           SNAP2123BRNA         D-9         SNAP2152INA         A-15         SNAP2162C2WTRA         A-18         SNAP2172RIGL         A-13,M-6,N-13           SNAP2123BRNA         D-9         SNAP2152IRA         A-15         SNAP2162CYWTRA         A-18         SNAP2172RIGLTRA         A-13,M-6,N-13           SNAP2123ILBKNA         D-9         SNAP2152LA         A-15         SNAP2162CYWTRA         A-15         SNAP2172RICTRA         A-13,M-6,N-13           SNAP2123ILBKNA         D-9         SNAP2152LA         A-15         SNAP2162CYMTA         A-15         SNAP2172RICTRA         A-13,M-6           SNAP2123ILNA         D-9         SNAP2152LA         A-15         SNAP2162CYTRA								
SNAP2121PLRNA         D-9         SNAP2152IGTRA         A-15,N-13         SNAP2162C2LATRA         A-18         SNAP2172LATRA         A-13,M-6           SNAP2121PLWNA         D-9         SNAP2152ILTA         A-15         SNAP2162C2R         A-18         SNAP2172LTRA         A-13,M-6           SNAP2121WNA         D-9         SNAP2152ILTA         A-15         SNAP2162C2TRA         A-18         SNAP2172RIGA         A-13,M-6           SNAP2123BKNA         D-9         SNAP2152ILTA         A-15         SNAP2162C2W         A-18         SNAP2172RIGA         A-13,M-6,N-13           SNAP2123BKNA         D-9         SNAP2152ICTRA         A-15         SNAP2162C2WTRA         A-18         SNAP2172RIGA         A-13,M-6,N-13           SNAP2123BRNA         D-9         SNAP2152ICTRA         A-15         SNAP2162CYTRA         A-15         SNAP2172RIGA         A-13,M-6,N-13           SNAP2123BRNA         D-9         SNAP2152ICA         A-15         SNAP2162GY         A-15         SNAP2172RIGA         A-13,M-6,N-13           SNAP2123ILBKNA         D-9         SNAP2152LA         A-15         SNAP2162GYL         A-15         SNAP2172RTRA         A-13,M-6           SNAP213ILWNA         D-9         SNAP2152LALTRA         A-15         SNAP2162GYSCTRA         A-15				,			_	-, -
SNAP2121PLWNA.         D-9         SNAP2152IL.         A-15         SNAP2162C2R.         A-18         SNAP2172LTRA.         A-13,M-6           SNAP2121RNA.         D-9         SNAP2152ILTRA         A-15         SNAP2162C2TRA         A-18         SNAP2172RA.         A-13,M-6,N-13           SNAP2123BKNA.         D-9         SNAP2152INA         A-15         SNAP2162C2W         A-18         SNAP2172RIGLTRA.         A-13,M-6,N-13           SNAP2123BRNA.         D-9         SNAP2152ISCTRA.         A-15         SNAP2162C2WTRA         A-18         SNAP2172RIGLTRA.         A-13,M-6,N-13           SNAP2123BRNA.         D-9         SNAP2152ICTRA.         A-15         SNAP2162C2WTRA         A-18         SNAP2172RIGLTRA.         A-13,M-6,N-13           SNAP2123BRNA.         D-9         SNAP2152ICTRA.         A-15         SNAP2162CGYA.         A-15         SNAP2172RICTRA.         A-13,M-6           SNAP2133ILBKNA.         D-9         SNAP2152LA.         A-15         SNAP2162GYLTRA.         A-15         SNAP2172RICTRA.         A-13,M-6           SNAP2123ILINA.         D-9         SNAP2152LAIT.         A-15         SNAP2162GYCTRA.         A-15         SNAP2172RSCTRA.         A-13,M-6           SNAP2123ILWA.         D-9         SNAP2152LANA.         A-15         SNAP2162G								
SNAP2121RNA         D-9         SNAP2152ILTRA         A-15         SNAP2162C2TRA         A-18         SNAP2172RA         A-13,M-6           SNAP2121WNA         D-9         SNAP2152INA         A-15         SNAP2162C2W         A-18         SNAP2172RIGL         A-13,M-6,N-13           SNAP2123BRNA         D-9         SNAP2152ISCTRA         A-15         SNAP2162C2WTRA         A-18         SNAP2172RIGLTRA         A-13,M-6,N-13           SNAP2123BRNA         D-9         SNAP2152ITRA         A-15         SNAP2162GYA         A-15         SNAP2172RIGTRA         A-13,M-6,N-13           SNAP2123GYNA         D-9         SNAP2152L         A-15         SNAP2162GYL         A-15         SNAP2172RICTRA         A-13,M-6           SNAP2123ILBKNA         D-9         SNAP2152LAA         A-15         SNAP2162GYLTRA         A-15         SNAP2172RCTRA         A-13,M-6           SNAP2133ILWNA         D-9         SNAP2152LAL         A-15         SNAP2162GYYLA         A-15         SNAP2172RGCTRA         A-13,M-6           SNAP2123ILWNA         D-9         SNAP2152LANA         A-15         SNAP2162GYTRA         A-15         SNAP2172RTRA         A-13,M-6           SNAP2123ILWNA         D-9         SNAP2152LANA         A-15         SNAP2162GYTRA         A-15				,				
SNAP2121WNA         D-9         SNAP2152INA         A-15         SNAP2162C2W         A-18         SNAP2172RIGL         A-13,M-6,N-13           SNAP2123BKNA         D-9         SNAP2152ISCTRA         A-15         SNAP2162C2WTRA         A-18         SNAP2172RIGLTRA         A-13,M-6,N-13           SNAP2123BRNA         D-9         SNAP2152ITRA         A-15         SNAP2162GYA         A-15         SNAP2172RIGTRA         A-13,M-6,N-13           SNAP2123ILBKNA         D-9         SNAP2152LA         A-15         SNAP2162GYL         A-15         SNAP2172RICTRA         A-13,M-6           SNAP2123ILINA         D-9         SNAP2152LA         A-15         SNAP2162GYLTRA         A-15         SNAP2172RICTRA         A-13,M-6           SNAP2123ILRNA         D-9         SNAP2152LAL         A-15         SNAP2162GYNA         A-15         SNAP2172RSCTRA         A-13,M-6           SNAP2123ILWNA         D-9         SNAP2152LALTRA         A-15         SNAP2162GYTRA         A-15         SNAP2172RTRA         A-13,M-6           SNAP2123ILWNA         D-9         SNAP2152LASCTRA         A-15         SNAP2162GYTRA         A-15         SNAP2172RTRA         A-13,M-6           SNAP2123INA         D-9         SNAP2152LASCTRA         A-15         SNAP2162IGTRA         A-15								
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SNAP2123GYNA         D-9         SNAP2152L         A-15         SNAP2162GYL         A-15         SNAP2172RL         A-13,M-6           SNAP2123ILBKNA         D-9         SNAP2152LAA         A-15         SNAP2162GYLTRA         A-15         SNAP2172RLTRA         A-13,M-6           SNAP2123ILINA         D-9         SNAP2152LAL         A-15         SNAP2162GYNA         A-15         SNAP2172RSCTRA         A-13,M-6           SNAP2123ILRNA         D-9         SNAP2152LALTRA         A-15         SNAP2162GYSCTRA         A-15         SNAP2172RTRA         A-13,M-6           SNAP2123ILWNA         D-9         SNAP2152LACTRA         A-15         SNAP2162GYTRA         A-15         SNAP2172RTRA         A-13,M-6           SNAP2123ILANA         D-9         SNAP2152LACTRA         A-15         SNAP2162IA         A-15         SNAP2162IA         A-15         SNAP2172TRA         A-13,M-6           SNAP2123ILANA         D-9         SNAP2152LATRA         A-15         SNAP2162IA         A-15         SNAP2162IA         A-15         SNAP2172WA         A-13,M-6           SNAP2123ILANA         D-9         SNAP2152LATRA         A-15         SNAP2162IG         A-15,N-13         SNAP2172WA         A-13,M-6           SNAP2123ILANA         D-9         SNAP2152LATRA	SNAP2123BKNA	D-9			SNAP2162C2WTRA	A-18		
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SNAP2123WNA         D-9         SNAP2152NA         A-15         SNAP2162IGTRA         A-15,N-13         SNAP2172WLTRA         A-13,M-6           SNAP2152A         A-15         SNAP2152RA         A-15         SNAP2162IL         A-15         SNAP2172WSCTRA         A-13,M-6           SNAP2152BKA         A-15         SNAP2152RL         A-15         SNAP2162ILTRA         A-15         SNAP2172WTRA         A-13,M-6           SNAP2152BKL         A-15         SNAP2152RLTRA         A-15         SNAP2162INA         A-15         SNAP2182A         A-13,M-6           SNAP2152BKLTRA         A-15         SNAP2152RNA         A-15         SNAP2162ISCTRA         A-15         SNAP2182BKA         A-13,M-6           SNAP2152BKNA         A-15         SNAP2152RSCTRA         A-15         SNAP2162ITRA         A-15         SNAP2182BKL         A-13,M-6           SNAP2152BKSCTRA         A-15         SNAP2152RTRA         A-15         SNAP2162L         A-15         SNAP2182BKLTRA         A-13,M-6           SNAP2152BKTRA         A-15         SNAP2152SCTRA         A-15         SNAP2162LAA         A-15         SNAP2182BKSCTRA         A-13,M-6								,
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SNAP2RA							
SNAPSRINA							
SNAP3W1NA   D-8,D-9   SNAP5262GYNA   A-14   SNAP5362BLSCTRA   A-14   SNAP5362S   A-17,N-13   SNAP3W2NA   D-8,D-9   SNAP5262GYSCTRA   A-14   SNAP5362BLTRA   A-14   SNAP5362SCTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362GYSCTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5261A   A-14   SNAP5262CTRA   A-14   SNAP5262CTRA   A-14   SNAP5262CTRA   A-14   SNAP5262CTRA   A-14   SNAP5262CTRA   A-14   SNAP5262CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5261BKTR   A-14   SNAP5262CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5362CTRA   A-14   SNAP5261BLTR   A-14   SNAP5262CTRA   A-14   SNAP5261BTR   A-14   SNAP5262CTRA   A-14   SNAP5262TRA   A-14   SNAP5261BTR   A-14   SNAP5262CTRA   A-14   SNAP5262TRA   A-14   SNAP5261GY   A-18   SNAP5262TRA   A-14   SNAP5261TRA   A-14   SNAP5262TRA   A-14   SNAP5261TRA   A-14   SNAP5262TRA   A-14   SNAP5261TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-18   SNAP8200BKTRA   A-12,M-5   SNAP526TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA   A-14   SNAP5262TRA							
SNAP3W2NA   D-8_D-9							
SNAP5WJUMP							
SNAP5261			,				
SNAP5261ALTR         A-14         SNAP5262IGL         A-14,N-13         SNAP5362C1BL         A-18         SNAP5362WLTRA         A-14           SNAP5261BK         A-14         SNAP5262IGITRA         A-14,N-13         SNAP5362C1GN         A-18         SNAP5362WNA         A-14           SNAP5261BL         A-14         SNAP5262IGTRA         A-14,N-13         SNAP5362C1GNTRA         A-18         SNAP5362WNA         A-17,N-13           SNAP5261BL         A-14         SNAP5262IL         A-14         SNAP5362C1GY         A-18         SNAP5362WSTRA         A-14           SNAP5261BLTR         A-14         SNAP5262ILTRA         A-14         SNAP5362C1GY         A-18         SNAP5362WTRA         A-14           SNAP5261GY         A-14         SNAP5262ILTRA         A-14         SNAP5362C1TRA         A-18         SNAP5362WTRA         A-14           SNAP5261TR         A-14         SNAP5262ILA         A-14         SNAP5362C1TRA         A-18         SNAP5362WTRA         A-14           SNAP5261TR         A-14         SNAP5262ILA         A-14         SNAP5362C1TRA         A-18         SNAP5362CTRA         A-12,M-5           SNAP5261TR         A-14         SNAP5262ISCTRA         A-14         SNAP5362CTRA         A-18         SNAP5362CTRA         A-1	SNAP5261			SNAP5362C1BK			
SNAP5261BK         A-14         SNAP5262IGITRA         A-14,N-13         SNAP5362C1GN         A-18         SNAP5362WNA         A-14           SNAP5261BKTR         A-14         SNAP5262IGTRA         A-14,N-13         SNAP5362C1GNTRA         A-18         SNAP5362WS         A-17,N-13           SNAP5261BLTR         A-14         SNAP5262ILTRA         A-14         SNAP5362C1GY         A-18         SNAP5362WTRA         A-14           SNAP5261BCTR         A-14         SNAP5262ILTRA         A-14         SNAP5362C1GYTRA         A-18         SNAP5362WTRA         A-14           SNAP5261GY         A-14         SNAP5262ILTRA         A-14         SNAP5362C1ITRA         A-18         SNAP8200BK         A-12,M-5           SNAP5261GYTR         A-14         SNAP5262IS         A-17,N-13         SNAP5362C1ITRA         A-18         SNAP8200BK         A-12,M-5           SNAP5261I         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1ITRA         A-18         SNAP8200BKL         A-12,M-5           SNAP5261IA         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1LA         A-18         SNAP8200BKL         A-12,M-5           SNAP5261IA         A-14         SNAP5262IA         A-14         SNAP5362C1A         A-18         SNAP8200BKL							
SNAP5261BKTR         A-14         SNAP5262IGTRA         A-14,N-13         SNAP5362C1GNTRA         A-18         SNAP5362WS         A-17,N-13           SNAP5261BL         A-14         SNAP5262IL         A-14         SNAP5362C1GY         A-18         SNAP5362WSCTRA         A-14           SNAP5261GY         A-14         SNAP5262ILTRA         A-14         SNAP5362C1GYTRA         A-18         SNAP5362WTRA         A-14           SNAP5261GY         A-14         SNAP5262INA         A-14         SNAP5362C1II         A-18         SNAP8200A         A-12,M-5           SNAP5261GYTR         A-14         SNAP5262IS         A-17,N-13         SNAP5362C1ITRA         A-18         SNAP8200BKA         A-12,M-5           SNAP5261I         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1LA         A-18         SNAP8200BKA         A-12,M-5           SNAP5261LA         A-14         SNAP5262ITRA         A-14         SNAP5362C1LA         A-18         SNAP8200BKI         A-12,M-5           SNAP5261LA         A-14         SNAP5362C1TRA         A-18         SNAP8200BKITRA         A-12,M-5           SNAP5261LATRA         A-14         SNAP5362C1TRA         A-18         SNAP8200BKITRA         A-12,M-5           SNAP5261R         A-14         S			, -				
SNAP5261BL         A-14         SNAP5262IL         A-14         SNAP5362C1GY         A-18         SNAP5362WSCTRA         A-14           SNAP5261BLTR         A-14         SNAP5262ILTRA         A-14         SNAP5362C1GYTRA         A-18         SNAP5362WTRA         A-14           SNAP5261GYT         A-14         SNAP5262INA         A-14         SNAP5362C1ITRA         A-18         SNAP8200A         A-12,M-5           SNAP5261ITR         A-14         SNAP5262IS         A-17,N-13         SNAP5362C1ITRA         A-18         SNAP8200BKA         A-12,M-5           SNAP5261IT         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1ITRA         A-18         SNAP8200BKA         A-12,M-5           SNAP5261ITR         A-14         SNAP5262IRA         A-14         SNAP5362C1LATRA         A-18         SNAP8200BKLTRA         A-12,M-5           SNAP5261LAT         A-14         SNAP5262IA         A-14         SNAP5362C1LATRA         A-18         SNAP6200BKNA         A-12,M-5           SNAP5261R         A-14         SNAP5262IAA         A-14         SNAP5362C1W         A-18         SNAP6200BKSCTRA         A-12,M-5           SNAP5261RTR         A-14         SNAP5262IAA         A-14         SNAP5362C1W         A-18         SNAP6200BKSCTRA							
SNAP5261BLTR.         A-14         SNAP5262ILTRA         A-14         SNAP5362C1GYTRA         A-18         SNAP5362WTRA         A-14           SNAP5261GYY.         A-14         SNAP5262INA         A-14         SNAP5362C1I         A-18         SNAP8200A         A-12,M-5           SNAP5261GYTR         A-14         SNAP5262IS         A-17,N-13         SNAP5362C1ITRA         A-18         SNAP8200BKA         A-12,M-5           SNAP5261IIT         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1LA         A-18         SNAP8200BKL         A-12,M-5           SNAP5261ITR         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1LATRA         A-18         SNAP8200BKL         A-12,M-5           SNAP5261ITR         A-14         SNAP5262LA         A-14         SNAP5362C1R         A-18         SNAP8200BKNA         A-12,M-5           SNAP5261LAR         A-14         SNAP5262LA         A-14         SNAP5362C1TRA         A-18         SNAP8200BKNA         A-12,M-5           SNAP5261RTR         A-14         SNAP5262LA         A-14         SNAP5362C1W         A-18         SNAP8200BKNA         A-12,M-5           SNAP5261RTR         A-14         SNAP5262LA         A-14         SNAP5362C1WTRA         A-18         SNAP8200BKTRA							
SNAP5261GY.         A-14         SNAP5262INA         A-14         SNAP5362C1I         A-18         SNAP8200A         A-12,M-5           SNAP5261GYTR         A-14         SNAP5262IS.         A-17,N-13         SNAP5362C1ITRA         A-18         SNAP8200BKA         A-12,M-5           SNAP5261I.         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1LA         A-18         SNAP8200BKL         A-12,M-5           SNAP5261IR         A-14         SNAP5262ITRA         A-14         SNAP5362C1LATRA         A-18         SNAP8200BKL         A-12,M-5           SNAP5261LA         A-14         SNAP5262LA         A-14         SNAP5362C1RR         A-18         SNAP8200BKNA         A-12,M-5           SNAP5261LATR         A-14         SNAP5262LA         A-14         SNAP5362C1RR         A-18         SNAP8200BKNCTRA         A-12,M-5           SNAP5261R         A-14         SNAP5262LA         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261R         A-14         SNAP5262LA         A-14         SNAP5362C1W         A-18         SNAP8200GYA         A-12,M-5           SNAP5261R         A-14         SNAP5262LA         A-14         SNAP5362C2BW         A-18         SNAP8200GYA         A-12,M-5 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
SNAP5261GYTR         A-14         SNAP5262IS         A-17,N-13         SNAP5362C1ITRA         A-18         SNAP8200BKA         A-12,M-5           SNAP5261I         A-14         SNAP5262ISCTRA         A-14         SNAP5362C1LA         A-18         SNAP8200BKL         A-12,M-5           SNAP5261ITR         A-14         SNAP5262ITRA         A-14         SNAP5362C1LATRA         A-18         SNAP8200BKLTRA         A-12,M-5           SNAP5261LA         A-14         SNAP5262LA         A-14         SNAP5362C1R         A-18         SNAP8200BKNA         A-12,M-5           SNAP5261LATR         A-14         SNAP5262LA         A-14         SNAP5362C1TRA         A-18         SNAP8200BKSCTRA         A-12,M-5           SNAP5261R         A-14         SNAP5262LA         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261RTR         A-14         SNAP5262LAL         A-14         SNAP5362C1WTRA         A-18         SNAP8200GYA         A-12,M-5           SNAP5261TR         A-14         SNAP5262LANA         A-14         SNAP5362C2         A-18         SNAP8200GYA         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYL							
SNAP5261ITR         A-14         SNAP5262ITRA         A-14         SNAP5362C1LATRA         A-18         SNAP8200BKLTRA         A-12,M-5           SNAP5261LA         A-14         SNAP5262L         A-14         SNAP5362C1R         A-18         SNAP8200BKNA         A-12,M-5           SNAP5261LATR         A-14         SNAP5262LAA         A-14         SNAP5362C1TRA         A-18         SNAP8200BKSCTRA         A-12,M-5           SNAP5261R         A-14         SNAP5262LAL         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261RR         A-14         SNAP5262LAL         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261RR         A-14         SNAP5262LAL         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261TR         A-14         SNAP5262LATRA         A-14         SNAP5362C2         A-18         SNAP8200GYL         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYL         A-12,M-5           SNAP5262BK         A-14         SNAP5262LAS         A-14         SNAP5362C2BKTRA         A-18         SNAP8200GYTRA <td< td=""><td></td><td></td><td></td><td>SNAP5362C1ITRA</td><td>A-18</td><td></td><td></td></td<>				SNAP5362C1ITRA	A-18		
SNAP5261LA         A-14         SNAP5262L         A-14         SNAP5362C1R         A-18         SNAP8200BKNA         A-12,M-5           SNAP5261LATR         A-14         SNAP5262LAA         A-14         SNAP5362C1TRA         A-18         SNAP8200BKSCTRA         A-12,M-5           SNAP5261R         A-14         SNAP5262LAL         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261TR         A-14         SNAP5262LANA         A-14         SNAP5362C2W         A-18         SNAP8200GYA         A-12,M-5           SNAP5261TR         A-14         SNAP5262LANA         A-14         SNAP5362C2BK         A-18         SNAP8200GYL         A-12,M-5           SNAP5261W         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BK         A-18         SNAP8200GYL         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BKTRA         A-18         SNAP8200GYL         A-12,M-5           SNAP5262BA         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BKTRA         A-18         SNAP8200GYSTRA         A-12,M-5           SNAP5262BK         A-14         SNAP5262LATRA         A-14         SNAP5262C2BKTRA         A-18         SNAP8200GYTRA		SNAP5262ISCTRA		SNAP5362C1LA			
SNAP5261LATR         A-14         SNAP5262LAA         A-14         SNAP5362C1TRA         A-18         SNAP8200BKSCTRA         A-12,M-5           SNAP5261R         A-14         SNAP5262LAL         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261RTR         A-14         SNAP5262LALTRA         A-14         SNAP5362C1WTRA         A-18         SNAP8200GYA         A-12,M-5           SNAP5261TR         A-14         SNAP5262LANA         A-14         SNAP5362C2         A-18         SNAP8200GYL         A-12,M-5           SNAP5261W         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYL         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYLTRA         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LAS         A-14,N-13         SNAP5362C2BKTRA         A-18         SNAP8200GYLTRA         A-12,M-5           SNAP5262BA         A-14         SNAP5262LAS         A-14         SNAP5362C2BKTRA         A-18         SNAP8200GYSCTRA         A-12,M-5           SNAP5262BKA         A-14         SNAP5262LTRA         A-14         SNAP5362C2GN         A-18         SNAP8200							
SNAP5261R         A-14         SNAP5262LAL         A-14         SNAP5362C1W         A-18         SNAP8200BKTRA         A-12,M-5           SNAP5261RTR         A-14         SNAP5262LALTRA         A-14         SNAP5362C1WTRA         A-18         SNAP8200GYA         A-12,M-5           SNAP5261TR         A-14         SNAP5262LANA         A-14         SNAP5362C2         A-18         SNAP8200GYL         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYL         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYLTRA         A-12,M-5           SNAP5262HWTR         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BK         A-18         SNAP8200GYLTRA         A-12,M-5           SNAP5262B         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BK         A-18         SNAP8200GYNA         A-12,M-5           SNAP5262BKA         A-14         SNAP5262LATRA         A-14         SNAP5362C2BK         A-18         SNAP8200GYTRA         A-12,M-5           SNAP5262BKL         A-14         SNAP5262NA         A-14         SNAP5362C2GNTRA         A-18         SNAP8200IGL </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
SNAP5261RTR         A-14         SNAP5262LALTRA         A-14         SNAP5362C1WTRA         A-18         SNAP8200GYA         A-12,M-5           SNAP5261TR         A-14         SNAP5262LANA         A-14         SNAP5362C2         A-18         SNAP8200GYL         A-12,M-5           SNAP5261W         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYL         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LAS         A-14         SNAP5362C2BK         A-18         SNAP8200GYNA         A-12,M-5           SNAP5262A         A-14         SNAP5262LATRA         A-14         SNAP5362C2BL         A-18         SNAP8200GYSCTRA         A-12,M-5           SNAP5262BKA         A-14         SNAP5262LTRA         A-14         SNAP5362C2GN         A-18         SNAP8200GYSCTRA         A-12,M-5           SNAP5262BKL         A-14         SNAP5262LTRA         A-14         SNAP5362C2GN         A-18         SNAP8200GYTRA         A-12,M-5           SNAP5262BKL         A-14         SNAP5262PA         A-14         SNAP5362C2GNTRA         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKNA         A-14         SNAP5262PA         A-14         SNAP5362C2ITRA         A-18         SNAP8200IGLTRA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
SNAP5261TR         A-14         SNAP5262LANA         A-14         SNAP5362C2         A-18         SNAP8200GYL         A-12,M-5           SNAP5261W         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYLTRA         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BKTRA         A-18         SNAP8200GYNA         A-12,M-5           SNAP5262A         A-14         SNAP5262LATRA         A-14         SNAP5362C2BL         A-18         SNAP8200GYSCTRA         A-12,M-5           SNAP5262BKA         A-14         SNAP5262LTRA         A-14         SNAP5362C2GN         A-18         SNAP8200GYSCTRA         A-12,M-5           SNAP5262BKL         A-14         SNAP5262LTRA         A-14         SNAP5362C2GN         A-18         SNAP8200GYTRA         A-12,M-5           SNAP5262BKLTRA         A-14         SNAP5262PA         A-14         SNAP5362C2GYTRA         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKSCTRA         A-14         SNAP5262RL         A-14         SNAP5362C2ITRA         A-18         SNAP8200IGLTRA         A-12,M-5,N-13           SNAP5262BKTRA         A-14         SNAP5262RLTRA         A-14         SNAP5362C2ITRA         A-18							
SNAP5261W         A-14         SNAP5262LAS         A-17,N-13         SNAP5362C2BK         A-18         SNAP8200GYLTRA         A-12,M-5           SNAP5261WTR         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BKTRA         A-18         SNAP8200GYNA         A-12,M-5           SNAP5262A         A-14         SNAP5262LATRA         A-14         SNAP5362C2BL         A-18         SNAP8200GYSCTRA         A-12,M-5           SNAP5262BKA         A-14         SNAP5262LTRA         A-14         SNAP5362C2GN         A-18         SNAP8200GYTRA         A-12,M-5           SNAP5262BKL         A-14         SNAP5262ITRA         A-14         SNAP5362C2GN         A-18         SNAP8200GYTRA         A-12,M-5           SNAP5262BKLTRA         A-14         SNAP5262PA         A-14         SNAP5362C2GNTRA         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKNA         A-14         SNAP5262RL         A-14         SNAP5362C2GYTRA         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKSCTRA         A-14         SNAP5262RLTRA         A-14         SNAP5262CZITRA         A-18         SNAP8200IGTRA         A-12,M-5,N-13           SNAP5262BL         A-14         SNAP5262RNA         A-14         SNAP5362CZITRA         A-18							
SNAP5261WTR         A-14         SNAP5262LASCTRA         A-14         SNAP5362C2BKTRA         A-18         SNAP8200GYNA         A-12,M-5           SNAP5262A         A-14         SNAP5262LATRA         A-14         SNAP5362C2BL         A-18         SNAP8200GYSCTRA         A-12,M-5           SNAP5262BKA         A-14         SNAP5262LTRA         A-14         SNAP5362C2GN         A-18         SNAP8200GYTRA         A-12,M-5           SNAP5262BKL         A-14         SNAP5262NA         A-14         SNAP5362C2GNTRA         A-18         SNAP8200IA         A-12,M-5           SNAP5262BKLTRA         A-14         SNAP5262RA         A-14         SNAP5362C2GY         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKNA         A-14         SNAP5262RL         A-14         SNAP5362C2GYTRA         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKSCTRA         A-14         SNAP5262RLTRA         A-14         SNAP5362C2I         A-18         SNAP8200IGTRA         A-12,M-5,N-13           SNAP5262BKTRA         A-14         SNAP5262RNA         A-14         SNAP5362C2ITRA         A-18         SNAP8200IL         A-12,M-5,N-13           SNAP5262BL         A-14         SNAP5262RNA         A-14         SNAP5362C2ITRA         A-18							
SNAP5262BKA       A-14       SNAP5262LTRA       A-14       SNAP5362C2GN       A-18       SNAP8200GYTRA       A-12,M-5         SNAP5262BKL       A-14       SNAP5262NA       A-14       SNAP5362C2GNTRA       A-18       SNAP8200IA       A-12,M-5         SNAP5262BKLTRA       A-14       SNAP5262RA       A-14       SNAP5362C2GY       A-18       SNAP8200IGL       A-12,M-5,N-13         SNAP5262BKNA       A-14       SNAP5262RL       A-14       SNAP5362C2GYTRA       A-18       SNAP8200IGLTRA       A-12,M-5,N-13         SNAP5262BKSCTRA       A-14       SNAP5262RLTRA       A-14       SNAP5362C2I       A-18       SNAP8200IGTRA       A-12,M-5,N-13         SNAP5262BKTRA       A-14       SNAP5262RNA       A-14       SNAP5362C2ITRA       A-18       SNAP8200IL       A-12,M-5,N-13         SNAP5262BL       A-14       SNAP5262RNA       A-14       SNAP5362C2ITRA       A-18       SNAP8200IL       A-12,M-5         SNAP5262BL       A-14       SNAP5262RSCTRA       A-14       SNAP5362C2LA       A-18       SNAP8200ILTRA       A-12,M-5		SNAP5262LASCTRA		SNAP5362C2BKTRA	A-18		
SNAP5262BKL         A-14         SNAP5262NA         A-14         SNAP5362C2GNTRA         A-18         SNAP8200IA         A-12,M-5           SNAP5262BKLTRA         A-14         SNAP5262RA         A-14         SNAP5362C2GY         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKNA         A-14         SNAP5262RL         A-14         SNAP5362C2GYTRA         A-18         SNAP8200IGL         A-12,M-5,N-13           SNAP5262BKSCTRA         A-14         SNAP5262RLTRA         A-14         SNAP5362C2I         A-18         SNAP8200IGTRA         A-12,M-5,N-13           SNAP5262BKTRA         A-14         SNAP5262RNA         A-14         SNAP5362C2ITRA         A-18         SNAP8200IL         A-12,M-5           SNAP5262BL         A-14         SNAP5262RNA         A-14         SNAP5362C2LA         A-18         SNAP8200IL         A-12,M-5							
SNAP5262BKLTRA       A-14       SNAP5262RA       A-14       SNAP5362C2GY       A-18       SNAP8200IGL       A-12,M-5,N-13         SNAP5262BKNA       A-14       SNAP5262BL       A-14       SNAP5362C2GYTRA       A-18       SNAP8200IGLTRA       A-12,M-5,N-13         SNAP5262BKSCTRA       A-14       SNAP5262BLTRA       A-14       SNAP5362C2I       A-18       SNAP8200IGTRA       A-12,M-5,N-13         SNAP5262BKTRA       A-14       SNAP5262BNA       A-14       SNAP5362C2ITRA       A-18       SNAP8200IL       A-12,M-5         SNAP5262BL       A-14       SNAP5262RSCTRA       A-14       SNAP5362C2LA       A-18       SNAP8200ILTRA       A-12,M-5							·
SNAP5262BKNA       A-14       SNAP5262RL       A-14       SNAP5362C2GYTRA       A-18       SNAP8200IGLTRA       A-12,M-5,N-13         SNAP5262BKSCTRA       A-14       SNAP5262RLTRA       A-14       SNAP5362C2I       A-18       SNAP8200IGTRA       A-12,M-5,N-13         SNAP5262BKTRA       A-14       SNAP5262RNA       A-14       SNAP5362C2ITRA       A-18       SNAP8200IL       A-12,M-5         SNAP5262BL       A-14       SNAP5262RSCTRA       A-14       SNAP5362C2LA       A-18       SNAP8200ILTRA       A-12,M-5							
SNAP5262BKSCTRA         .A-14         SNAP5262RLTRA         .A-14         SNAP5362C2I         .A-18         SNAP8200IGTRA         .A-12,M-5,N-13           SNAP5262BKTRA         .A-14         SNAP5262RNA         .A-14         SNAP5362C2ITRA         .A-18         SNAP8200IL         .A-12,M-5           SNAP5262BL         .A-14         SNAP5262RSCTRA         .A-14         SNAP5362C2LA         .A-18         SNAP8200ILTRA         .A-12,M-5							
SNAP5262BKTRA         A-14         SNAP5262RNA         A-14         SNAP5362C2ITRA         A-18         SNAP8200IL         A-12,M-5           SNAP5262BL         A-14         SNAP5262RSCTRA         A-14         SNAP5362C2LA         A-18         SNAP8200ILTRA         A-12,M-5							
SNAP5262BLL							
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SNAPEQUILALTRA	SNAP6200LAA SNAP82001 ΔΙ	A-12,IVI-3 Δ_12 M_5						
SNAPB200LAYAR		,						
SNAP200LITAR								
SNAPSOULTRA								
SNAPSCOUND   A - 12_M-5								
SNAP6200FIG.   A - 12.M-5   SNAP6200TIMA   A - 12.M-5   SNAP6200TIME   A - 12.M-5	SNAP8200LTRA	A-12,M-5						
SNAPEQOORIGINA A-12M-51   SNAPEQUORIGINA A-12M-5   SPI4BG				,				
SNAPE2000HITRA A-12M-5 NAP2300HA A-12M-5 SP145SP1 R-3 S144 O-8 SNAP2600HITRA A-12M-5 SNAP2600HA A-12M-5 SNAP								
SNAP82001EL								
SNAP8200ILTR								
SNAP8200RNA			SNAP8300LAA	A-12,M-5	SP15USB1B	R-3	SS1426	O-12,Z-13
SNAP8200RSCTRA								
SNAP8200TRTA			SNAP8300LALTRA	A-12,M-5				
SNAP8200TFIA			SNAP8300LANA	A-12,M-5				
SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUITA   A. 12, M.5   SPIBAL   O.11, T.45   SSIC   O.10   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 12, M.5   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 12, M.5   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 12, M.5   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 12, M.5   SAMPRODUISB   A. 16, M.7.P.9   SAMPRODUISB   A. 12, M.5   SAMPRODUISB   A. 12, M								
SAMP2200USB K. A-16,M-7.P-9   SNAP2300RA								
SNAP8200USBGY	SNAP8200USB A-	16,M-7,R-9	SNAP8300NA	A-12,M-5	SP18AL	O-11,T-45		
SNAP8200USBIA								
SNAP8200USBIR A -16,M-7.R-9   SNAP8300RIGTRA A-12,M-5   SP24AL								
SANAPS200USBR								
SNAP8200USBW						,		
SNAP8200WA			SNAP8300RLTRA	A-12.M-5		,		
SNAP8200WLTRA	SNAP8200WA	A-12,M-5	SNAP8300RNA	A-12,M-5	SP24G	O-8,T-45	SS226	O-13,Z-13
SNAP8200WNTA	SNAP8200WL	A-12,M-5						
SNAP8200WSCTRA								
SNAP8200WTRA								
SNAP8210	SNAP8200WTRA	A-12,M-5						
SNAP8210ALTR	SNAP8210	A-12,M-5			SP34AL	O-8,T-45		
SNAP8210BK.   A-12,M-5   SNAP8300USBR   A-16,M-7,R-9   SP4AL   O-5,T-45   SS2309F1BKA   Q-25   SNAP8210BLR   A-12,M-5   SNAP8300USBR   A-16,M-7,R-9   SP5AL   O-5,T-45   SS2309F1GYA   Q-25   SNAP8210BLR   A-12,M-5   SNAP8300USBW   A-16,M-7,R-9   SP5EF   Y-9   SS2309FBKA   Q-25   SNAP8210BLR   A-12,M-5   SNAP8300WA   A-12,M-5   SP5ER   Y-9   SS2309FBKA   Q-25   SNAP8210GYR   A-12,M-5   SNAP8300WL   A-12,M-5   SP6AL   O-5,T-45   SS2309FBKA   Q-25   SNAP8210GYR   A-12,M-5   SNAP8300WL   A-12,M-5   SP6AL   O-5,T-45   SS2309FBKA   Q-25   SNAP8210IR   A-12,M-5   SNAP8300WLTRA   A-12,M-5   SP6AL   O-5,T-45   SS2309SBKA   Q-25   SNAP8210IR   A-12,M-5   SNAP8300WNA   A-12,M-5   SP6R   Y-9   SS2309SGYA   Q-25   SNAP8210IR   A-12,M-5   SNAP8300WSCTRA   A-12,M-5   SP7AL   O-6,T-45   SS2309SLBKA   Q-25   SNAP8210LA   A-12,M-5   SNAP8300WTRA   A-12,M-5   SP7AL   O-6,T-45   SS2309SLBKA   Q-25   SNAP8210LA   A-12,M-5   SNAP8310   A-12,M-5   SP82AL   O-6,T-45   SS2309TBKA   Q-25   SNAP8210RT   A-12,M-5   SNAP8310AL   A-12,M-5   SP82AL   O-6,T-45   SS2309TBKA   Q-25   SNAP8210TR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP83AL   O-6,T-45   SS2309TGYA   Q-25   SNAP8210TR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP83AL   O-6,T-45   SS2309TGYA   Q-25   SNAP8210TR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP83AL   O-6,T-45   SS230   O-8   SNAP8210TR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP83AL   O-6,T-45   SS24   O-8   SNAP8210TR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP84   P-39   SS24L   O-8   SNAP820WTR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP84   P-39   SS24L   O-8   SNAP820WTR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP84   P-39   SS24L   O-8   SNAP820WTR   A-12,M-5   SNAP8310BKR   A-12,M-5   SP85   A-47,D-16,O-9,P-35,Z-12   SNAP8262RS   A-16,M-7,N-13   SNAP8310BTR   A-12,M-5   SP84   P-39   SS24L   D-16,O-9,P-35,Z-12   SNAP8262RS   A-16,M-7,N-13   SNAP8310BTR   A-12,M-5   SP86   O-6,T-45   SS26   D-16,O-9,P-35,Z-12   SNAP8262RS   A-16,M-7,N-13   SNAP8310BTR   A-12,M-5   SP0W/D10S   U-8   SS26   D-16,O-9,P-35,Z-12   SNAP8300BKA   A-12,M-5	SNAP8210AL	A-12,M-5						
SNAP8210BKTR         A.12,M-5         SNAP8300USBR         A.16,M-7,R-9         SP5AL         .0-5,T-45         SS2309F1GYA         .Q-25           SNAP8210BLT         A.12,M-5         SNAP8300USBW         A-16,M-7,R-9         SP5EF         Y-9         SS2309FBLA         .Q-25           SNAP8210BLT         A.12,M-5         SNAP8300WA         A-12,M-5         SP5EF         Y-9         SS2309FBLA         .Q-25           SNAP8210GY.         A.12,M-5         SNAP8300WL         A-12,M-5         SP6AL         .Q-5,T-45         SS2309SBKA         .Q-25           SNAP8210I.         A.12,M-5         SNAP8300WL         A-12,M-5         SP6F         Y-9         SS2309SBKA         .Q-25           SNAP8210I.         A.12,M-5         SNAP8300WNA         A-12,M-5         SP6R         Y-9         SS2309SBKA         .Q-25           SNAP8210I.         A.12,M-5         SNAP8300WTRA         A-12,M-5         SP7G         .Q-6,T-45         SS2309SLBKA         .Q-25           SNAP8210LATR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82AL         .Q-6,T-45         SS2309SLBKA         .Q-25           SNAP8210RTR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82AL         .Q-6,T-45         SS2309SLBKA         .Q-25								
SNAP8210BL								
SNAP8210BLTR         A-12,M-5         SNAP8300WA         A-12,M-5         SP5ER         Y-9         SS2309FBKA         Q-25           SNAP8210GY         A-12,M-5         SNAP8300WL         A-12,M-5         SP6AL         .0-5,T-45         SS2309FGYA         .Q-25           SNAP8210I         A-12,M-5         SNAP8300WNA         A-12,M-5         SP6F         .Y-9         SS2309SGYA         .Q-25           SNAP8210ITR         A-12,M-5         SNAP8300WNA         A-12,M-5         SP6R         .Y-9         SS2309SGYA         .Q-25           SNAP8210ITR         A-12,M-5         SNAP8300WTRA         A-12,M-5         SP7AL         .G-6,T-45         SS2309SLBKA         .Q-25           SNAP8210LATR         A-12,M-5         SNAP8310         A-12,M-5         SP7GL         .G-6,T-45         SS2309TBKA         .Q-25           SNAP8210RTR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82AL         .G-6,T-45         SS2309TBKA         .Q-25           SNAP8210RTR         A-12,M-5         SNAP8310BL         A-12,M-5         SP83         .P-39         SS23L         .G-8           SNAP8210WTR         A-12,M-5         SNAP8310BK         A-12,M-5         SP84         .P-39         SS24L         .G-8	SNAP8210BKTT	A-12 M-5						
SNAP8210GYTR         A-12,M-5         SNAP8300WLTRA         A-12,M-5         SP6F         Y-9         SS2309SBKA         Q-25           SNAP8210II         A-12,M-5         SNAP8300WNA         A-12,M-5         SP6R         Y-9         SS2309SUSA         Q-25           SNAP8210ITR         A-12,M-5         SNAP8300WSCTRA         A-12,M-5         SP7AL         O-6,T-45         SS2309SUBKA         Q-25           SNAP8210LA         A-12,M-5         SNAP8300WTRA         A-12,M-5         SP7G.         O-6,T-45         SS2309SUGYA         Q-25           SNAP8210LATR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210RR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210RR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210RR         A-12,M-5         SNAP8310AL         A-12,M-5         SP83AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210RR         A-12,M-5         SNAP8310BLR         A-12,M-5         SP83AL         O-6,T-45         SS2309TBKA         Q-25								
SNAP8210I.         A-12,M-5         SNAP8300WNA         A-12,M-5         SP6R         Y-9         SS2309SGYA         Q-25           SNAP8210ITR         A-12,M-5         SNAP8300WSCTRA         A-12,M-5         SP7AL         O-6,T-45         SS2309SLBKA         Q-25           SNAP8210LA         A-12,M-5         SNAP8300WTRA         A-12,M-5         SP7G         O-6,T-45         SS2309SLGYA         Q-25           SNAP8210LATR         A-12,M-5         SNAP8310         A-12,M-5         SP82AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210RT         A-12,M-5         SNAP8310AL         A-12,M-5         SP82G         O-6,T-45         SS2309TGYA         Q-25           SNAP8210TR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82G         O-6,T-45         SS2309TGYA         Q-25           SNAP8210TR         A-12,M-5         SNAP8310BL         A-12,M-5         SP83         P-39         SS23L         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BKTR         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BL         A-12,M-5         SP8AL         O-6,T-45         SS26         A-47,D-16,O-9,P-35								
SNAP8210ITR         A-12,M-5         SNAP8300WSCTRA         A-12,M-5         SP7AL         O-6,T-45         SS2309SLBKA         Q-25           SNAP8210LA         A-12,M-5         SNAP8300WTRA         A-12,M-5         SP7G.         O-6,T-45         SS2309SLBKA         Q-25           SNAP8210LATR         A-12,M-5         SNAP8310         A-12,M-5         SP82AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210R         A-12,M-5         SNAP8310AL         A-12,M-5         SP82G.         O-6,T-45         SS2309TGYA         Q-25           SNAP8210RTR         A-12,M-5         SNAP8310ALTR         A-12,M-5         SP83         P-39         SS230         D-8           SNAP8210TR         A-12,M-5         SNAP8310BK         A-12,M-5         SP83AL         O-6,T-45         SS24         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BKTR         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BLT         A-12,M-5         SP84         P-39         SS26L         O-6,T-45         SS26C         D-16,O-9,P-35,Z-12           SNAP83262IS         A-16,M-7,N-13         SNAP8310BLTR         A-12,M-5         SP8G         O-6,T-45         SS26C <td></td> <td></td> <th></th> <td>·</td> <td></td> <td></td> <td></td> <td></td>				·				
SNAP8210LA         A-12,M-5         SNAP8300WTRA         A-12,M-5         SP7G         O-6,T-45         SS2309SLGYA         Q-25           SNAP8210LATR         A-12,M-5         SNAP8310         A-12,M-5         SP82AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210RTR         A-12,M-5         SNAP8310ALTR         A-12,M-5         SP82G         O-6,T-45         SS2309TGYA         Q-25           SNAP8210TR         A-12,M-5         SNAP8310ALTR         A-12,M-5         SP83         P-39         SS23L         O-8           SNAP8210W         A-12,M-5         SNAP8310BKTR         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BL         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8262GYS         A-16,M-7,N-13         SNAP8310BL         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8262IS         A-16,M-7,N-13         SNAP8310BL         A-12,M-5         SP8AL         O-6,T-45         SS26         A-47,D-16,O-9,P-35,C-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GYT         A-12,M-5         SP8B         D-6,T-45         SS26L         D-16,O-9,Z-12								
SNAP8210LATR         A-12,M-5         SNAP8310         A-12,M-5         SP82AL         O-6,T-45         SS2309TBKA         Q-25           SNAP8210RR         A-12,M-5         SNAP8310AL         A-12,M-5         SP82G         O-6,T-45         SS2309TGYA         Q-25           SNAP8210TR         A-12,M-5         SNAP8310ALTR         A-12,M-5         SP83A         P-39         SS23L         O-8           SNAP8210TR         A-12,M-5         SNAP8310BK         A-12,M-5         SP83AL         O-6,T-45         SS24         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BKTR         A-12,M-5         SP83AL         O-6,T-45         SS24         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BLTR         A-12,M-5         SP8AL         O-6,T-45         SS26         A-47,D-16,O-9,P-35           SNAP8262GYS         A-16,M-7,N-13         SNAP8310BLTR         A-12,M-5         SP8AL         O-6,T-45         SS26         D-16,O-9,P-35,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GYTR         A-12,M-5         SPBG         O-6,T-45         SS262         D-16,O-9,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GYTR         A-12,M-5         SPB2         H-18         SS262         D-16,O-9,Z-1								
SNAP8210R         A-12,M-5         SNAP8310AL         A-12,M-5         SP8G         O-6,T-45         SS2309TGYA         Q-25           SNAP8210TR         A-12,M-5         SNAP8310ALTR         A-12,M-5         SP83         P-39         SS23L         O-8           SNAP8210TR         A-12,M-5         SNAP8310BK         A-12,M-5         SP83AL         O-6,T-45         SS24         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BKTR         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BL         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8262GYS         A-16,M-7,N-13         SNAP8310BL         A-12,M-5         SP84         O-6,T-45         SS262         D-16,O-9,P-35,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310BL         A-12,M-5         SP8G         O-6,T-45         SS262         D-16,O-9,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GY         A-12,M-5         SP8G         O-6,T-45         SS262         D-16,O-9,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GY         A-12,M-5         SPB1         H-18         SS262         D-16,O-9,Z-12				,		, -		
SNAP8210TR         A-12,M-5         SNAP8310BK         A-12,M-5         SP83AL         O-6,T-45         SS24         O-8           SNAP8210W         A-12,M-5         SNAP8310BKTR         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BL         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8262GYS         A-16,M-7,N-13         SNAP8310BL         A-12,M-5         SP8AL         O-6,T-45         SS26         A-47,D-16,O-9,P-35           SNAP8262IS         A-16,M-7,N-13         SNAP8310BLTR         A-12,M-5         SP8G         O-6,T-45         SS262         D-16,O-9,P-35,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GY         A-12,M-5         SPB1         H-18         SS262L         D-16,O-9,Z-12           SNAP8262RS         A-16,M-7,N-13         SNAP8310GYTR         A-12,M-5         SPDW/D10S         U-8         SS264         O-9,Z-12           SNAP8262RS         A-16,M-7,N-13         SNAP8310ITR         A-12,M-5         SPOW/D10S         U-8         SS265         O-9,Z-12           SNAP8300A         A-12,M-5         SNAP8310ITR         A-12,M-5         SPOW/D18S         U-8         SS266         O-9,Z-12     <							SS2309TGYA	Q-25
SNAP8210W         A-12,M-5         SNAP8310BKTR         A-12,M-5         SP84         P-39         SS24L         O-8           SNAP8210WTR         A-12,M-5         SNAP8310BL         A-12,M-5         SP8AL         O-6,T-45         SS26         A-47,D-16,O-9,P-35           SNAP8262GYS         A-16,M-7,N-13         SNAP8310BLTR         A-12,M-5         SP8G         O-6,T-45         SS262         D-16,O-9,P-35,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GY         A-12,M-5         SP8G         O-6,T-45         SS262         D-16,O-9,Z-12           SNAP8262LAS         A-16,M-7,N-13         SNAP8310GYTR         A-12,M-5         SPB1         H-18         SS262L         D-16,O-9,Z-12           SNAP8262RS         A-16,M-7,N-13         SNAP8310ITR         A-12,M-5         SPDW/D10S         U-8         SS264         O-9,Z-12           SNAP8362WS         A-16,M-7,N-13         SNAP8310LA         A-12,M-5         SPOW/D12S         U-8         SS265         O-9,Z-12           SNAP8300A         A-12,M-5         SNAP8310LA         A-12,M-5         SPOW/D18S         U-8         SS266         O-9,Z-12           SNAP8300BKA         A-12,M-5         SNAP8310RT         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         <								
SNAP8210WTR         .A-12,M-5         SNAP8310BL         .A-12,M-5         SP8AL         .O-6,T-45         SS26         .A-47,D-16,O-9,P-35           SNAP8262GYS         .A-16,M-7,N-13         SNAP8310BLTR         .A-12,M-5         SP8G         .O-6,T-45         SS262         .D-16,O-9,P-35,Z-12           SNAP8262IS         .A-16,M-7,N-13         SNAP8310GY         .A-12,M-5         SPB1         .H-18         SS262L         .D-16,O-9,Z-12           SNAP8262LAS         .A-16,M-7,N-13         SNAP8310GYTR         .A-12,M-5         SPB2         .H-18         SS263         .D-16,O-9,Z-12           SNAP8262RS         .A-16,M-7,N-13         SNAP8310I         .A-12,M-5         SPOWI/D10S         .U-8         SS264         .O-9,Z-12           SNAP8262WS         .A-16,M-7,N-13         SNAP8310ITR         .A-12,M-5         SPOWI/D12S         .U-8         SS265         .O-9,Z-12           SNAP8300A         .A-12,M-5         SNAP8310LA         .A-12,M-5         SPOWSWI/D18S         .U-8         SS266         .O-9,Z-12           SNAP8300BKA         .A-12,M-5         SNAP8310RT         .A-12,M-5         SPOWSWI/D10S         .U-8         SS26L         .D-16,O-9,Z-12           SNAP8300BKLTRA         .A-12,M-5         SNAP8310RT         .A-12,M-5         SPOWSWI/D18S	SNAP8210TR	A-12,M-5						
SNAP8262GYS         A-16,M-7,N-13         SNAP8310BLTR         A-12,M-5         SP8G         O-6,T-45         SS262         D-16,O-9,P-35,Z-12           SNAP8262IS         A-16,M-7,N-13         SNAP8310GY         A-12,M-5         SPB1         H-18         SS262L         D-16,O-9,Z-12           SNAP8262LAS         A-16,M-7,N-13         SNAP8310GYTR         A-12,M-5         SPB2         H-18         SS263         D-16,O-9,Z-12           SNAP8262RS         A-16,M-7,N-13         SNAP8310I         A-12,M-5         SPOWI/D10S         U-8         SS264         O-9,Z-12           SNAP8262S         A-16,M-7,N-13         SNAP8310ITR         A-12,M-5         SPOWI/D10S         U-8         SS265         O-9,Z-12           SNAP8300A         A-12,M-5         SNAP8310LA         A-12,M-5         SPOWI/D18S         U-8         SS266         O-9,Z-12           SNAP8300BKA         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKL         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKL         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D10S         U-8         SS26L	SNAP8210W	A-12,IVI-5						
SNAP8262IS.         A-16,M-7,N-13         SNAP8310GY.         A-12,M-5         SPB1         H-18         SS262L         D-16,O-9,Z-12           SNAP8262LAS.         A-16,M-7,N-13         SNAP8310GYTR         A-12,M-5         SPB2         H-18         SS263         D-16,O-9,Z-12           SNAP8262RS.         A-16,M-7,N-13         SNAP8310I.         A-12,M-5         SPOW/D10S         U-8         SS264         O-9,Z-12           SNAP8262S.         A-16,M-7,N-13         SNAP8310ITR         A-12,M-5         SPOW/D12S         U-8         SS265         O-9,Z-12           SNAP8262WS.         A-16,M-7,N-13         SNAP8310LA         A-12,M-5         SPOW/D18S         U-8         SS266         O-9,Z-12           SNAP8300A.         A-12,M-5         SNAP8310LATR         A-12,M-5         SPOWSWI/D18S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKA.         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKL.         A-12,M-5         SNAP8310RT         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKLRA         A-12,M-5         SNAP8310RT         A-12,M-5         SPOWSWI/D18S         U-8         SS2						,		
SNAP8262RS         A-16,M-7,N-13         SNAP8310I         A-12,M-5         SPOWI/D10S         U-8         SS264         O-9,Z-12           SNAP8262S         A-16,M-7,N-13         SNAP8310ITR         A-12,M-5         SPOWI/D12S         U-8         SS265         O-9,Z-12           SNAP8262WS         A-16,M-7,N-13         SNAP8310LA         A-12,M-5         SPOWI/D18S         U-8         SS266         O-9,Z-12           SNAP8300A         A-12,M-5         SNAP8310LATR         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKA         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKL         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKL         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D12S         U-8         SS2C         O-10           SNAP8300BKLTRA         A-12,M-5         SNAP8310TR         A-12,M-5         SPOWSWI/D18S         U-8         SS2L         D-16,O-5           SNAP8300BKNA         A-12,M-5         SNAP8310W         A-12,M-5         SPPR10         Y-8,Y-12         SS309B         P-								
SNAP8262S         A-16,M-7,N-13         SNAP8310ITR         A-12,M-5         SPOWI/D12S         U-8         SS265         O-9,Z-12           SNAP8262WS         A-16,M-7,N-13         SNAP8310LA         A-12,M-5         SPOWI/D18S         U-8         SS266         O-9,Z-12           SNAP8300A         A-12,M-5         SNAP8310LATR         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKA         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D10S         U-8         SS2C         O-10           SNAP8300BKL         A-12,M-5         SNAP8310RTR         A-12,M-5         SPOWSWI/D18S         U-8         SS2C         O-10           SNAP8300BKLTRA         A-12,M-5         SNAP8310TR         A-12,M-5         SPOWSWI/D18S         U-8         SS2L         D-16,O-5           SNAP8300BKNA         A-12,M-5         SNAP8310TR         A-12,M-5         SPPBK10         Y-8,Y-12         SS309B         P-35,Q-26,U-16           SNAP8300BKSCTRA         A-12,M-5         SNAP8310WTR         A-12,M-5         SPUF         Y-9         SS309B         P-35,Q-26,U-16           SNAP8300BKTRA         A-12,M-5         SNAP8362GYS         A-16,M-7,N-13         SPUR         Y-9         SS309D         P-								
SNAP8262WS         A-16,M-7,N-13         SNAP8310LA         A-12,M-5         SPOW/D18S         U-8         SS266         O-9,Z-12           SNAP8300A         A-12,M-5         SNAP8310LATR         A-12,M-5         SPOWSWI/D10S         U-8         SS26L         D-16,O-9,Z-12           SNAP8300BKA         A-12,M-5         SNAP8310R         A-12,M-5         SPOWSWI/D12S         U-8         SS2C         O-10           SNAP8300BKL         A-12,M-5         SNAP8310RTR         A-12,M-5         SPOWSWI/D18S         U-8         SS2C         D-16,O-5           SNAP8300BKLTRA         A-12,M-5         SNAP8310TR         A-12,M-5         SPPBK10         Y-8,Y-12         SS3         D-16,O-5           SNAP8300BKNA         A-12,M-5         SNAP8310W         A-12,M-5         SPPR10         Y-8,Y-12         SS309B         P-35,Q-26,U-16           SNAP8300BKTRA         A-12,M-5         SNAP8310WTR         A-12,M-5         SPUF         Y-9         SS309BF         P-35,Q-26,U-16           SNAP8300BKTRA         A-12,M-5         SNAP8362GYS         A-16,M-7,N-13         SPUR         Y-9         SS309D         P-35,Q-26,U-16								
SNAP8300A       A-12,M-5       SNAP8310LATR       A-12,M-5       SPOWSWI/D10S       U-8       SS26L       D-16,O-9,Z-12         SNAP8300BKA       A-12,M-5       SNAP8310R       A-12,M-5       SPOWSWI/D12S       U-8       SS2C       O-10         SNAP8300BKL       A-12,M-5       SNAP8310RTR       A-12,M-5       SPOWSWI/D18S       U-8       SS2C       D-16,O-5         SNAP8300BKLTRA       A-12,M-5       SNAP8310TR       A-12,M-5       SPPBK10       Y-8,Y-12       SS3       D-16,O-5         SNAP8300BKNA       A-12,M-5       SNAP8310W       A-12,M-5       SPPR10       Y-8,Y-12       SS309B       P-35,Q-26,U-16         SNAP8300BKSCTRA       A-12,M-5       SNAP8310WTR       A-12,M-5       SPUF       Y-9       SS309BF       P-35,Q-26,U-16         SNAP8300BKTRA       A-12,M-5       SNAP8362GYS       A-16,M-7,N-13       SPUR       Y-9       SS309D       P-35,Q-26,U-16	SNAP82625 A-10	6,M-7,N-13						
SNAP8300BKA       A-12,M-5       SNAP8310R       A-12,M-5       SPOWSWI/D12S       U-8       SS2C       O-10         SNAP8300BKL       A-12,M-5       SNAP8310RTR       A-12,M-5       SPOWSWI/D18S       U-8       SS2C       D-16,O-5         SNAP8300BKLTRA       A-12,M-5       SNAP8310TR       A-12,M-5       SPPBK10       Y-8,Y-12       SS3       D-16,O-5         SNAP8300BKNA       A-12,M-5       SNAP8310W       A-12,M-5       SPPR10       Y-8,Y-12       SS309B       P-35,Q-26,U-16         SNAP8300BKSCTRA       A-12,M-5       SNAP8310WTR       A-12,M-5       SPUF       Y-9       SS309BF       P-35,Q-26,U-16         SNAP8300BKTRA       A-12,M-5       SNAP8362GYS       A-16,M-7,N-13       SPUR       Y-9       SS309D       P-35,Q-26,U-16				,				
SNAP8300BKL       A-12,M-5       SNAP8310RTR       A-12,M-5       SPOWSWI/D18S       U-8       SS2L       D-16,O-5         SNAP8300BKLTRA       A-12,M-5       SNAP8310TR       A-12,M-5       SPPBK10       Y-8,Y-12       SS3       D-16,O-5         SNAP8300BKNA       A-12,M-5       SNAP8310W       A-12,M-5       SPPR10       Y-8,Y-12       SS309B       P-35,Q-26,U-16         SNAP8300BKSCTRA       A-12,M-5       SNAP8310WTR       A-12,M-5       SPUF       Y-9       SS309BF       P-35,Q-26,U-16         SNAP8300BKTRA       A-12,M-5       SNAP8362GYS       A-16,M-7,N-13       SPUR       Y-9       SS309D       P-35,Q-26,U-16								
SNAP8300BKNA       A-12,M-5       SNAP8310W       A-12,M-5       SPPR10       Y-8,Y-12       SS309B       P-35,Q-26,U-16         SNAP8300BKSCTRA       A-12,M-5       SNAP8310WTR       A-12,M-5       SPUF       Y-9       SS309BF       P-35,Q-26,U-16         SNAP8300BKTRA       A-12,M-5       SNAP8362GYS       A-16,M-7,N-13       SPUR       Y-9       SS309D       P-35,Q-26,U-16	SNAP8300BKL	A-12,M-5	SNAP8310RTR	A-12,M-5				
SNAP8300BKSCTRA      A-12,M-5       SNAP8310WTR      A-12,M-5       SPUF      Y-9       SS309BF      P-35,Q-26,U-16         SNAP8300BKTRA      A-12,M-5       SNAP8362GYS      A-16,M-7,N-13       SPUR      Y-9       SS309D      P-35,Q-26,U-16								
SNAP8300BKTRA								

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SSI								
SS44			SSJ26	O-16	TX2002002002T00	J-2,T-68	USB20AC5BK	A-27,R-8,Z-7
\$\( \text{S44} \) \$\( \text{O} \) \$\( \text{S45} \) \$\( \text{O} \) \$\( \text{S46} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{O} \) \$\( \text{S48} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\( \text{S48} \) \$\( \text{C} \) \$\(								
SS4C.         O-10         SSJ8.         O-16         TX2904002304700         J-2-F68         US8200ASW         A-27 R-8.27           SS4.         O-5         SSJ8.         O-16         TX290600230400         J-2-F68         US820CS         A-27 R-8.27           SS5.         O-10         SSK60         H-13         TX290600230400         J-2-F68         US820CSF         A-27 R-8.27           SS6.         O-5         SWB1         A-40         TX200600230400         J-2-F68         US820CSF         A-27 R-9.27           SS60.         O-10         SWB5         A-40         TX2004003000710         J-2-F68         US820CSL         A-27 R-9.27           SS60.         O-5         SWB2         A-40         UB12         J-36         US820CSL         A-27 R-9.27           SS60.         O-5         SWB4         A-40         UB12         J-36         US820CSL         A-27 R-9.27           SS70.         A-47.8-9.78         SWP1         O-19         UB18         J-36         US820CA         A-27 R-9.27           SS702.         O-7         SWP18         O-19         UB30         J-36         US821         A-27 R-9.27           SS702.         O-7         SWP18         O-19         UB0								
SSS.         O-5         SSK         H-13         TX2906002304000         J-2-FeB         USB20CSGK         A-77-R-2.77           SSSC         O-10         SSK60         H-13         TX2906002304000         J-2-FeB         USB20CSGY         A-77-R-2.77           SS60         O-5         SWB2         A-40         TX200400430004700         J-2-FeB         USB20CSL         A-77-R-2.77           SS60         O-10         SWB5         A-40         UB12         J-36         USB20CSL         A-77-R-2.77           SS6C         O-10         SWB5         A-40         UB12         J-36         USB20CSW         A-27-R-2.77           SS7         A-47.8-50.0-R-25         SWP1         O-19         UB18         J-36         USB20CSW         A-27-R-2.77           SS70         A-50.0-7.95         SWP12         O-19         UB18         J-36         USB20CA         A-27-R-2.77           SS70         A-70.0-75         SWP18         O-19         UB30         J-36         USB21A         A-27-R-2.77           SS702         O-7         SWP18         O-19         UFC0001         X-73         USB21A         A-27-R-2.77           SS716         O-7         SWP18         O-19         UFC0001CR <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
SSSC         O-10         SSK60         H-13         TX298002304C00         J-2.Te8         USB20C5GY         A-7.R-2.7           SS607         O-5         SWB2         A-40         TX200403004T00         J-2.Te8         USB20C5IA         A-7.R-8.27           SS608         O-5         SWB4         A-40         UB12         J-36         USB20C5IA         A-7.R-8.27           SS60         O-10         SWB5         A-40         UB12         J-36         USB20K         A-7.R-9.27           SS70         A-47,B-50-6-P35         SWP1         O-19         UB18         J-36         USB20K         A-7.R-9.27           SS701         A-50,O-7,P-35         SWP12         O-19         UB18         J-36         USB21         A-27.R-9.27           SS702         O-7         SWP13         O-19         UB300         J-36         USB21         A-27.R-9.27           SS703         A-90,-7,P-35         SWP13         O-19         UFC0001         X-73         USB21         A-27.R-9.27           SS703         A-90,-7,P-35         SWP18         O-19         UFC0001         X-73         USB24         A-27.R-9.27           SS703         A-91         UFC0001         X-73         USB44								
SS6.   O-5   SWB2								
SS607         0-5         SWB2         A-40         TXS004000004T00.         J-2.768         USB20CSIA.         A-27.R-2.7           SS60.         0-10         SWB5         A-40         UB12.         J-36         USB20SIK.         A-27.R-2.7           SS7.         A-47,B-50.6-R-95         SWP1         0-19         UB18.         J-36         USB2IK.         A-27.R-9.2.7           SS701         A-50,O-7.P-35         SWP12         0-19         UB18.         J-36         USB2I.         A-27.R-9.2.7           SS702.         O-7         SWP12         0-19         UB30.         J-36         USB2I.         A-27.R-9.2.7           SS703.         A-90.7-P-35         SWP13         0-19         UB30.         J-36         USB2I.         A-27.R-9.2.7           SS703.         A-90.7-P-35         SWP13         0-19         UFC0001.         X-73         USB4.         A-27.R-9.2.7           SS716.         O-7         SWP18         0-19         UFC0001.         X-73         USB4.         A-27.R-9.2.7           SS726.         O-6.P-35         SWP28         0-19         UFC00012.         X-73         USB4V.         A-27.R-9.2.7           SS723.         A-40.P-7         SWP26         0-19								
SMBC   O-10   SWBS   A-40   UB12E   J-36   USB2B/K   A-27,R-9,27   SS701   A-50,0-7,P-35   SWP1   O-19   UB18   J-36   USB2D/K   A-27,R-9,27   SS701   A-50,0-7,P-35   SWP12   O-19   UB18E   J-36   USB2D   A-27,R-9,27   SS702   O-7   SWP18   O-19   UB300   J-36   USB2D   A-27,R-9,27   SS703   A-49,0-7,P-35   SWP13   O-19   UB30E   J-36   USB2W   A-27,R-9,27   SS703   A-49,0-7,P-35   SWP13   O-19   UFC0001   X-73   USB4   A-27,R-9,27   SS705   O-7   SWP18   O-19   UFC0001   X-73   USB4   A-27,R-9,27   SS716   O-7   SWP2   O-19   UFC0001   X-73   USB4   A-27,R-9,27   SS72   O-6,P-35   SWP2   O-19   UFC0001   X-73   USB4   A-27,R-9,27   SS72   O-6,P-35   SWP2   O-19   UFC00001   X-73   USB4   A-27,R-9,27   SS723   A-49,0-7   SWP26   O-19   UFC0000   X-73   USB4   A-27,R-9,27   SS723   A-49,0-7   SWP26   O-19   UFC00003   X-73   USB4   A-27,R-9,27   SS725   B-49,0-7,A-11   SWP28   O-19   UFC00003   X-73   USB4   A-27,R-9,27   SS725   B-49,0-7,A-11   SWP28   O-19   UFC00003   X-73   USB4   A-27,R-9,27   SS725   B-49,0-7,A-11   SWP28   O-19   UFC20001   X-73   USB8200AS   A-27,M-10,R-8   SS738   O-15   SWP3   O-19   UFC2003   X-73   USB8200AS   A-27,M-10,R-8   SS738   O-15   SWP8   O-19   UFC2003   X-73   USB8200AS   A-27,M-10,R-8   SS739   O-15   SWP8   O-19   UGP10231   A-40   USB8200AS   A-27,M-10,R-8   SS741   O-15   SWP8   O-19   UGP10231   A-40   USB8200AS   A-27,M-10,R-8   SS741   O-15   SWP81   O-19   UGRA20231   A-40   USB8200AS   A-27,M-10,R-8   SS748   O-6   TB2   F-28   USB102   R-9   USB8200AS   A-27,M-10,R-8   SS748   O-6   TB2   F-28   USB102   R-9   USB8200AS   A-27,M-10,R-8   SS748   O-6   TB2   F-28   USB102   R-9   USB8200AS   A-27,M-10,R-8   SS749   O-11   TP0.L   H-14   USB102A   R-9   USB8200AS   A-27,M-10,R-8   SS749   O-11   TP0.L   H-14   USB102B   R-9   USB8200AS   A-27,M-10,R-8   SS749   O-11   TP0.L   H-14   USB102B   R-9   USB8200AS   A-27,M-10,R-8   SS84   O-6   TB2   F-28   USB102B   R-9   USB8200AS   A-27,M-10,R-8   SS84   O-6   TB2   F-28   USB16AS   A-27,R-8,2-7   USB8200AS   A-27,M	SS607	O-5	SWB2	A-40				
SST								
SS701								
SS702								
SS703	SS702	O-7					USB2LA	A-27,R-9,Z-7
SS716								
SS72								
SS720								
SS722	SS720 B-52,O-7,P-3	35,AA-11	SWP26	O-19			USB4I	A-27,R-9,Z-7
SS725   B-49,0-7,AA-11   SWP28   O-19   UFC2001CR   X-73   USB8200A5   A-27,M-10,R-8   SS737   B-65,B-68,0-7   SWP3   O-19   UFC2003CR   X-73   USB8200A5BK   A-27,M-10,R-8   SS738   O-15   SWP4   O-19   UGP15231   A-40   USB8200A5GY   A-27,M-10,R-8   SS739   O-15   SWP8   O-19   UGP20231   A-40   USB8200A5I   A-27,M-10,R-8   SS740   O-5   SWP812   O-19   UGR20231   A-40   USB8200A5I   A-27,M-10,R-8   SS741   O-15   SWP813   O-19   UGR020231   A-40   USB8200A5I   A-27,M-10,R-8   SS741   O-6   SWP82   O-19   USB10   Y-14   USB8200A5R   A-27,M-10,R-8   SS748   O-6   TB2   F-28   USB102   R-9   USB8200A5C   A-27,M-10,R-8   SS749   O-7   TB5   F-28   USB102   R-9   USB8200A5C   A-27,M-10,R-8   SS749   O-7   TB5   F-28   USB102BK   R-9   USB8200A5E   A-27,M-10,R-8   SS750   B-60,O-22,AA-15   TPC100   H-14   USB102EK   R-9   USB8200A5C   A-27,M-10,R-8   SS771   O-18   TPC50   H-14   USB1021   R-9   USB8200A5C   A-27,M-10,R-8   SS78   O-11   TPDL   H-14   USB1021   R-9   USB8200A5C   A-27,M-10,R-8   SS78   A-47,B-50,O-6,P-35   TPF1BK   Y-10   USB15A5   A-27,R-8,2-7   USB8200A5C   A-27,M-10,R-8   SS844   O-6   TBDS   H-14   USB15A5   A-27,R-8,2-7   USB8200A5   A-27,M-10,R-8   SS820   O-6,P-35   TPF1BK   Y-10   USB15A5G   A-27,R-8,2-7   USB8200A5   A-27,M-10,R-8   SS820   O-6,P-35   TPF1BK   Y-10   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-6,P-35   TPF1BK   Y-10   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-6   TBDS1AL   P-53   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-6   TBDS1BR   P-53   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-6   TIBDS1BR   P-53   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-17   TIBDS1BK   P-53   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-17   TIBDS2BK   P-53   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-17   TIBDS2BK   P-53   USB15A5G   A-27,R-8,2-7   USB8200C5   A-27,M-10,R-8   SS820   O-17   TIBDS2BK   P-53   USB15A5G   A-27,R-8,2-7   USB8200A5   A-2								
SS737   B-65,B-68,O-7   SWP3   O-19   UFC2003CR								
SS738							USB8200A5 USB8200A5BK	A-27,M-10,N-8
\$\$740	SS738	O-15	SWP4	O-19	UGP15231		USB8200A5GY.	A-27,M-10,R-8
SS741								
\$\$747.							USB8200A5LA	A-27,M-10,R-8 A-27 M-10 R-8
\$\$748.							USB8200A5W	A-27,M-10,R-8
\$\ \text{S5750} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \							USB8200AC5	A-27,M-10,R-8
\$\$771.								
\$\$78.								
SS8         A-47,B-50,0-6,P-35         TPF1BK         Y-10         USB15A5         A-27,R-8,Z-7         USB8200AC5W         A-27,M-10,R-8           SS8147         0-13         TPF1GY         Y-10         USB15A5BK         A-27,R-8,Z-7         USB8200C5         A-27,M-10,R-8           SS82         0-6,P-35,AA-42         TPF10W         Y-10         USB15A5GY         A-27,R-8,Z-7         USB8200C5BK         A-27,M-10,R-8           SS82         0-6         T1Z-13         TPF1W         Y-10         USB15A5I         A-27,R-8,Z-7         USB8200C5BK         A-27,M-10,R-8           SS82         0-6         TTBDS1AL         P-53         USB15A5I         A-27,R-8,Z-7         USB8200C5I         A-27,M-10,R-8           SS82MEV         0-17         TTBDS1BK         P-53         USB15A5W         A-27,R-8,Z-7         USB8200C5LA         A-27,M-10,R-8           SS83         0-6         TTBDS1BR         P-53         USB15AC5         A-27,R-8,Z-7         USB8200C5R         A-27,M-10,R-8           SS84         0-6         TTBDS2BK         P-53         USB15AC5GK         A-27,R-8,Z-7         USB8300A5         A-27,M-10,R-8           SS8L         B-50,0-6         TTBDS2BR         P-53         USB15AC5GY         A-27,R-8,Z-7         USB8300A5BK	SS78	0-11					USB8200AC5LA	A-27,M-10,R-8
SS8147         O-13         TPF1GY         Y-10         USB15A5BK         A-27,R-8,Z-7         USB8200C5         A-27,M-10,R-8           SS82         O-6,P-35,AA-42         TPF1OW         Y-10         USB15A5GY         A-27,R-8,Z-7         USB8200C5BK         A-27,M-10,R-8           SS826         O-11,Z-13         TPF1W         Y-10         USB15A5I         A-27,R-8,Z-7         USB8200C5GY         A-27,M-10,R-8           SS82L         O-6         TTBDS1AL         P-53         USB15A5LA         A-27,R-8,Z-7         USB8200C5I         A-27,M-10,R-8           SS82MEV         O-17         TTBDS1BK         P-53         USB15A5W         A-27,R-8,Z-7         USB8200C5LA         A-27,M-10,R-8           SS83         O-6         TTBDS1BR         P-53         USB15AC5         A-27,R-8,Z-7         USB8200C5R         A-27,M-10,R-8           SS84         O-6         TTBDS2AL         P-53         USB15AC5BK         A-27,R-8,Z-7         USB8200C5W         A-27,M-10,R-8           SS81         B-50,O-6         TTBDS2BR         P-53         USB15AC5GY         A-27,R-8,Z-7         USB8300A5BK         A-27,M-10,R-8           SSMEV         O-17         TTBKSAL         P-53         USB15AC5GY         A-27,R-8,Z-7         USB8300A5BK         A-27,M-10,								
SS82         O-6,P-35,AA-42         TPF10W         Y-10         USB15A5GY         A-27,R-8,Z-7         USB8200C5BK         A-27,M-10,R-8           SS826         O-11,Z-13         TPF1W         Y-10         USB15A5I         A-27,R-8,Z-7         USB8200C5GY         A-27,M-10,R-8           SS82L         O-6         TTBDS1AL         P-53         USB15A5LA         A-27,R-8,Z-7         USB8200C5I         A-27,M-10,R-8           SS82MEV         O-17         TTBDS1BK         P-53         USB15A5W         A-27,R-8,Z-7         USB8200C5I         A-27,M-10,R-8           SS83         O-6         TTBDS1BR         P-53         USB15AC5         A-27,R-8,Z-7         USB8200C5R         A-27,M-10,R-8           SS84         O-6         TTBDS2AL         P-53         USB15AC5BK         A-27,R-8,Z-7         USB8200C5W         A-27,M-10,R-8           SS870         O-11         TTBDS2BK         P-53         USB15AC5GY         A-27,R-8,Z-7         USB8300A5E         A-27,M-10,R-8           SS8MEV         O-17         TTBKSAL         P-53         USB15AC5LA         A-27,R-8,Z-7         USB8300A5GY         A-27,M-10,R-8           SSF11         Y-9         TTBKSBK         P-53         USB15AC5W         A-27,R-8,Z-7         USB8300A5GY         A-27,M-10,R-8								, ,
SS826         O-11,Z-13         TPF1W         Y-10         USB15A5I         A-27,R-8,Z-7         USB8200C5GY         A-27,M-10,R-8           SS82L         O-6         TTBDS1AL         .P-53         USB15A5LA         .A-27,R-8,Z-7         USB8200C5I         .A-27,M-10,R-8           SS82MEV         O-17         TTBDS1BK         .P-53         USB15A5W         .A-27,R-8,Z-7         USB8200C5LA         .A-27,M-10,R-8           SS83         O-6         TTBDS1BR         .P-53         USB15AC5         .A-27,R-8,Z-7         USB8200C5R         .A-27,M-10,R-8           SS84         O-6         TTBDS2AL         .P-53         USB15AC5BK         .A-27,R-8,Z-7         USB8300A5         .A-27,M-10,R-8           SS8720         O-11         TTBDS2BR         .P-53         USB15AC5GY         .A-27,R-8,Z-7         USB8300A5BK         .A-27,M-10,R-8           SS8MEV         .D-17         TTBKSAL         .P-53         USB15AC5LA         .A-27,R-8,Z-7         USB8300A5GY         .A-27,M-10,R-8           SSF11         .D-21         TTBKSBK         .P-53         USB15AC5LA         .A-27,R-8,Z-7         USB8300A5GY         .A-27,M-10,R-8           SSF12         .Y-9         TTBKSBR         .P-53         USB15C5BK         .A-27,R-8,Z-7         USB8300A5LA								
SS82MEV         O-17         TTBDS1BK         P-53         USB15A5W         A-27,R-8,Z-7         USB8200C5LA         A-27,M-10,R-8           SS83         O-6         TTBDS1BR         P-53         USB15AC5         A-27,R-8,Z-7         USB8200C5R         A-27,M-10,R-8           SS84         O-6         TTBDS2AL         P-53         USB15AC5BK         A-27,R-8,Z-7         USB8200C5W         A-27,M-10,R-8           SS8720         O-11         TTBDS2BK         P-53         USB15AC5GY         A-27,R-8,Z-7         USB8300A5         A-27,M-10,R-8           SS8L         B-50,O-6         TTBDS2BR         P-53         USB15AC5I         A-27,R-8,Z-7         USB8300A5BK         A-27,M-10,R-8           SS8MEV         O-17         TTBKSAL         P-53         USB15AC5LA         A-27,R-8,Z-7         USB8300A5GY         A-27,M-10,R-8           SSF1         D-21         TTBKSBK         P-53         USB15AC5W         A-27,R-8,Z-7         USB8300A5I         A-27,M-10,R-8           SSF12         Y-9         TTBKSBK         P-53         USB15C5         A-27,R-8,Z-7         USB8300A5LA         A-27,M-10,R-8           SSF13         Y-9         TTBXLRBK         P-53         USB15C5BK         A-27,R-8,Z-7         USB8300A5BA         A-27,M-10,R-8	SS826	-11,Z-13	TPF1W	Y-10	USB15A5I	A-27,R-8,Z-7	USB8200C5GY.	A-27,M-10,R-8
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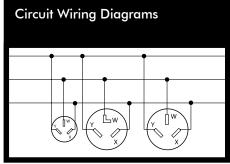
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•	Push Button			
	Bell			
$\blacksquare$	Outside telephone			
$\square$	Interconnecting telephone			
$\mathbb{N}$	Telephone switchboard			
(†)	Bell ringing transformer			
D	Electric door opener			

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#### **Product Standards and Installation Codes**

Standards and codes of many types developed by and for our industry form a vital consideration in the design of our products. The following pages in this section briefly describe the functions of the organizations producing the standards which influence the safety and design of wiring devices.

The American Boat and Yacht Council Inc. (ABYC) is a not-for-profit membership organization that has been developing and updating the safety standards for boat building and repair for over 50 years. ABYC is actively involved with the International Organization for Standardization (ISO) and is a leader in education for the marine industry, as well as certification programs for marine technicians. ABYC's membership includes boat builders, boat owners, surveyors, boat yards, insurance companies, law firms, trade associations, marinas, dealerships, government agencies, educational institutions and equipment and accessory manufacturers. Over 400 volunteers donate time, expertise, and research while serving on technical committees, which develop and revise the ABYC standards and technical information reports. We ensure quality and professionalism in each of ABYC's services.

**UL LLC, formely Underwriters Laboratories Inc. (UL)** A for-profit corporation, operating in two distinct roles, as a certifier and testing facility, and as a developer of safety standards. By its own definition, Underwriters Laboratories defines itself as follows: "Underwriters Laboratories Inc. founded in 1894, is chartered as a not-for-profit organization without capital stock, under the laws of the state of Delaware to establish, maintain, and operate laboratories for the examination and testing of devices, systems and materials to determine their relation to hazards to life and property." On January 1,

2012, UL moved to a for-profit structure.

Separate from product certifications, UL develops consensus safety standards for the U.S. UL evaluates products for paying "clients" and if the product submitted passes the requirements of the UL standard for which it is submitted, a UL "Listing" is granted which allows the manufacturer to use the UL manifest or "Label" on its products. Electrical inspectors or other Authorities Having Jurisdiction (AHJs) use UL Listings of products to determine acceptability of electrical installations. It is important to remember that UL is not an approval agency. It approves nothing, but lists a product as meeting minimum standards for safety. The Underwriters "Listing" mark on a product is generally accepted by the public and government agencies as evidence of a "safe" product, not necessarily a "quality" product.

CSA Group, formerly Canadian Standards Association (CSA) is a not-for-profit membership-based association and performs a function for manufacturers similar to that performed in the USA by Underwriters Laboratories Inc. (UL) and National Fire Protection Association (NFPA). CSA Standards develops product safety standards for Canada, which parallel UL standards in many aspects but are not always identical. CSA International evaluates products and grants paying clients "Certification" that their products meet CSA Standards. CSA Standards also sponsors the Canadian Electrical Code (CE Code).

American National Standards Institute, Inc. (ANSI) as the voice of the U.S. standards and conformity assessment system, the American National Standards Institute (ANSI) empowers its members and constituents to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the protection of the environment.

The Institute oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector: from acoustical devices to construction equipment, from dairy and livestock production to energy distribution, and many more. ANSI is also actively engaged in accrediting programs that assess conformance to standards – including globally-recognized cross-sector programs such as the ISO 9000 (quality), ISO 14000 (environmental) and ISO 17025 (laboratory) management systems.

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes international standards for all electrical, electronic and related technologies. These serve as a basis for national standardization and as references when drafting international tenders and contracts. Through its members, the IEC promotes international cooperation on all questions of electrotechnical standardization and related matters, such as the assessment of conformity to standards, in the fields of electricity, electronics and related technologies.

IEC's international standards facilitate world trade by removing technical barriers to trade, leading to new markets and economic growth. Put simply, a

### **Product Standards and Installation Codes**

component or system manufactured to IEC standards and manufactured in country A can be sold and used in countries B through Z. IEC's standards are vital since they also represent the core of the World Trade Organization's Agreement on Technical Barriers to Trade (TBT), whose 100-plus central government members explicitly recognize that international standards play a critical role in improving industrial efficiency and developing world trade.

### The National Electrical Code® (NEC®)

The NEC is a model installation code developed by NFPA's Committee on the National Electrical Code®, which consists of 19 Code-Making Panels and a Technical Correlating Committee. Work on the NEC is sponsored by the National Fire Protection Association (NFPA). The NEC is approved as an American National Standard by the American National Standards Institute (ANSI). It is formally identified as ANSI/NFPA 70. The NEC must be adopted locally by legislation or regulation.

First published in 1897, the NEC is updated and published every three years. The 2017 edition will be published in October 2016. Most states adopt the most recent edition within a couple of years of its publication. As with any "uniform" code, a few jurisdictions regularly omit or modify some sections, or add their own requirements (sometimes based upon earlier versions of the NEC, or locally accepted practices). However, the NEC is the least amended model code, even with it setting minimum standards. No court has faulted anyone for using the latest version of the NEC, even when the local code was not updated to the most recent edition.

National Electrical Manufacturers Association (NEMA®) An organization of over 450 manufacturers of electrical equipment, including, but not limited to, wiring devices, wire and cable, conduit, load centers, pressure wire connectors, circuit breakers, fuses, etc. NEMA is the "voice" of the electrical industry, and through it, standards are developed for electrical distribution.

Generally these standards promote interchangeability between products of one manufacturer with like products made by another manufacturer. In some cases, standards relating to product "performance" are also formulated by NEMA but these are the exception rather than the rule.

NEMA standards are not compulsory, but generally are accepted by those manufacturers that help to write them as a way of making their products more saleable and acceptable. However, many NEMA

standards, such as ANSI/NEMA WD 6, are approved by the American Standards Institute and referenced by mandatory UL and CSA product standards. NEMA standards are utilized by many consumers in writing specifications for the materials they purchase. NEMA does not evaluate or certify products or enforce regulations.

General Services Administration Federal Supply Service (GSA) Federal Supply Service (FSS) provides federal customers with the products, services, and programs to meet their supply, service, procurement, vehicle purchasing and leasing, travel and transportation, and personal property management requirements. Hubbell offers devices listed by UL as FED SPEC and can be found throughout this catalog.

Occupational Safety and Health Administration (OSHA) is a branch of the US Department of Labor which was created to assure safe and healthful working conditions for working men and women. OSHA uses regulations from the Federal Register, NFPA and the National Electric Code to establish and enforce safety standards for the workplace. It is important to note: OSHA does NOT approve products. OSHA enforces existing safety regulations.

### Canadian Electrical Code, Part I (CE Code)

The CE Code is a model installation code developed by the Committee on CE Code, Part I, composed of members representing inspection authorities, manufacturing and utilizing industries, utilities and allied interests. The Committee meets annually to address reports submitted by 43 section subcommittees. Work on CE Code, Part I is sponsored by CSA Standards. The product standards of CSA Standards comprise the Canadian Electrical Code, Part II.

First published in 1927, the CE Code, Part I, is updated and published every three years, prior to 2006 every four years. The 2012 CE Code, Part I, is the latest edition. As with any "uniform" code, provinces and a few jurisdictions regularly modify or add their own requirements.

NSF International, formerly National Sanitation Foundation (NSF) NSF International is a not-for-profit organization founded in 1944 from the University of Michigan's School of Public Safety. NSF develops public health standards, and provides and enforces certifications to protect food, water, and beverages. NSF is the leading certifier of food service equipment.

### **Certification Agencies and Markings**

### **Understanding Certification Marks:**

Certification marks vary significantly with respect to testing required to achieve a particular mark. In some cases, (i.e.: Specification Grade), no outside certification agency is involved. The manufacturer decides which of their products they wish to be so identified. The following table for 15 and 20A Straight Blade receptacles demonstrates these wide differences. The understanding of these marks permits the user/specifier to make more meaningful product selections.

Understanding Product Certification Marks - 15 and 20 Amp Straight Blade Receptacles Products that carry certification marks must meet the specific testing standards indicated

Certification Mark	Description	UL 498	CSA, C22.2 No. 42	UL 498 Hospital Grade	CSA, C22.2 No. 42 M Hospital Grade	DESC WC596
Spec Grade*	Self Certified, No Testing Required- A	dvertising	Trade N	ame		
<b>**:</b> **********************************	Used on recognized component parts that are part of a Listed product or system intended for the United States. Component "C" intended for Canada. Recognized components are intended only for installation by Original Equipment Manufacturers (OEMs) within their Listed products, and are not accepted by electrical inspectors for general-use field installations due to limitations called Conditions Of Acceptability (COA).	x				
c <b>511</b> °us **	Used on recognized component parts that are part of a Listed product or system intended for the United States and Canada. Recognized components are intended only for installation by Original Equipment Manufacturers (OEMs) within their Listed products, and are not accepted by electrical inspectors for general-use field installations due to limitations called Conditions Of Acceptability (COA).	x				
UL LISTED SP US	Products found with this mark means Underwriters Laboratory or CSA International found that representative samples of this product met Underwriters Laboratory's published Standards for Safety intended for the US market.	х				
<b>⊕</b> ••••	Products found with this mark are certified primarily for the Canadian market.		x			
c U us c O us	Products intended for US and Canada.	х	x			
• Hospital Grade	In addition to complying with general use requirements, this mark denotes these devise have been specially designed and are subject to additional requirements of the standards.	х		x		
<b>SP</b> ® • Hospital Grade	In addition to complying with general use requirements, this mark denotes these devise have been specially designed and are subject to additional requirements of the standards.		x		х	
F UL S	In addition to complying with general use grade requirements, this mark denotes receptacles also have been investigated for compliance with United States Federal Specification W-C-596.	х				х
F U S Fed. Spec. • Hospital Grade	In addition to complying with general use and hospital grade requirements, this mark denotes receptacles also have been investigated for compliance with United States Federal Specification W-C-596.	x		х		x

Note: \*Includes such variation as Premium Spec, Super Spec, etc.

### **Cross Reference Note:**

Recognize that cross reference guides supplied by some manufacturers should be used only to determine compatible devices (rating and configuration). It does not, in any way, deal with performance levels (which will vary widely by manufacturer). Common catalog numbers are often used for convenience of selection. The use of the same catalog number is solely the discretion of the manufacturer. It in no way implies compliance to any standard or testing criteria.

<sup>\*\*</sup>End Product test also required.

### **Industry Associations, Organizations and Standards**

For convenience, the following listings define common acronyms for a variety of organizations.

## Standards Development Organizations: Organizations primarily involved in the development and/or promulgation of standards.

ANSI American National Standards Institute.

CANENA Conseio de Armonizacion de los Naciones de America.

CSA Canadian Standards Association.

IEC International Electrotechnical Commission.
IEEE Institute of Electrical & Electronics Engineers, Inc.
ISA The Instrumentation, Systems and Automation Society.

ISO International Organization for Standardization.

LEEDS Leadership in Energy and Environmental Design.

NFPA National Fire Protection Association, Inc.

NSF National Sanitation Foundation.
SAE Society of Automotive Engineers.
SME Society of Manufacturing Engineers.
USGBC United States Green Building Council.
UL Underwriters Laboratories Inc.















#### **Installation Codes**

CEC Part I Canadian Electrical Code, Part I.

NEC® National Electrical Code®.

NOM Normas Oficiales Mexicanas (Mexican Electrical Code).





## Industry Associations: Associations of companies or individuals for the purpose of standardization, trade, and professional development, etc.

ABYC American Boat and Yacht Council.

ASTM American Society for Testing and Materials.

BICSI Building Industry Consulting Services International.

BOMA Building Owner Management Association.
CANAME Camara Nacional de Manufacturas Electricas.

CEMRA Canadian Electrical Manufacturers Representative Association.

ECOC Electrical Contractors of Canada.
EF-C Electro-Federation-Canada.
EIA Electronic Industries Alliance.
EPRI Electric Power Research Institute.

IAEI International Association of Electrical Inspectors.
IECI Independent Electrical Contractors International.
IFMA International Facilities Management Association.
NAED National Association of Electrical Distributors.

NAW National Association of Wholesalers.
NECA National Electrical Contractors Association.
NEMA National Electrical Manufacturers Association.

NEMRA National Electrical Manufacturers Representatives Association.

NMDA National Marine Distributor Association.
NMRA National Marine Representative Association.

SEMI Semi Conductor Equipment and Material International.

TIA Telecommunication Industry Association.

















### **Codes and Standards Organizations**

For convenience, the following listings define common acronyms for a variety of organizations.

Certification Agencies: Primarily involved in certification of products or manufacturers to standards developed by the certification agency or by others.

National Association of Normalization and Certification of the Electrical Sector. ANCE

BSI British Standards Institute.

Self Certification Marking of European Community. CE

CCC China Compulsory Certification.

Canadian Standards Association or CSA International. CSA

Factory Mutual. FΜ

NRTL Nationally Recognized (by OSHA) Testing Laboratory. Product Safety Electrical Appliance and Material (Japan). PSE

TÜV Rheinland of N.A., Inc. ΤÜV Underwriters Laboratories Inc. UL

VDF Verband Deutscher Elektrotechniker (Germany).





















Note: Hubbell products are in the process of being certified in Mexico. Many have already been certified. Consult with the factory for specific data.

#### **Government Agencies**

DSCC Defense Supply Center - Columbus.

European Union. EU

**FCC** Federal Communications Commission.

IAPA Industrial Accident & Prevention Association (Canada). **OSHA** Occupational Safety and Health Administration.

### Copies of standards referred to on the preceding pages may be purchased from the following:

### **American Boat and Yacht** Council, Inc. (ABYC)

613 Third Street, Suite 10 Annapolis, MD 21403

USA

### **The American National** Standards Institute (ANSI)

25 West 43rd Street, (between 5th and 6th Avenues), 4 floor New York, NY 10036

1819 L Street, NW (between 18th and 19th Streets), 6th floor Washington, DC 20036

USA

### CSA Group (CSA)

178 Rexdale Boulevard Toronto, Ontario M9W 1R3 CANADA

### **National Electrical Manufacturers** Association (NEMA)

1300 North 17th Street Rosslyn, VA 22209

USA

### **National Fire Protection** Association (NFPA)

1 Batterymarch Park Quincy, MA 02169-7471

USA

#### **NSF International (NSF)**

789 North Dixboro Road Ann Arbor, MI 49105

**USA** 

#### The International Electrotechnical Commission (IEC)

IEC Central Office 3, rue de Varembé P.O. Box 131

CH - 1211 GENEVA 20

Switzerland

### Asociacion Nacional de Normalizacion v Certificacion del Sector Electrico A.C. (NOM - ANCE)

Ibsen No.13,

Colonia Chapultepec Polanco, C.P.11560 México, D.F., Conmutador 5280-6775

### Occupational Safety and **Health Administration (OSHA)**

Occupational Safety & Health

Administration

200 Constitution Avenue, NW Washington, DC 20210

USA

#### UL LLC (UL)

Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 USA

### **AC Switch Data and Horsepower Explanation**

#### AC Test Requirements

When AC general use switches were considered by the industry and Underwriters' Laboratories, Inc. thought was given to the ratings and it was decided to rate the switches in accordance with NEC branch circuit ratings of 15, 20 and 30 amperes. It was also decided to test the switch for all the loads that could be applied to a branch circuit. Therefore, all AC switches are tested on resistance, tungsten lamp and inductive loads to 100% of switch rating.

# Underwriters' Laboratories and Canadian Standards Association Test requirements for AC General Use Switches

In order to be listed by Underwriters' Laboratories, Inc. and certified by CSA International, all 15, 20 and 30 amperes 120/277V AC switches must perform, without failure, the following sequence of tests.

- 1. An overload test of 100 cycles at 4.8 times rated current and 40-50% power factor and rated voltage. This overload test is performed at 144 amps, 277 volts for 30 ampere switches at 6-10 cycles per minute.
- 2. 10,000 cycles on a plain resistance load at full rating of 15, 20 or 30 amperes, at 277 volts at 18-24 cycles per minute.
- 3. 10,000 cycles on an inductive load of either 15, 20 or 30 amperes at 277 volts, 80% power factor at 24 cycles per minute.
- 4. 10,000 cycles at 15, 20 or 30 amperes, 120 volts on a tungsten filament lamp load at 6-10 cycles per minute.
- 5. Temperature rise at test-rated load. In this test, temperature rise must not exceed 30 degrees Celsius.
- 6. A switch shall withstand, without breakdown, 1500 volts for 1 minute between live parts of opposite polarity and between live parts and dead metal parts, with the switch at the maximum operating temperature reached in intended use.

### **Explanation of "Horsepower" Ratings**

Manual motor controllers marked with Horsepower Ratings are suitable for controlling the Motor Loads of the HP ratings shown on the manual motor controllers for that operating voltage as well as for lower HP ratings.

To qualify for an HP rating, a manual motor controllers is tested at (6) six times the full load Motor Current corresponding to the HP rating marked on the switch. (For DC Motor Controllers, the test is made at 10 times the full load Motor Current corresponding to the DC HP rating marked on the switch). The test consists of 50 on-off operations at this load and the test is conducted on (3) three samples. For ¾ HP 120 - 240 volts AC rating, (2) two sets of (3) three samples each are tested in addition to the regular overload, endurance, temp. rise and dielectric tests. The test circuit characteristics are:

	120V AC	240V AC
Closed Circuit Volts Current	120 volts AC 82.8 amps	240 volts AC 41.4 amps
Power Factor	0.40-0.50	0.40-0.50

Note: Current at 240V AC is 1/2 that at 120V AC

All manual motor controllers must be in good operating condition after the tests have been completed. There must be no excessive arcing, welding or burning of the contacts nor arc-over to the ground (the manual motor controller frames are grounded during the stalled rotor test).

### Wiring Device Standards and Testing

### **Wiring Device Standards**

There are many different marketing terms in the electrical industry to describe the various electrical receptacles available from different manufacturers. Some of these terms include: Spec-Grade, Commercial, Heavy Duty, Industrial, Hard-Use, etc. There are no clear or universal definitions for these terms. There is no criteria established to differentiate one term from the next. Reliance solely upon these terms is not a reliable measure of performance or durability in a given application.

Underwriters Laboratories (UL) recognized a need to categorize receptacles based on application and expectations of performance. As a result, UL verifies performance to the following designations. Here are brief descriptions of each:



**General Use - UL 498** – All duplex receptacles are required to meet these general requirements. Devices bearing the UL mark for general use have been tested to insure they can safely provide power in typical everyday usage (vacuum, lamps, electronics, etc.).



**Fed. Spec. - W-C-596** – The Federal Government wanted some way to determine that a receptacle performed better than average and would withstand the tougher demands of institutional use (post offices, military installations, prisons, etc.). Fed. Spec. listing identifies receptacles as having construction features, marking specifications and performance requirement (i.e., plug retention, increased cycle testing) beyond the requirements of the general use listing.



**Hospital Grade** – In addition to compliance with general use requirements, Hospital Grade receptacles must meet performance criteria designed to test: ground reliability, assembly integrity, overall strength and reliability. Hospital Grade devices are marked with a green dot on their face.



**Hospital Grade Fed. Spec.** – Receptacles meeting this designation meet requirements and have completed test programs for both Fed. Spec. and Hospital Grade receptacles. All Hubbell Hospital Grade devices are UL listed to this designation.

These UL designations are a better determinant of performance than marketing descriptions, for performance and durability.

### Wiring Device Standards and Testing

### Testing for Hospital Grade and Fed. Spec. Listing of Hubbell Receptacles, Plugs and Connectors

All Hubbell Hospital Grade products are tested quarterly in our factories with Underwriters Laboratories.

#### Receptacles

**Fed. Spec. Test: Ground Pin Retention Test** - The grounding contact of the receptacle is conditioned by twenty insertions with a 0.204 inch oversized diameter pin. After conditioning, a 0.184 inch diameter pin is inserted in the grounding contact must be capable of supporting a weight of at least 4 ounces for one minute.

**Fed. Spec. Test: Power Blade Retention Test** - A test plug with a single oversized blade measuring 0.075 inch thick is inserted into each current carrying contact for twenty conditioning cycles. When the conditioning cycles are completed, each contact must be capable of supporting, for one minute, 1.5 pounds secured to a single 0.055 inch thick solid steel blade without holes.

**HG Test:** Abrupt Removal of Plug Test - A steel bodied test plug with blades made of brass is inserted into the receptacle. A 10 pound weight dropped from at least 24 inches, pulls the plug out of the receptacle abruptly. This test is done eight times with the receptacle rotated in different positions to create the greatest stress to the face and contacts. Then, with the receptacle facing down, the grounding contact must retain a 4 ounce grounding pin with a 0.184 inch diameter for one minute. After this test there shall be no breakage of the receptacle that interferes with the receptacle function or to the integrity of the enclosure.

**Fed. Spec. Test: Assembly Security Test** - A force of 100 pounds is applied through the slots of the receptacle into the base while the bridge is supported at its screw mounting positions. Each receptacle is then examined for damage.

### **Plugs and Connectors**

**HG Test: Impact Test** – A plug or connector wired with the minimum size flexible cord is subjected to an impact from a 10 pound cylindrical weight having a flat face with a 2 inch diameter dropped from a height of 18 inches. After the test, there shall be no breakage or other damage that may effect the function of the device.

**HG Test: Mechanical Drop Test** – The cord connector is wired to #18 AWG flexible cord and suspended horizontally. It is released so it impacts a hardwood surface 45 inches below the point of suspension. This is repeated for 1,300 cycles. After the test, there shall be no breakage, deformation or other effect that may interfere with the function of the device.

**HG Test: 500 Pound Crush Test** – A wired plug or connector is placed between two hardwood slabs while subjected to a force which is progressively increased to 500 pounds. After the test, there shall be no breakage, deformation or other effect that may interfere with the function of the device.

**HG Test:** Strain Relief Test – While assembled to a plug or connector but not wired to the terminals; the cord must remain securely fastened after a straight pull of 30 pounds and a rotary motion within 3 inch circles with a 10 pound force applied for two consecutive hours. Displacement of conductors, insulation and outer jacket of the flexible cord shall not exceed 0.031 inch. There shall be no cuts, rips or tears in the insulation of the cord.

### RoHS, WR, TR and LED Power Descriptions



#### **RoHS - Restriction of Hazardous Substances**

This EU Directive, 2002/95/EC, prohibits the use of mercury, cadmium, lead, chromium VI, PBB (polybrominated biphenyls) and PBDE (polybrominated diphenyl ethers) in certain electrical products. The regulatory maximums for these items are 0.01%, by weight, for cadmium and 0.1%, by weight, for the other five items in each "homogenous unit" contained within that product. There are certain exemptions available from the RoHS requirements.



#### Weather Resistant Receptacles

Per National Electrical Code (NEC®) Section 406.9; all 125 and 250 volt, 15 and 20 amp non-locking receptacles for use in damp or wet locations shall be a listed weather resistant type. Listed devices are required to have a WR marking on the face visible when installed.



#### **Tamper-Resistant Receptacles**

Per National Electrical Code (NEC®) Section 406.12 now addresses all 15 and 20 ampere, 125 and 250 volt nonlocking-type receptacles in the areas specified in 406.12(1) through (7) shall be listed tamper-resistant receptacles. New occupancies have been added to the receptacle tamper-resistant requirements: Dwelling units, guest rooms and guest suites of hotels and motels, child care facilities, preschools and elementary education facilities, business offices, corridors, waiting rooms and in clinics, medical and dental offices and outpatient facilities, places of waiting transportation, gymnasiums, skating rinks, auditoriums and dormitories.



### **LED Power Indicators**

Most popularly used to identify emergency circuits in hospitals, the LED power indicators are bright enough to be visible in low light as well as bright daylight conditions.

## Tamper-Resistant SG Series Duplex Receptacle, Hospital Grade. How the SG Tamper-Resistant Receptacle Works.

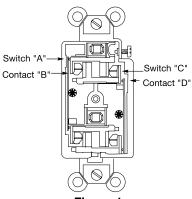


Figure 1

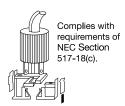


Figure 2

As shown in Figure 1, Switch "A" energizes the left hand Contact "B" and Switch "C" energizes the right hand Contact "D". The same arrangement applies to the lower portion of the outlet.

If, for example, a metallic object is inserted into the left power Contact "B" only, the object is not energized because it requires the additional insertion of a similar object in the opposite Contact "D" to move the slider to close Switch "A".

Similarly, if an object is inserted into the right hand slot only, it cannot become energized unless and additional object is inserted in the opposite slot to close Switch "C".

In other words it requires the presence of an object in both right and left hand contacts to energize the device. This condition is in practice fulfilled only by the insertion of the proper electrical plug as shown in Figure 2.

Remember, this receptacle can be used with either a 2 or 3 wire plug. No other tamper-resistant receptacle on the market can provide you with greater reliability and durability than the Hubbell hospital grade tamper resistant receptacle.

Complies with requirements of NEC Section 517-18(c).

NEC® is a registered trademark of the National Fire Protection Association (NFPA).

### **NEMA** and IEC Classifications

### Comparison Between NEMA Enclosure Type Numbers and IEC Enclosure Classification Designations

IEC Publication 60529 Classification of Degrees of Protection Provided by Enclosures provides a system for specifying the enclosures of electrical equipment on the basis of the degree of protection provided by the enclosure. IEC 60529 does not specify degrees of protection against mechanical damage of equipment, risk of explosions, or conditions such as moisture (produced for example by condensation), corrosive vapors, fungus, or vermin. NEMA Standards Publication 250 does test for environmental condition such as corrosion, rust, icing, oil, and coolants. For this reason, and because the tests and evaluations for other characteristics are not identical, the IEC Enclosure Classification Designations cannot be exactly equated with NEMA Enclosure Type Numbers. The IEC designation consists of the letters IP followed by two numerals. The first characteristic numeral indicates the degree of protection provided by the enclosure with respect to persons and solid foreign objects entering the enclosure. The second characteristic numeral indicates the degree of protection provided by the enclosure with respect to the harmful ingress of water.

The table below provides an equivalent conversion from NEMA Enclosure Type Numbers to IEC Enclosure Classification Designations. The NEMA Types meet or exceed the test requirements for the associated IEC Classifications; for this reason the table cannot be used to convert from IEC Classifications to NEMA Types.

### **Conversion of NEMA Type Numbers to IEC Classification Designations**

(Cannot be used to convert IEC classification designations to NEMA type numbers)

NEMA Enclosure Type Number	IEC Enclosure Classification Des- ignation	Basic Description
1	IP10	General Purpose
2	IP11	Dripproof- Indoor
3	IP54	Dusttight, Raintight and Sleet (Ice) Resistant- Outdoor
3R	IP14	Rainproof and Sleet (Ice) Resistant- Outdoor
3S	IP44, IP54	Dusttight, Raintight and Sleet (ice) Proof- Outdoor
4	IP56	Watertight and Dusttight- Indoor and Outdoor
4X	IP56	Watertight, Dusttight and Corrosion-Resistant - Indoor and Outdoor
5	IP52	Superseded by Type 12 for Control Apparatus
6	IP67	Submersible, Watertight, Dusttight and Sleet (Ice) Resistant- Indoor and Outdoor
12	IP52	Industrial Use, Dusttight and Driptight- Indoor
12K	IP52	Industrial Use, Dusttight and Driptight with Knockouts- Indoor
13	IP54	Oiltight and Dusttight- Indoor

#### Elements of the IP Code and Their Meanings - In Accordance with Standard IEC 60529

IP Suitability Ratings are a system for classifying the degree of ingress protection provided by enclosures of electrical equipment. Generally, the higher the number, the greater the degree of protection; they apply ONLY to properly installed equipment.

### Example: IP67 = Ingress Protection/Dust-Tight/Temporary Immersion

#### Meaning for the Protection of Equipment First Number **Code Letters** Second Number Against Ingress of Against Ingress of Water Ingress Protection Solid Foreign Objects with Harmful Effects 0 - Non-protected 0 - Non-protected ΙP 1 ≥ 50mm diameter 1 - Vertically dripping 2 ≥ 12.5mm diameter 2 - Dripping (15 Tilted) The numerals stand for the following: 3 - Spraying 3 ≥ 2.5mm diameter 4 - Splashing 4 ≥ 1.0mm diameter 1. First Numeral: degree of protection for persons against access to hazardous parts inside the 5 - Dust-protected 5 - Jetting enclosure and/or against the ingress of solid 6 - Dust-tight 6 - Power jetting foreign objects. 7 - Temporary immersion 2. Second Numeral: degree of protection of 8 - Continuous immersion equipment inside enclosures against damage from the ingress of water.

### **Enclosure Types for Self-Certified Non-Hazardous (Unclassified) Locations**

	NEMA Standards Publication No. 250 Enclosures for Electrical Equipment (1000 Volts maximum)	UL50E Standard for Enclosures for Electrical Equipment Environmental Considerations	CAN/CSA C22.2 No. 94.2 Special Purpose Enclosures
Designation	Intended Use and Description	Intended Use and Description	Intended Use and Description
Definition	An enclosure is a surrounding case constructed to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection to the enclosed equipment against specified environmental conditions.	Enclosure - A surrounding case constructed to provide a degree of protection against incidental contact with the enclosed equipment and to provide a degree of protection to the enclosed equipment against specified environmental conditions.	Enclosuresprovide a degree of protection against accidental contact with the enclosed equipment, and to the enclosed equipment, against specified environmental conditions.
Type 1	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dirt.	Indoor use primarily to provide a degree of protection against limited amounts of falling dirt.	No CSA equivalent.
Type 2	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment, to provide a degree of protection against falling dirt, and to provide a degree of protection against dripping and light splashing of non-corrosive liquids.	Indoor use primarily to provide a degree of protection against limited amounts of falling water and dirt.	An enclosure for indoor use, constructed so as to provide a degree of protection against dripping and light splashing of non-corrosive liquids, and falling dirt.
Type 3	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, and windblown dust; and that will be undamaged by the external formation of ice on the enclosure.	Outdoor use primarily to provide a degree of protection against rain, sleet, windblown dust and damage from external ice formation.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain, snow, and wind blown dust; undamaged by the external formation of ice on the enclosure.
Type 3X	Same as above and corrosion resistant.	Same as above and corrosion resistant.	Same as above and corrosion resistant.
Type 3R	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, and snow; and that will be undamaged by the external formation of ice on the enclosure.	Outdoor use primarily to provide a degree of protection against rain, sleet, and damage from external ice formation.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain and snow, undamaged by the external formation of ice on the enclosure.
Type 3RX	Same as above and corrosion resistant.	Same as above and corrosion resistant.	Same as above and corrosion resistant.
Type 3S	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, and windblown dust; and in which the external mechanism(s) remain operable when ice laden.	Outdoor use primarily to provide a degree of protection against rain, sleet, windblown dust, and to provide for operation of external mechanisms when ice laden.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain, snow, and windblown dust, the external mechanism(s) remain operable while ice covered.
Type 3SX	Same as above and corrosion resistant.	Same as above and corrosion resistant.	Same as above and corrosion resistant.
Type 4	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water, and hose-directed water, and that will be undamaged by the external formation of ice on the enclosure.	Indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water, hose-directed water, and damage from external ice formation.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain, snow, windblown dust, splashing and hose-directed water; undamaged by the external formation of ice on the enclosure.
Type 4X	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water, hose-directed water, and corrosion; and that will be undamaged by the external formation of ice on the enclosure.	Indoor or outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, hose-directed water and damage from external ice formation.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against rain, snow, windblown dust, splashing and hose-directed water, undamaged by the external formation of ice on the enclosure; resists corrosion.

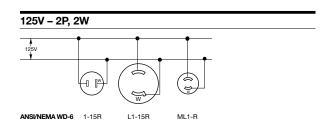
### **Enclosure Types for Self-Certified Non-Hazardous (Unclassified) Locations**

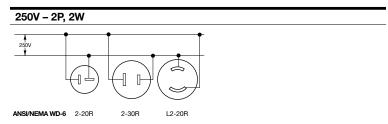
	NEMA Standards Publication No. 250 Enclosures for Electrical Equipment (1000 Volts maximum)	UL50E Standard for Enclosures for Electrical Equipment Environmental Considerations	CAN/CSA C22.2 No. 94.2 Special Purpose Enclosures
Designation	Intended Use and Description	Intended Use and Description	Intended Use and Description
Type 5	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against settling airborne dust, lint, fibers, and flyings; and to provide a degree of protection against dripping and light splashing of liquids.	Indoor use primarily to provide a degree of protection against settling airborne dust, falling dirt, and dripping non-corrosive liquids.	An enclosure for indoor use, constructed so as to provide a degree of protection against dripping and light splashing of non-corrosive liquids and settling dust, lint, fibers, and flyings.
Type 6	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against hose directed water and the entry of water during occasional temporary submersion at a limited depth; and that will be undamaged by the external formation of ice on the enclosure.	Indoor or outdoor use primarily to provide a degree of protection against hose-directed water, the entry of water during occasional temporary submersion at a limited depth, and damage from external ice formation.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against the entry of water during occasional temporary submersion at a limited depth; undamaged by the external formation of ice on the enclosure.
Type 6P	Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against hose-directed water and the entry of water during prolonged submersion at a limited depth; and that will be undamaged by the external formation of ice on the enclosure.	Indoor or outdoor use primarily to provide a degree of protection against hose-directed water, the entry of water during prolonged submersion at a limited depth, and damage from external ice formation.	An enclosure for either indoor or outdoor use, constructed so as to provide a degree of protection against the entry of water during prolonged submersion at a limited depth; undamage by the external formation of ice on the enclosure; resists extended corrosion.
Type 12	Enclosures constructed (without knockouts) for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against circulating dust, lint, fibers, and flyings; and against dripping and light splashing of liquids.	Indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping non-corrosive liquids.	An enclosure for indoor use, constructed so as to provide a degree of protection against circulating dust, lint fibers, and flyings; dripping and light splashing of non-corrosive liquids; and provided with knockouts.
Type 12K	Enclosures constructed (with knockouts) for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against circulating dust, lint, fibers, and flyings; and against dripping and light splashing of liquids.	Indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping non-corrosive liquids.	An enclosure for indoor use, constructed so as to provide a degree of protection against circulating dust, lint fibers, and flyings; dripping and light splashing of non-corrosive liquids; and provided with knockouts.
Type 13	Enclosures constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt; against circulating dust, lint, fibers, and flyings; and against the spraying, splashing, and seepage of water, oil, and non-corrosive coolants.	Indoor use primarily to provide a degree of protection against dust, spraying of water, oil, and non-corrosive coolant.	An enclosure for indoor use, constructed so as to provide a degree of protection against circulating dust, lint, fibers, and flyings; seepage and spraying of non-corrosive liquids including oils and coolants.

### **Circuit Wiring Diagrams**

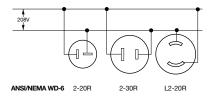
### **Wiring Diagrams for NEMA Configurations**

(Configurations shown are for female devices)

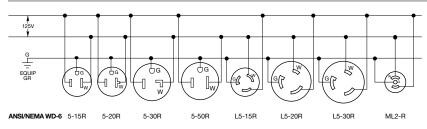




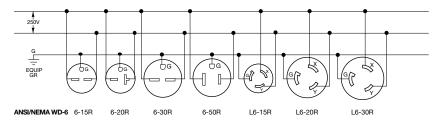
#### 208V AC Line-to-Line\* - 2P, 2W



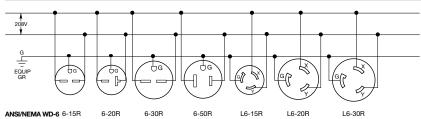
#### 125V - 2P, 3W - Grounding



### 250V - 2P, 3W - Grounding



### 208V AC Line-to-Line\* - 2P, 3W - Grounding



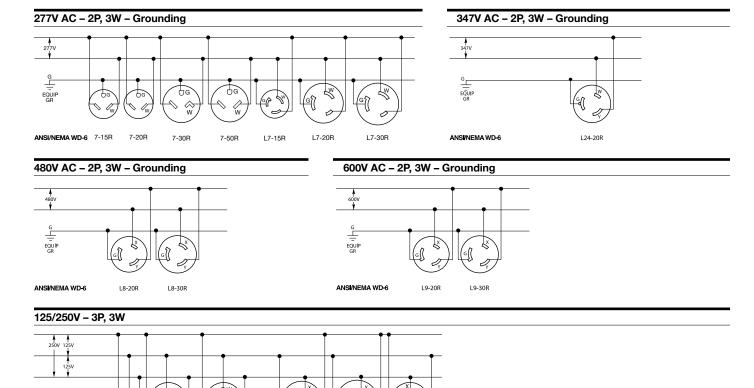
Note: \*Does NOT encompass 208V AC Line-to-Neutral.

The above diagrams are intended to show device terminal identification only.

### **Circuit Wiring Diagrams**

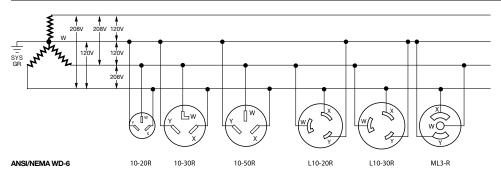
### **Wiring Diagrams for NEMA Configurations**

(Configurations shown are for female devices)



#### 1Ø 120/208YV AC - 3P, 3W

ANSI/NEMA WD-6

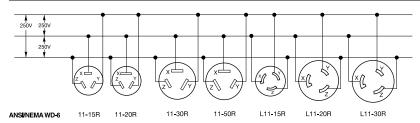


### **Circuit Wiring Diagrams**

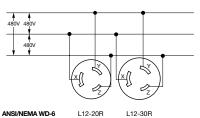
### **Wiring Diagrams for NEMA Configurations**

(Configurations shown are for female devices)

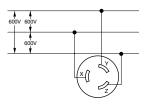
### 3Ø 250V AC - 3P, 3W



### 3Ø 480V AC - 3P, 3W



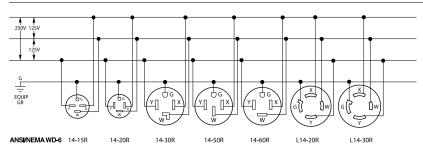
3Ø 600V AC - 3P, 3W



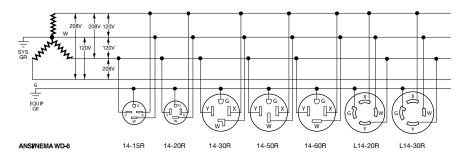
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ANSI/NEMA WD-6

### 125/250V - 3P, 4W



### 1Ø 120/208YV AC - 3P, 4W - Grounding

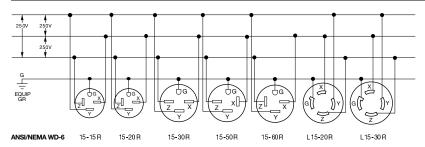


### **Circuit Wiring Diagrams**

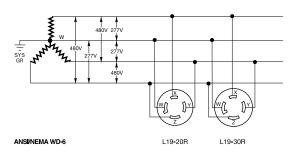
### **Wiring Diagrams for NEMA Configurations**

(Configurations shown are for female devices)

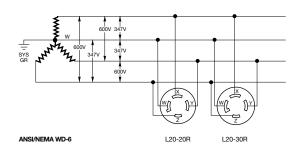
### 3Ø 250V - 3P, 4W - Grounding



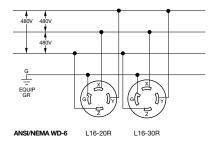
### 3ØY 277/480V AC - 4P, 4W



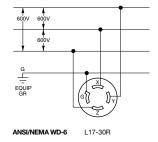
### 3ØY 347/600V AC - 4P, 4W



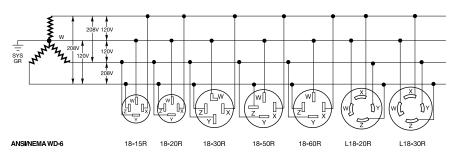
### 3Ø 480V AC - 3P, 4W - Grounding



### 3Ø 600V AC - 3P, 4W - Grounding



#### 3ØY 120/208V AC - 4P, 4W

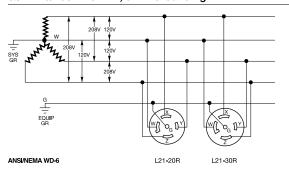


### **Circuit Wiring Diagrams**

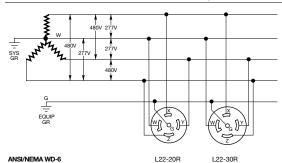
### **Wiring Diagrams for NEMA Configurations**

(Configurations shown are for female devices)

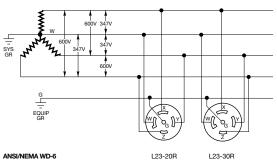
### 3ØY 120/208V AC - 4P, 5W - Grounding



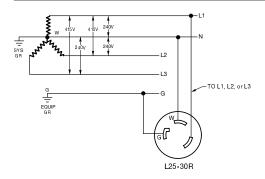
### 3ØY 277/480V AC - 4P, 5W - Grounding



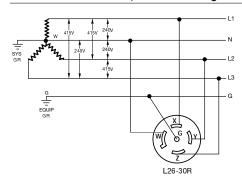
### 3ØY 347/600V AC - 4P, 5W - Grounding



### 3ØY 220/380V AC - 4P, 5W - Grounding



### 3ØY 240/415V AC - 4P, 5W - Grounding



### Horsepower Ratings and UL 508A Table SB4.1

Horsepower Ratings for NEMA Configurations - Plugs and Receptacles Only

Straight Blade			Locking				
NEMA Configuration	AC HP Rating <sup>1</sup>	NEMA Configuration	AC HP Rating <sup>1</sup>	NEMA Configuration	AC HP Rating <sup>1</sup>	NEMA Configuration	AC HP Rating <sup>1</sup>
1-15 2-15 2-20 2-30	0.5 1.5* 2* 2*	11-15 11-20 11-30 11-50	2 3 3 7.5	L1-15 L2-20 L5-15 L5-20	0.5 2* 0.5	L11-15 L11-20 L11-30	2 3 3
5-15 5-20 5-30 5-50	0.5 1 2 2	14-15 14-20	1.5 L-L* 0.5 L-N 2 L-L*	L5-30 L6-15 L6-20 L6-30	1.5* 2* 2* 2*	L12-20 L12-30 L14-20	5 10 2 L-L* 1 L-N
6-15 6-20 6-30 6-50	1.5* 2* 2* 3*	14-30	1 L-N 2 L-L* 2 L-N	L7-15 L7-20 L7-30	2 2 3	L14-30 L15-20 L15-30	2 L-L* 2 L-N 3 3
7-15 7-20 7-30 7-50	2 2 3 5	14-50 14-60 15-15	3 L-L* 2 L-N 3 L-L* 2 L-N	L8-20 L8-30	3 5	L16-20 L16-30 L18-20 L18-30	5 10 2 3
10-20	2 L-L* 1 L-N 2 L-L* 2 L-N	15-20 15-30 15-50 15-60	2 3 3 7.5 10	L10-20	2 L-L* 1 L-N 2 L-L* 2 L-N	L19-20 L19-30 L21-20 L21-30 L22-20	5 10 2 3 5
10-50	3 L-L* 2 L-N	18-15 18-20 18-30 18-50 18-60	2 2 3 7.5 7.5		2 L-1V	L22-20 L22-30 L25-30 L26-30	5 10 2 7.5

Note: ¹The phase to phase horsepower ratings are noted "L-L". The phase to neutral ratings are identified "L-N".

# UL 231 Table 2.1, UL 508A Table SB4.1, UL 891 Table 16 - Assumed Maximum Short Circuit Current Rating for Unmarked Components When Used in UL 231 Power Outlets, UL 508A Industrial Control Panels, and UL 891 Switchboards

Component	Short Circuit Current Rating, kA
Bus bars	10
Circuit breaker (including GFCI type)	5
Current meters	a
Current shunt	10
Fuseholder	10
Industrial control equipment:	
a. Auxiliary devices (overload relay)	5
b. Switches (other than mercury tube type)	5
c. Mercury tube switches	
- Rated over 60 amperes or over 250 volts	5
- Rated 250 volts or less, 60 amperes or less, and over 2 kVA	3.5
- Rated 250 volts or less and 2 kVA or less	1
Motor controller, rated in horsepower (kW)	_
a. 0 – 50 (0 – 37.3)	5c
b. 51 – 200 (38 – 149)	10c
c. 201 – 400 (150 – 298)	18c
d. 401 – 600 (299 – 447)	30c
e. 601 – 900 (448 – 671)	42c 85c
f. 901 – 1500 (672 – 1193) Meter socket base	10
Miniature or miscellaneous fuse	10 10b
Receptacle (GFCI type)	2
Receptacle (other than GFCI type)	10
Supplementary protector	0.2
Switch unit	5
Terminal block or power distribution block	10

Note: a A short circuit current rating is not required when connected via a current transformer or current shunt.

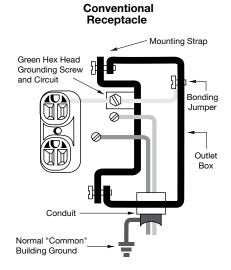
<sup>\*</sup>Also suitable for 208V Line-to-Line, not 208V Line-to-Neutral.

A directly connected current meter shall have a marked short circuit current rating.

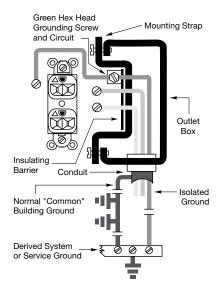
b The use of a miniature fuse is limited to 125-volt circuits.

c Standard fault current rating for motor controller rated within specified horsepower range.

### **Isolated Ground Story**



#### Isolated Ground Receptacle



### **Hubbell Isolated Ground Receptacles**

Why do you need an isolated ground device?

When mounting a conventional receptacle in a steel box, the ground is commonly established through the existing electrical system. This is done by using either the grounding clip on the receptacle's mounting strap, or by running a ground wire (which is part of the "normal" existing system) to the green grounding screw.

In a conventional receptacle the grounding contacts are connected to the mounting strap and the green grounding screw. Thus, even when a separate green wire is brought to the receptacle, it is still tied into the normal ground. This occurs since the mounting strap is in contact with the box grounding system, therefore, a "pure" isolated path to the ground is not established.

#### The Problem

The conventional grounding receptacle provides safety for personnel and equipment. However, the ground network also serves as a giant antenna and conductor of electrical noise. This electrical noise is electromagnetic interference and is caused by numerous transient ground currents. This can produce random transient electrical signals on the grounding system.

As a result, sensitive electronic equipment such as point of purchase terminals, accounting machines, computers and highly sensitive medical and communications equipment, can pick up these transient signals. This can interfere with the proper operation of the equipment.

#### **The Solution**

The isolated ground receptacle is similar to a conventional receptacle except for one important change. Insulating barrier construction, first patented by Hubbell, isolates the ground contacts from the mounting strap. The green grounding screw is connected directly to the grounding contacts. The isolated equipment grounding circuit is completed by running an isolated ground wire to the green grounding screw. This ground wire passes through intermediate panel boards without being connected to their grounding terminal and terminates directly at an equipment grounding conductor terminal of the derived system or service, in accordance with NEC® requirements.

### The Result

This "isolated ground" can be kept relatively free of electrical noise. This is achieved since the grounding network has less branches, fewer sources of noise, and is connected to the ground at a single point.

### **Decimal Equivalents Table**

### **Decimal Equivalents Table**

Inches	Inches	Millimeters	Inches	Inches	Millimeters
1/64	.015625	.3969	33/64	.515625	13.0969
1/32	.03125	.7938	17/32	.53125	13.4938
3/64	.046875	1.1906	35/64	.546875	13.8906
1/16	.0625	1.5875	9/16	.5625	14.2875
5/64	.078125	1.9844	37/64	.578125	14.6844
3/32	.09375	2.3813	19/32	.59375	15.0813
7/64	.109375	2.7781	39/64	.609375	15.4781
1/8	.1250	3.1750	5/8	.6250	15.8750
9/64	.140625	3.5719	<sup>41</sup> / <sub>64</sub>	.640625	16.2719
5/32	.15625	3.9688	21/32	.65625	16.6688
11/64	.171875	4.3656	43/64	.671875	17.0656
3/16	.1875	4.7625	11/16	.6875	17.4625
13/64	.203125	5.1594	<sup>45</sup> / <sub>64</sub>	.703125	17.8594
7/32	.21875	5.5563	23/ <sub>32</sub>	.71875	18.2563
15/64	.234375	5.9531	<sup>47</sup> / <sub>64</sub>	.734375	18.6531
1/4	.2500	6.3500	3/4	.7500	19.0500
<sup>17</sup> / <sub>64</sub>	.265625	6.7469	<sup>49</sup> / <sub>64</sub>	.765625	19.4469
9/32	.28125	7.1438	25/32	.78125	19.8438
<sup>19</sup> / <sub>64</sub>	.296875	7.5406	51/64	.796875	20.2406
5/16	.3125	7.9375	13/16	.8125	20.6375
21/64	.328125	8.3344	53/64	.828125	21.0344
11/32	.34375	8.7313	27/32	.84375	21.4313
23/64	.359375	9.1281	55/64	.859375	21.8281
3/8	.3750	9.5250	7/8	.8750	22.2250
<sup>25</sup> /64	.390625	9.9219	57/64	.890625	22.6219
13/32	.40625	10.3188	29/32	.90625	23.0188
<sup>27</sup> /64	.421875	10.7156	59/64	.921875	23.4156
7/16	.4375	11.1125	15/16	.9375	23.8125
29/64	.453125	11.5094	61/64	.953125	24.2094
15/32	.46875	11.9063	31/32	.96875	24.6063
31/64	.484375	12.3031	63/64	.984375	25.0031
1/2	.5000	12.7000	1	1.0000	25.4000

### **Electrical Symbols and Abbreviations**

### **Electrical Symbols and Abbreviations**

General Outlets	Panels, Circuits and Miscellaneous
Ceiling Wall	Lighting panel
○ -○ Lighting Outlet	Power panel
® -® Blanked outlet	Branch circuit; concealed in ceiling or wall
Deep cord	Branch circuit; concealed in floor
€ -€ Electrical outlet: for use only when circle used alone	Branch circuit; exposed
might be confused with columns, plumbing symbols, etc.	Home run to panel board. Indicated number of circuits
€ - Fan outlet	by number of arrows.  Note: Any circuit without further designation indicates a two-wire circuit.
① -① Junction box	For a greater number of wires indicate as follows: ## (3 wires)
© -© Lamp holder	## (4 wires), etc.
© <sub>s</sub> -O <sub>s</sub> Lamp holder with pull switch	Feeders  Note: Use heavy lines and designate by number of corresponding to listing
S - S Pull switch	in feeder schedule.
	Underfloor duct and junction box. Triple system
⊗ -⊗ Exit light outlet	Note: For double or single systems eliminate one or two lines. This symbol is equally adaptable to auxiliary system layouts.
© -© Clock outlet (specify voltage)	Generator
	M Motor
Convenience Outlets	① Instrument
Duplex convenience outlet	Power transformer (or draw to scale)
<ul> <li>Convenience outlet other than duplex</li> <li>1-single, 3-triplex, etc.</li> </ul>	Controller
→ Weatherproof convenience outlet	Isolating switch
Range outlet	
Switch and convenience outlet	Auxiliary Systems
Radio and convenience outlet	Push Button / Buzzer
Special purpose outlet (Des. in Spec.)	Bell → Annunciator
Floor outlet	■ Outside telephone
<u> </u>	Interconnecting telephone
Switch Outlets	Telephone switchboard
S Single pole switch	Bell ringing transformer
S <sub>2</sub> Double pole switch	D Electric door opener
S <sub>3</sub> Three way switch	F Fire alarm bell
S <sub>4</sub> Four way switch	City fire alarm station
S <sub>D</sub> Automatic door switch	FA Fire alarm central station
S <sub>F</sub> Electrolier switch	FS Automatic fire alarm device
S <sub>K</sub> Key operated switch	W Watchman's station
S <sub>P</sub> Switch and pilot lamp	Watchman's central station
S <sub>CB</sub> Circuit breaker switch	H Horn
S <sub>WCB</sub> Weatherproof circuit breaker	N Nurse's signal plug M Maid's signal plug
S <sub>MC</sub> Momentary contact switch	R Radio outlet
S <sub>RC</sub> Remote control switch	Sc Signal central section
S <sub>WP</sub> Weatherproof switch	☐ Interconnection box ∰ Battery
S <sub>F</sub> Fused switch	Auxiliary system circuits.
S <sub>wF</sub> Weatherproof fused switch	Note: Any line without further designation indicates a 2-wire
	system. For a greater number of wires designate with
Special Outlets	numerals in manner similar to – - – 12-No. 18 W-3'4"C, or designate by number corresponding to listing in
Any standard symbol as given above with the addition of a lower cas	

☐ Special auxiliary outlets

in specifications.

Subscript letters refer to notes on plans or detailed description

Any standard symbol as given above with the addition of a lower case subscript letter may be used to designate some special variation of standard equipment of particular interest in a specific set of architectural plans.

Q<sub>b,c,etc</sub> When used they must be listed in the Key of Symbols on each drawing and if necessary further described in the specifications.

### **Diameter Ranges of Jacketed Cord and Wire Charts**

### Diameter Ranges of Jacketed Cord Chart - In Accordance with Standard UL62

Acceptable range in inches (mm) of the average overall diameter of round, jacketed heater cords and non-retractile vacuum cleaner and service cords.

Type of Cord	AWG Size	e 2 Conductor	3 Conductor	4 Conductor	5 Conductor
SV, SVE, SVEO, SVOO	18	.22"26" (5.6-6.6)	.23"27" (5.8-6.9)	_	_
SVO, SVT, SVTOO, SVTO	16	.25"28" (6.2-7.1)	.26"30" (6.6-7.5)	_	_
SJ, SJE, SJOO, SJO, SJEO,	18	.28"32" (7.1-8.1)	.30"34" (7.6-8.6)	.33"37" (8.4-9.4)	_
SJEOOSJT, SJTO, SJTOO,	16	.31"34" (7.9-8.6)	.33"36" (8.4-9.1)	.35"40" (8.9-10.2)	_
SJEW, SJOOW, SJOW,	14	.34"38" (8.6-9.7)	.36"40" (9.1-10.2)	.39"44" (9.9-11.2)	_
SJEOW, SJEOOW, SJTW,	12	.41"46" (10.4-11.7)	.43"48" (10.9-12.2)	.47"52" (11.9-13.2)	_
SJTOW, SJTOOW	10	.54"61" (13.7-15.5)	.57"64" (14.5-16.3)	.63"70" (16.0-17.8)	_
S, SE, SOO, SEO, SEOO, ST	18	.34"39" (8.6-9.9)	.36"40" (9.1-10.2)	.39"43" (9.9-10.9)	.46"51" (11.7-13.0
STOO, STO, SEW, SOOW,	16	.37"41" (9.4-10.4)	.39"43" (9.9-10.9)	.41"46" (10.4-11.7)	.49"55" (12.4-14.0
SOW, SEOW, SEOOW, STW,	14	.50"55" (12.7-14.0)	.52"58" (13.2-14.7)	.56"62" (14.2-15.7)	.63"71" (16.0-18.0
STOOW, STOW	12	.57"63" (14.5-16.0)	.59"66" (15.0-16.8)	.64"71" (16.3-18.0)	.70"77" (17.8-19.6)
	10	.62"69" (15.7-17.5)	.65"72" (16.5-18.3)	.70"78" (17.8-19.8)	.76"84" (19.3-21.3)
	8	.78"88" (19.8-22.4)	.83"93" (21.1-23.6)	.93"-1.05" (23.6-26.7)	1.00"-1.15" (25.4-29.2)
	6	.92"-1.05" (23.4-26.7)	.97"-1.10" (24.6-27.9)	1.05"-1.20" (26.7-30.5)	1.18"-1.33" (30.0-33.8)
	4	1.06"-1.21" (26.9-30.7)	1.13"-1.28" (28.7-32.5)	1.25"-1.45" (31.8-36.8)	_ ` ` `
	2	1.21"-1.40" (30.7-35.6)	1.30"-1.50" (33.0-38.1)	1.45"-1.65" (36.8-41.9)	_

### Nominal Diameters of Round Portable Power Cable - In Accordance with Standard CSA-C22.2 No. 96

Type of Cord	AWG Size	2 Conductor	3 Conductor	4 Conductor	5 Conductor
W, G, G-GC, G-BGC, PPC	6	0.945" (24.0)	0.984" (25.0)	1.102" (28.0)	1.220" (31.0)
	4	1.063" (27.0)	1.142" (29.0)	1.260" (32.0)	1.417" (36.0)
	3	1.181" (30.0)	1.220" (31.0)	1.339" (34.0)	1.496" (38.0)
	2	1.260" (32.0)	1.339" (34.0)	1.496" (38.0)	1.614" (41.0)
	1	1.339" (34.0)	1.496" (38.0)	1.654" (42.0)	1.890" (48.0)
	1/0	1.417" (36.0)	1.614" (41.0)	1.772" (45.0)	1.929" (49.0)
	2/0	1.535" (39.0)	1.732" (44.0)	1.929" (49.0)	2.047" (52.0)
	3/0	1.654" (42.0)	1.890" (48.0)	2.047" (52.0)	2.244" (57.0)
	4/0	1.772" (45.0)	2.008" (51.0)	2.244" (57.0)	2.441" (62.0)

### Wire Types Approximate Diameter in Inches (mm)\*

Size (AWG or kcmil)	THHN, THWN, THWN-2 Inches (mm)	TW, THHW, THW, THW-2 Inches (mm)	XHHW, ZW, XHHW-2, XHH Inches (mm)
12	0.130 (3.302)	0.152 (3.861)	0.152 (3.861)
10	0.164 (4.166)	0.176 (4.470)	0.176 (4.470)
8	0.216 (5.486)	0.236 (5.994)	0.236 (5.994)
6	0.254 (6.452)	0.304 (7.722)	0.274 (6.960)
4	0.324 (8.230)	0.352 (8.941)	0.322 (8.179)
3	0.352 (8.941)	0.380 (9.652)	0.350 (8.890)
2	0.384 (9.754)	0.412 (10.46)	0.382 (9.703)
1	0.446 (11.23)	0.492 (12.50	0.442 (11.23)
1/0	0.486 (12.34)	0.532 (13.51)	0.482 (12.34)
2/0	0.532 (13.51)	0.578 (14.68)	0.528 (13.41)
3/0	0.584 (14.83)	0.630 (16.00)	0.580 (14.73)
4/0	0.642 (16.31)	0.688 (17.48)	0.638 (16.21)
250	0.711 (18.06)	0.765 (19.43)	0.705 (17.91)
300	0.766 (19.46)	0.820 (20.83)	0.760 (19.30)
350	0.817 (20.75)	0.871 (22.12)	0.811 (26.60)
400	0.864 (21.95)	0.918 (23.32)	0.858 (21.79)
500	0.949 (24.10)	1.003 (25.48)	0.943 (23.95)
600	1.051 (26.70)	1.113 (28.27)	1.053 (26.75)
700	1.122 (28.50)	1.184 (30.07)	1.124 (25.55)
750	1.156 (29.36)	1.218 (30.94)	1.158 (29.41)
800	1.188 (30.18)	1.250 (31.75)	1.190 (30.23)
900	1.252 (31.80)	1.314 (33.38)	1.254 (31.85)
1000	1.310 (33.27)	1.372 (34.85)	1.312 (33.32)

Note: \*Information Sourced from the National Electrical Code.

### **IEC Pin and Sleeve Terminal Identification**

### IEC Pin and Sleeve Terminal Identification - Rear View

				Termir	nal Marking Pattern*		
	Rating		Rece	ptacle and Connector	F	Plug and Inlet	
Description	Domestic	International	Domestic	International	Domestic	International	
3 Wire	125V AC 277V AC	100-130V	White	Green	White	Green	
3 Wire	250V AC 480V AC 600V AC	200-250V 380-415V AC	Green		Green		
4 Wire	125/250V AC 1ØY 120/208V	_	White		White		
4 Wire	(3Ø Δ) 250V AC 480V AC 600V AC	380-415V AC	*Pilot		♣ Pilot ⑤ ⑥ ⑤		
5 Wire	(3ØY) 120/208V AC 277/480V AC 347/600V AC	220/380V 50Hz 250/440V 60Hz 200/346V to 240/415V 50 and 60Hz	White Pilot		* Pilot Wr	nite	

Note: \*Location of grounding contact position will change as clock positions assigned to specific voltages change.

\*Pilot contacts supplied on 4 and 5 wire, 63 and 125 Amp international rated devices.

### Horsepower Ratings

### Horsepower Ratings for Hubbell IEC Pin and Sleeve Devices\*

Single Phase						
Amps	Wire Count	Voltage	Clock	Catalog Number	New HP Rating	
20	3	125V	4	HBL320x4W	1	
20	3	250V	6	HBL320x6W	2	
20	3	480V	7	HBL320x7W	5	
20	4	125/250 (208L-L)	12	HBL420x12W	2	
20	4	125/250 (250L-L)	12	HBL420x12W	2	
20	4	125/250 (125L-N)	12	HBL420x12W	1	
30	3	125V	4	HBL330x4W	2	
30	3	250V	6	HBL330x6W	3	
30	3	480V	7	HBL330x7W	7.5	
30	3	550VDC	8	HBL330X8	N/A	
30	4	125/250 (208L-L)	12	HBL430x12W	3	
30	4	125/250 (250L-L)	12	HBL430x12W	3	
30	4	125/250 (125L-N)	12	HBL430x12W	2	
60	3	125V	4	HBL360x4W	2	
60	3	250V	6	HBL360x6W	3	
60	3	480V	7	HBL360x7W	7.5	
60	3	250VDC	3	HBL360x3W	N/A	
60	3	550VDC	8	HBL360x8W	N/A	
60	4	125/250 (208L-L)	12	HBL460x12W	3	
60	4	125/250 (250L-L)	12	HBL460x12W	3	
60	4	125/250 (125L-N)	12	HBL460x12W	2	
100	3	125V	4	HBL3100x4W	5	
100	3	250V	6	HBL3100x6W	15	
100	3	480V	7	HBL3100x7W	30	
100	3	250VDC	3	HBL3100x3W	N/A	
100	3	550VDC	8	HBL3100x8W	N/A	
100	4	125/250 (208L-L)	12	HBL4100x12W	10	
100	4	125/250 (250L-L)	12	HBL4100x12W	15	
100	4	125/250 (125L-N)	12	HBL4100x12W	5	

3-Pha						
	Wire				Present HP	-
Amps	Count	Voltage	Clock	Catalog Number	Rating	Rating
20	4	3Ø 250V	9	HBL420x9W	2	5
20	4	3Ø 480V	7	HBL420x7W	5	10
20	4	3Ø 600V	5	HBL420x5W	7.5	10
20	4	3Ø 380-415V	6	HBL420x6W	-	7.5
20	5	3ØY 120/208V	9	HBL520x9W	0.5	3
20	5	3ØY 277/480V	7	HBL520x7W	5	10
20	5	3ØY 347/600V	5	HBL520x5W	7.5	10
20	5	3Ø 240/415V	6	HBL520x6W	-	5
30	4	3Ø 250V	9	HBL430x9W	3	7.5
30	4	3Ø 480V	7	HBL430x7W	7.5	15
30	4	3Ø 600V	5	HBL430x5W	10	20
30	5	3ØY 120/208V	9	HBL530x9W	2	5
30	5	3ØY 277/480V	7	HBL530x7W	7.5	15
30	5	3ØY 347/600V	5	HBL530x5W	10	20
30	4	3Ø 380/415V	6	HBL430x6W	-	10
30	5	3Ø 200/346-240/415	6	HBL530x6W	-	10
60	4	3Ø 250V	9	HBL460x9W	5	7.5
60	4	3Ø 480V	7	HBL460x7W	10	20
60	4	3Ø 600V	5	HBL460x5W	15	25
60	4	3Ø 380-415VAC	6	HBL460x6W	-	10
60	5	3ØY 120/208V	9	HBL560x9W	3	7.5
60	5	3ØY 277/480V	7	HBL560x7W	10	20
60	5	3ØY 347/600V	5	HBL560x5W	15	25
60	5	3Ø 200/346-240/415	6	HBL560x6W	-	10
100	4	3Ø 250V	9	HBL4100x9W	10	15
100	4	3Ø 480V	7	HBL4100x7W	30	40
100	4	3Ø 600V	5	HBL4100x5W	30	50
100	4	3Ø 380-415V	6	HBL4100x6W	-	30
100	5	3ØY 200/346-240/415V	6	HBL5100x6W	-	30
100	5	400VDC	8	HBL5100x8W		N/A
100	5	3ØY 120/208V	9	HBL5100x9W	10	15
100	5	3ØY 277/480V	7	HBL5100x7W	30	40
100	5	3ØY 347/600V	5	HBL5100x5W	30	50

Note: \*Horsepower Ratings are NOT standardized amongst different Pin and Sleeve manufacturers.

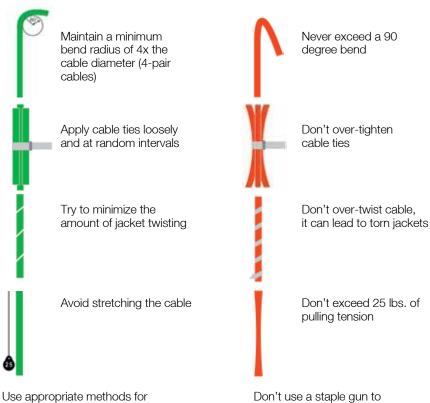
### **Network Cabling Requirements**

### **Supported Media - International**

Designation	ANSI/TIA-568-C	ISO/IEC 11801 Amend 2: 2010	CENELEC EN-50173-1: 2002
Category 3 (16 MHz)	Supported	Supported: Class C	Supported: Class C
Category 5e (100 MHz)	Supported	Supported: Class D	Supported: Class D
Category 6 (250 MHz)	Supported	Supported: Class E	Supported: Class E
Category 6A (500 MHz)	Supported	Supported: Class EA	Supported: Class EA
Category 7 (600 MHz)	Not Recognized	Supported: Class F	Supported: Class F
Category 7A (1,000 MHz)	Not Recognized	Supported: Class Fa*	Supported: Class FA*
Category 8 (2,000 MHz)	Not Recognized	Supported: Class Fa*	Supported: Class FA*
50/125 - 62.5/125 Multimode	Supported	Supported	Supported
Singlemode Fiber	Supported	Supported	Supported
Singlemode Fiber to the Work Area	Not Supported	Supported	Supported
Work Area Outlet Configuration	4 Pairs T568A or B	4 Pairs T568A Only	4 Pairs T568A Only
Stranded Patch Cord Attenuation	120% of Horiz. Cable	150% of Horiz. Cable	150% of Horiz. Cable

Note: \*Category 8 proposed in TIA 568-C.2-1 for 40 GBASE-T. ISO/IEC and cenelec to be determined. ISO/IEC and cenelec considering expanding Class FA frequency in addition to a considering new Class.

- Strip back only as much cable jacket as is required for termination and maintain pair twists as close as possible to the point of mechanical termination
- At a minimum, never allow untwisting of pairs as specified: Category 5e and 6/6A: 0.5 inch max.



Use appropriate methods for dressing and securing cables:

- Cable ties
- Cable support bar
- Wire management panels
- Releasable straps

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position cable