

Section E

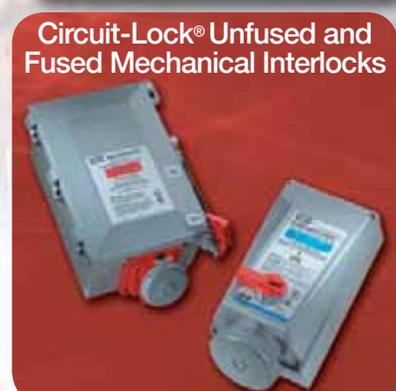
Pin and Sleeve Devices

Mechanical Interlocks



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Pin and Sleeve Devices Summary



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.



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. The devices are fully interchangeable with other manufacturers of UL1686 C1 devices.



Back Boxes and Accessories

A complete line of metallic and non-metallic back boxes, angle adapters, closure caps and liquidtight adapters are available. These accessories help complement the line and aid in the installation of the product.

Hubbell produces the highest quality and most extensive Pin and Sleeve offering.

Similar our Twist-Lock® devices, Hubbell's Pin and Sleeve line of plugs, connectors, inlets, receptacles, mechanical interlocks and accessories are the highest performing product available. The HBL® series of IEC pin and sleeve and Insulgrip line are produced in the USA and have a full list of innovative features.

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.

The Insulgrip line of pin and sleeve is listed UL Type 4X which provides a watertight, dust-tight seal for harsh environments. The non-metallic bodies of the plugs and connectors provide excellent insulating, impact and UV resistant properties. The patented beryllium copper spring-pin design of the contacts maintains high unit pressure on mating sleeves. This ensures reliable electrical contact while minimizing heat rise. There are two styles of Insulgrip pin and sleeve devices. Style I devices achieve grounding by attaching the metallic shell to a ground terminal within the device. Style II devices feature redundant grounding by including an additional ground pin and sleeve to the grounding method used in Style I. The full Insulgrip line of devices is interchangeable with other manufacturers of UL1686 C1 devices which makes it ideal for use in industrial applications where multiple manufactures of product may be present.

Both the IEC and Insulgrip lines of pin and sleeve are used often in conjunction with mechanical interlocks. Mechanical interlocks prevent users from mating or breaking the circuit under load. This feature is critical to maintain a safe electrical connection. The interlocks are also available in reverse service applications where a generator is providing power to an electrical system.



Circuit-Lock® Mechanical Interlocks

Hubbell's Circuit-Lock enclosure products virtually eliminate making or breaking the circuit under load. This revolutionary design incorporates a disconnect switch and receptacle in one compact non-metallic unit. They are available in either a fused or non-fused versions.



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 and cables exiting perpendicular from the wall.



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 nickel-plated Tellurium copper on the Insulgrip contacts prevent corrosion and heat rise.



Reverse Service

Generators and portable power distribution units require devices to deliver power in a reverse direction to power up a piece of equipment or building. Hubbell manufactures reverse service devices in both the IEC and Insulgrip Pin and Sleeve configurations as well as IEC Mechanical Interlock Inlets.



IEC Pin and Sleeve

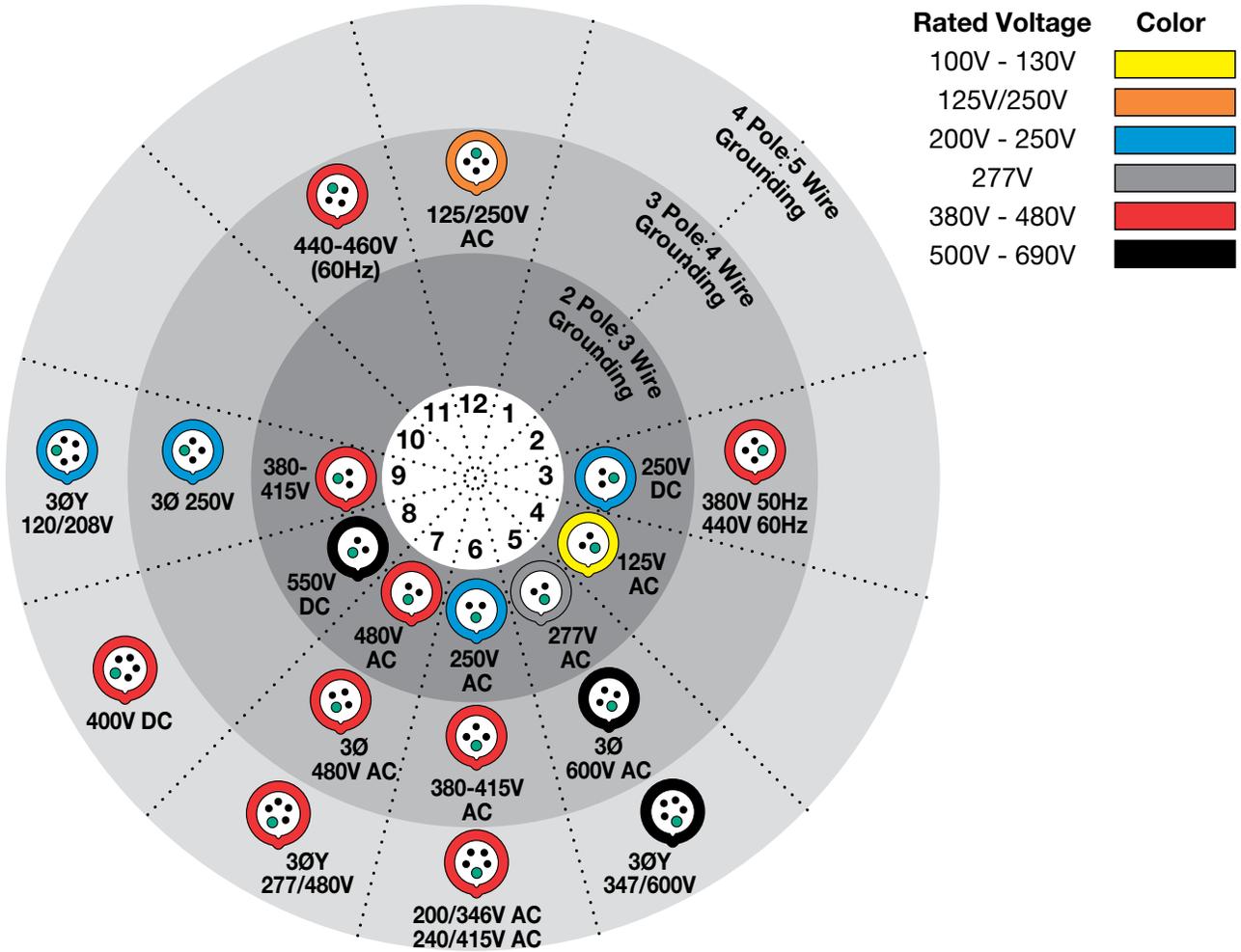
IEC Configurations Chart

Singly Rated Configurations

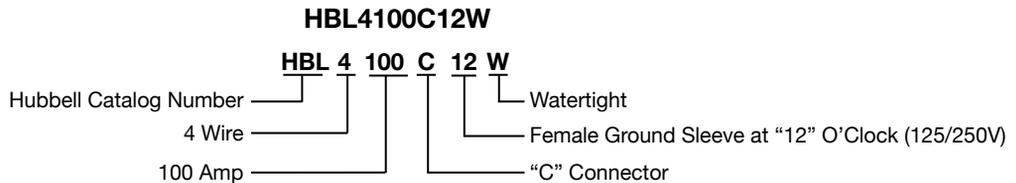
Every non-metallic Hubbell Pin and Sleeve product is designed and manufactured to meet the International Standard IEC 60309-1 and IEC 60309-2. This device calls out a singly rated, non-interchangeable configuration for every voltage and type of service throughout the world. Pin and sleeve device housings 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



Explanation

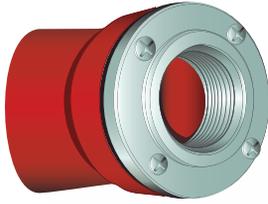
- 1 (HBL) Designates Hubbell Catalog Number
- 2 First Digit: 3-3 wire, 4-4 wire, 5-5 wire
- 3 Next Series Of Digits: Preceding a letter (20-20 Amp, 30-30 Amp, 60-60 Amp, 100-100 Amp)
- 4 Letter: P-Plug, R-Receptacle, C-Connector, B-Inlet, MI-Mechanical Interlock, MIF-Mechanical Interlock Fused
- 5 Last Digit(s): After the letter. This denotes the position of the ground sleeve and the assigned voltage in the receptacle as it relates to the hours of the clock. This is done to eliminate interchangeability between devices with different voltages.
- 6 Letter: W Watertight



IEC Pin and Sleeve Watertight Devices

Features and Benefits

IP67
SUITABILITY

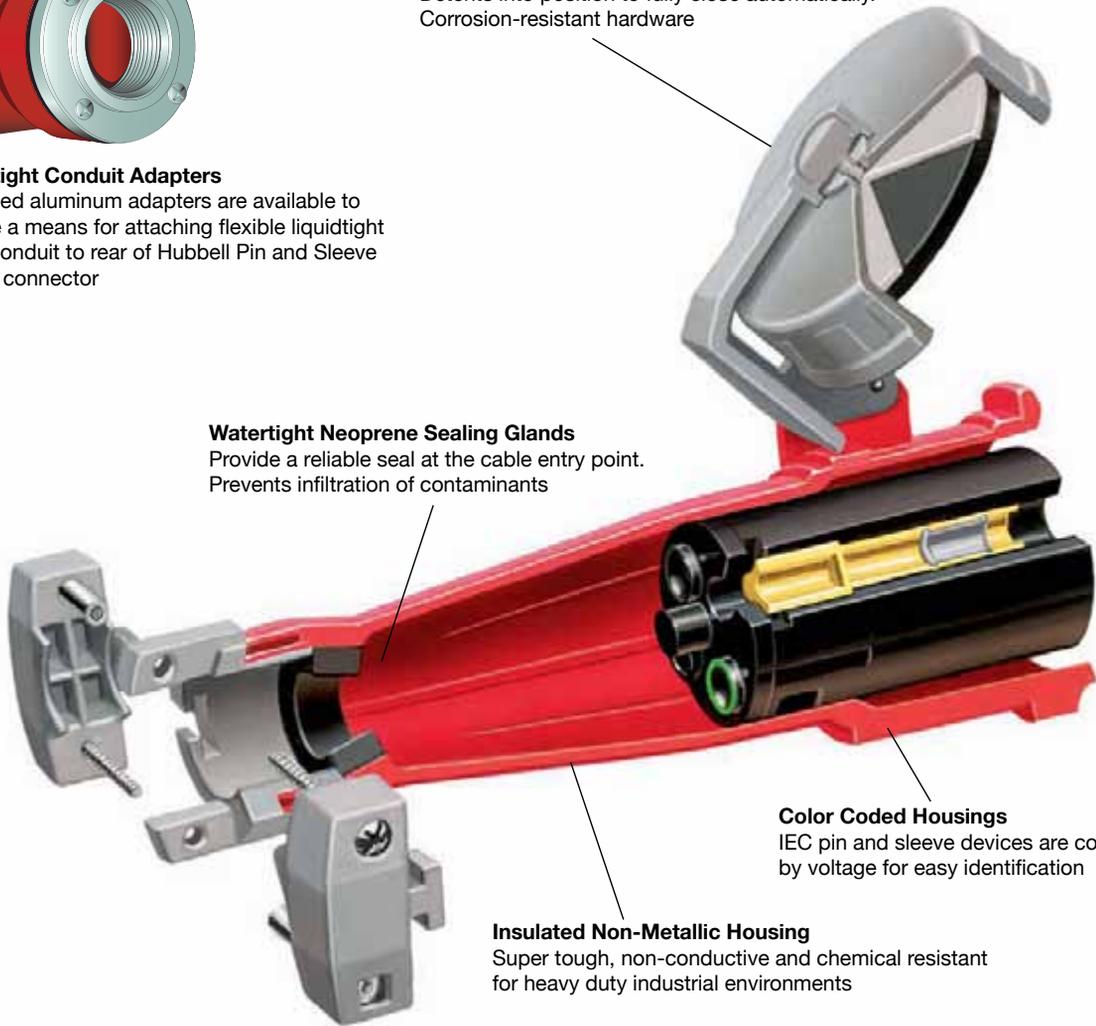


Self-Closing Gasketed Cover

Detents into position to fully close automatically.
Corrosion-resistant hardware

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



Watertight Neoprene Sealing Glands

Provide a reliable seal at the cable entry point.
Prevents infiltration of contaminants

Color Coded Housings

IEC pin and sleeve devices are color coded by voltage for easy identification

Insulated Non-Metallic Housing

Super tough, non-conductive and chemical resistant for heavy duty industrial environments



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.



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 resist oxide film to achieve low resistance contact for cooler operation.



Sequential Contact Engagement

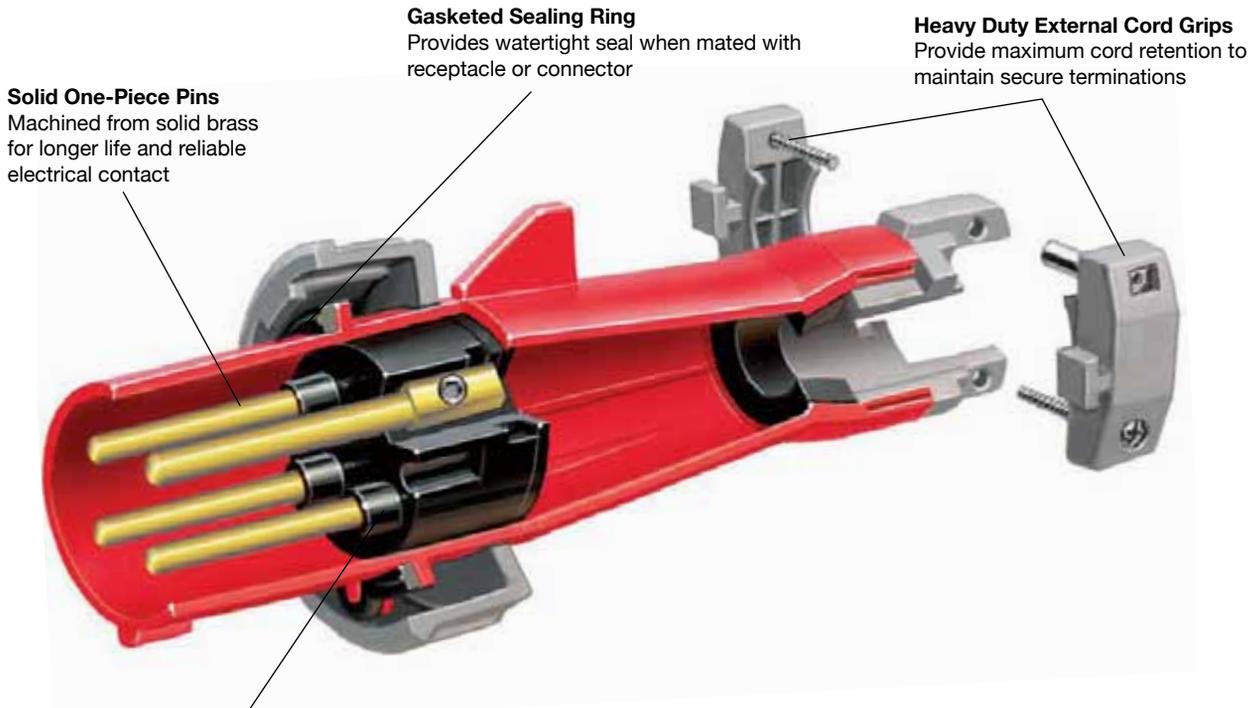
Ground makes first and breaks last. Neutral makes second and breaks second (to prevent a momentary over-voltage on components connected phase to neutral). Phase contacts make last and break first.

IEC Pin and Sleeve

Watertight Devices

Features and Benefits

IP67
SUITABILITY



Solid One-Piece Pins
Machined from solid brass for longer life and reliable electrical contact

Gasketed Sealing Ring
Provides watertight seal when mated with receptacle or connector

Heavy Duty External Cord Grips
Provide maximum cord retention to maintain secure terminations

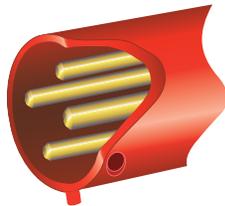
Contact Collar
Raised collar surrounds each phase pin increasing the tracking resistance between contacts across the contact carrier face



Lockout/Tagout
Tapered opening on plug shroud accommodates up to 3/8 inch (9.7mm) lock shackle diameter



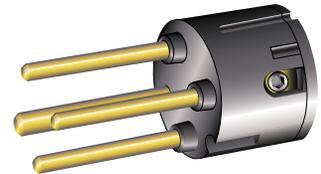
Rugged One-Piece Housing
Thick wall construction protects internal components, eliminates joints preventing infiltration of contaminants. Amperage/voltage rating and catalog number molded in housing for easy identification.



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.



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. The large box terminals are designed for North American conductors.



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.

IEC Pin and Sleeve Watertight Devices

20 and 30 Ampere – North American Ratings
16 and 32 Ampere – International Ratings



IP67
SUITABILITY

Rating					Watertight Devices				Accessories			Replacement Interiors	
Amps	Poles and Wires	Configuration	Recep./ Plug/ Inlet	AC Voltage	Receptacle	Plug	Connector	Inlet	Back Boxes		Closure Caps	Recep./ Conn.	Plug/ Inlet
									Non-Metallic	Metallic			
16	2P 3W			100–130V	HBL316R4W	HBL316P4W	HBL316C4W	HBL316B4W†	BB2030N	BB201W BB301W	PC320	IN320BF	IN320BM
	2P 3W			220–240V	HBL316R6W	HBL316P6W	HBL316C6W	HBL316B6W	BB2030N	BB201W BB301W	PC320	IN320BF	IN320BM
	3P 4W			380–415V	HBL416R6W	HBL416P6W	HBL416C6W	HBL416B6W†	BB2030N	BB201W BB301W	PC420	IN420DF	IN420DM
	4P 5W			220/380V 240/415V	HBL516R6W	HBL516P6W	HBL516C6W	HBL516B6W	BB2030N	BB201W BB301W	PC520	IN520EF†	IN520EM
20	2P 3W			125V	HBL320R4W	HBL320P4W	HBL320C4W	HBL320B4W	BB2030N	BB201W BB301W	PC320	IN320AF	IN320AM
	2P 3W			250V	HBL320R6W	HBL320P6W	HBL320C6W	HBL320B6W	BB2030N	BB201W BB301W	PC320	IN320BF	IN320BM
	2P 3W			480V	HBL320R7W	HBL320P7W	HBL320C7W	HBL320B7W	BB2030N	BB201W BB301W	PC320	IN320BF	IN320BM
	3P 4W			125/250V	HBL420R12W	HBL420P12W	HBL420C12W	HBL420B12W	BB2030N	BB201W BB301W	PC420	IN420CF	IN420CM
	3P 4W			30 250V	HBL420R9W	HBL420P9W	HBL420C9W	HBL420B9W	BB2030N	BB201W BB301W	PC420	IN420DF	IN420DM
	3P 4W			30 480V	HBL420R7W	HBL420P7W	HBL420C7W	HBL420B7W	BB2030N	BB201W BB301W	PC420	IN420DF	IN420DM
	3P 4W			30 600V	HBL420R5W	HBL420P5W	HBL420C5W	HBL420B5W	BB2030N	BB201W BB301W	PC420	IN420DF	IN420DM
	4P 5W			30Y 120/208V	HBL520R9W	HBL520P9W	HBL520C9W	HBL520B9W	BB2030N	BB201W BB301W	PC520	IN520EF†	IN520EM
	4P 5W			30Y 277/480V	HBL520R7W	HBL520P7W	HBL520C7W	HBL520B7W	BB2030N	BB201W BB301W	PC520	IN520EF†	IN520EM
	4P 5W			30Y 347/600V	HBL520R5W	HBL520P5W	HBL520C5W	HBL520B5W	BB2030N	BB201W BB301W	PC520	IN520EF†	IN520EM
30	2P 3W			125V	HBL330R4W	HBL330P4W	HBL330C4W	HBL330B4W	BB2030N	BB201W BB301W	PC3430	IN330AF	IN330AM
	2P 3W			250V	HBL330R6W	HBL330P6W	HBL330C6W	HBL330B6W	BB2030N	BB201W BB301W	PC3430	IN330BF	IN330BM
	2P 3W			480V	HBL330R7W	HBL330P7W	HBL330C7W	HBL330B7W	BB2030N	BB201W BB301W	PC3430	IN330BF	IN330BM
	3P 4W			125/250V	HBL430R12W	HBL430P12W	HBL430C12W	HBL430B12W	BB2030N	BB201W BB301W	PC3430	IN430CF	IN430CM
	3P 4W			30 250V	HBL430R9W	HBL430P9W	HBL430C9W	HBL430B9W	BB2030N	BB201W BB301W	PC3430	IN430DF	IN430DM
	3P 4W			30 480V	HBL430R7W	HBL430P7W	HBL430C7W	HBL430B7W	BB2030N	BB201W BB301W	PC3430	IN430DF	IN430DM
	3P 4W			30 600V	HBL430R5W	HBL430P5W	HBL430C5W	HBL430B5W	BB2030N	BB201W BB301W	PC3430	IN430DF	IN430DM
	4P 5W			30Y 120/208V	HBL530R9W	HBL530P9W	HBL530C9W	HBL530B9W	BB2030N	BB201W BB301W	PC530	IN530EF	IN530EM
	4P 5W			30Y 277/480V	HBL530R7W	HBL530P7W	HBL530C7W	HBL530B7W	BB2030N	BB201W BB301W	PC530	IN530EF	IN530EM
	4P 5W			30Y 347/600V	HBL530R5W	HBL530P5W	HBL530C5W	HBL530B5W	BB2030N	BB201W BB301W	PC530	IN530EF	IN530EM
32	2P 3W			100–130V	HBL332R4W†	HBL332P4W†	HBL332C4W†	HBL332B4W†	BB2030N	BB201W BB301W	PC3430	IN330BF	IN330BM
	2P 3W			220–240V	HBL332R6W	HBL332P6W	HBL332C6W	HBL332B6W	BB2030N	BB201W BB301W	PC3430	IN330BF	IN330BM
	3P 4W			380–415V	HBL432R6W	HBL432P6W	HBL432C6W	HBL432B6W	BB2030N	BB201W BB301W	PC3430	IN430DF	IN430DM
	3P 4W			380V 50Hz 440V 60Hz	HBL432R3W	HBL432P3W	HBL432C3W	HBL432B3W†	BB2030N	BB201W BB301W	PC3430	IN430DF	IN430DM
	4P 5W			220/380V 240/415V	HBL532R6W	HBL532P6W	HBL532C6W	HBL532B6W	BB2030N	BB201W BB301W	PC530	IN530EF	IN530EM

Note: See page E-9 and E-10 for back boxes and accessories, E-11 and E-12 for product dimensions, E-13 and E-14 for product specifications and HP ratings.
Closure caps purchased separately, see page E-10. PC320, PC420, PC520, PC3430, PC530 are not UL or CSA.
† Consult factory.



IEC Pin and Sleeve Watertight Devices

60 and 100 Ampere – North American Ratings
63 and 125 Ampere – International Ratings



IP67
SUITABILITY

Rating				Watertight Devices				Accessories			Replacement Interiors	
Amps	Poles and Wires	Configuration Recept./ Plug/ Conn. Inlet	AC Voltage								Recept./ Conn.	Plug/ Inlet
				Receptacle	Plug	Connector	Inlet	Non-Metallic	Metallic			
60	2P 3W		125V	HBL360R4W	HBL360P4W	HBL360C4W	HBL360B4W	BB60N	BB601W BB602W	PC60	IN360AF	IN360AM
	2P 3W		250V	HBL360R6W	HBL360P6W	HBL360C6W	HBL360B6W	BB60N	BB601W BB602W	PC60	IN360BF	IN360BM†
	2P 3W		480V	HBL360R7W	HBL360P7W	HBL360C7W	HBL360B7W	BB60N	BB601W BB602W	PC60	IN360BF	IN360BM†
	3P 4W		125/250V	HBL460R12W	HBL460P12W	HBL460C12W	HBL460B12W	BB60N	BB601W BB602W	PC60	IN460CF	IN460CM
	3P 4W		3Ø 250V	HBL460R9W	HBL460P9W	HBL460C9W	HBL460B9W	BB60N	BB601W BB602W	PC60	IN460DF	IN460DM
	3P 4W		3Ø 480V	HBL460R7W	HBL460P7W	HBL460C7W	HBL460B7W	BB60N	BB601W BB602W	PC60	IN460DF	IN460DM
	3P 4W		3Ø 600V	HBL460R5W	HBL460P5W	HBL460C5W	HBL460B5W	BB60N	BB601W BB602W	PC60	IN460DF	IN460DM
	4P 5W		3ØY 120/208V	HBL560R9W	HBL560P9W	HBL560C9W	HBL560B9W	BB60N	BB601W BB602W	PC60	IN560EF	IN560EM†
	4P 5W		3ØY 277/480V	HBL560R7W	HBL560P7W	HBL560C7W	HBL560B7W	BB60N	BB601W BB602W	PC60	IN560EF	IN560EM†
	4P 5W		3ØY 347/600V	HBL560R5W	HBL560P5W	HBL560C5W	HBL560B5W	BB60N	BB601W BB602W	PC60	IN560EF	IN560EM†
63	2P 3W		220–240V	HBL363R6W	HBL363P6W	HBL363C6W	HBL363B6W	BB60N	BB601W BB602W	PC60	IN360BFS	IN360BMS†
	3P 4W		380–415V	HBL463R6W	HBL463P6W	HBL463C6W	HBL463B6W	BB60N	BB601W BB602W	PC60	IN460DFS	IN460DMS
	4P 5W		220/380V 240/415V	HBL563R6W	HBL563P6W	HBL563C6W	HBL563B6W	BB60N	BB601W BB602W	PC60	IN560EFS†	IN560EMS
100	2P 3W		125V	HBL3100R4W	HBL3100P4W	HBL3100C4W	HBL3100B4W	BB100N	BB1001W BB1002W	PC100	IN3100AF	IN3100AM
	2P 3W		250V	HBL3100R6W	HBL3100P6W	HBL3100C6W	HBL3100B6W	BB100N	BB1001W BB1002W	PC100	IN3100BF	IN3100BM†
	2P 3W		480V	HBL3100R7W	HBL3100P7W	HBL3100C7W	HBL3100B7W	BB100N	BB1001W BB1002W	PC100	IN3100BF	IN3100BM†
	3P 4W		125/250V	HBL4100R12W	HBL4100P12W	HBL4100C12W	HBL4100B12W	BB100N	BB1001W BB1002W	PC100	IN4100CF†	IN4100CM
	3P 4W		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		3ØY 120/208V	HBL5100R9W	HBL5100P9W*	HBL5100C9W	HBL5100B9W	BB100N	BB1001W BB1002W	PC100	IN5100EF	IN5100EM
	4P 5W		3ØY 277/480V	HBL5100R7W	HBL5100P7W	HBL5100C7W	HBL5100B7W	BB100N	BB1001W BB1002W	PC100	IN5100EF	IN5100EM
	4P 5W		3ØY 347/600V	HBL5100R5W	HBL5100P5W	HBL5100C5W	HBL5100B5W	BB100N	BB1001W BB1002W	PC100	IN5100EF	IN5100EM
125	2P 3W		220–240V	HBL3125R6W	HBL3125P6W	HBL3125C6W	HBL3125B6W	BB100N	BB1001W BB1002W	PC100	IN3100BFS†	IN3100BMS†
	3P 4W		380–415V	HBL4125R6W	HBL4125P6W	HBL4125C6W	HBL4125B6W	BB100N	BB1001W BB1002W	PC100	IN4100DFS	IN4100DMS
	4P 5W		220/380V 240/415V	HBL5125R6W	HBL5125P6W	HBL5125C6W	HBL5125B6W	BB100N	BB1001W BB1002W	PC100	IN5100EFS	IN5100EMS

Note: See page E-9 and E-10 for back boxes and accessories, E-11 and E-12 for product dimensions, E-13 and E-14 for product specifications and HP ratings.

All 63A and all 125A devices have pilot pins or contacts.

Closure caps purchased separately, see page E-10. PC60 and PC100 are not UL or CSA.

* Short housing plug HBL5100P9WSH, see page E-16 for more information. IP22 suitability - length 8.30" (210.8).

† Consult factory.



IEC Pin and Sleeve

Corrosion Resistant Devices

100 Ampere Devices



IP67
SUITABILITY

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
- Water Treatment
- Meat Packing
- Agriculture
- Factory
- Washdown
- Construction
- Outdoor Entertainment
- Temporary Power

Standard Service

Rating					Watertight Devices			Accessories		
Amps	Poles And Wires	Configuration Recep./ Conn.	Plug	AC Voltage	Receptacle	Plug	Connector	Back Boxes		Closure Caps
								Non-Metallic	Metallic	
100	3P 4W			125/250V	M4100R12	M4100P12	M4100C12	BB100N	BB1001W BB1002W	PC100
	4P 5W			3ØY 120/208V	M5100R9	M5100P9	M5100C9	BB100N	BB1001W BB1002W	PC100
	4P 5W			3ØY 277/480V	M5100R7	M5100P7	M5100C7	BB100N	BB1001W BB1002W	PC100

"Reverse Service"

Rating					Watertight Devices			Accessories		
Amps	Poles And Wires	Configuration Conn.	Inlet	AC Voltage	Inlet	Plug	Connector	Back Boxes		Closure Caps
								Non-Metallic	Metallic	
100	3P 4W			125/250V	M4100B12R	—	M4100C12R	BB100N	BB1001W BB1002W	PC100
	4P 5W			3ØY 120/208V	M5100B9R	—	M5100C9R	BB100N	BB1001W BB1002W	PC100
	4P 5W			3ØY 277/480V	M5100B7R	—	M5100C7R	BB100N	BB1001W BB1002W	PC100

Note: See page W-17 for corrosion resistant cord sets.



IEC Pin and Sleeve Back Boxes



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	N.P.T. Hub Size*	Catalog Number
Back box for 16, 20, 30 and 32A devices.	1"	BB2030N
Back box for 60 and 63A devices.	1¼"	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, 1¼ in. = 1705, 1½ in. = 1706. These boxes meet IP67 requirement and Type 4X requirements when installed with a watertight conduit hub.

Metallic 15° Angle Back Box**

Description	N.P.T. Hub Size	Catalog Number
Back box for 16, 20, 30 and 32A devices.	¾"	BB201W
	1"	BB301W
Back box for 60 and 63A devices.	1¼"	BB601W
	1½"	BB602W
Back box for 100 and 125A devices.	1½"	BB1001W
	2"	BB1002W

Note: ** These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

Metallic 55° Angle Back Box and Adapter**

Description	N.P.T. Hub Size	Catalog Number
Feed-thru box back box and adapter for 16, 20, 30 and 32A devices. Angle adapter only.	1"	AB203055 AA203055
	1½"	FW6010055 AA6010055

Note: ** These boxes are cast aluminum, suitable for IP54 requirements and are finished with enamel paint.

Metallic Feed-Thru Back Box**

Description	N.P.T. Hub Size	Catalog Number
Feed-thru box for 16, 20, 30 and 32A devices.	¾"	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	N.P.T. 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 2-gang, device mount, FD boxes.	HBL2030AP

Angle Wall Box Adapter

Description	Catalog Number
Adapts 16, 20, 30 and 32A Watertight IEC Pin and Sleeve devices to standard wall boxes.	AA2030PS

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.



BB60N



BB601W



FW6010055



FT202W



FW60100



HBL2030AP



AA2030PS



IEC Pin and Sleeve Accessories



PC3430

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



CA3430

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



CC3430

LR3430

Cord Clamp and Locking Ring

Replacement cord clamp and locking ring for use with IEC plugs, connectors and inlets.

Description	Cord Clamp Catalog Number	Locking Ring Catalog Number
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 N.P.T. sizes and configurations. Consult your local code grounding requirements before using liquidtight adapters.



SAB34



074093403

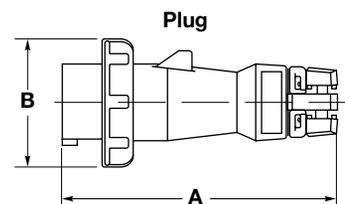
Rating of Hubbell Pin and Sleeve Device	Liquidtight Conduit Size	Hubbell Liquidtight Adapter Catalog Number	Optional Kellems Liquidtight Conduit Grip Catalog Number
16 and 20 Amp	1/2" N.P.T.	SAA12	074093402
3 and 4 Wire	3/4" N.P.T.	SAA34	074093403
16 and 20 Amp 5 wire	1/2" N.P.T.	SAB12	074093402
and 30 and 32 Amp	3/4" N.P.T.	SAB34	074093403
3 and 4 wire	1" N.P.T.	SAB100	074093404
30 and 32 Amp 5 wire	3/4" N.P.T.	SAC34	074093403
30 and 32 Amp 5 wire	1" N.P.T.	SAC100	074093404
and 60 and 63 Amp (all)	1 1/4" N.P.T.	SAC125	074093405
100 and 125 Amp (all)	1 1/4" N.P.T.	SAD125	074093405
	1 1/2" N.P.T.	SAD150	074093406

IEC Pin and Sleeve Dimensions

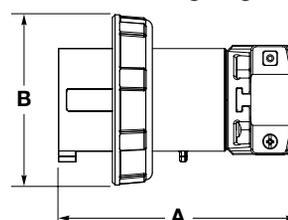


Plug Dimensions

Type	A	B	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

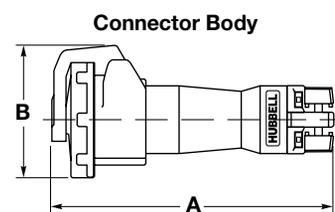


Short Housing Plug Dimensions

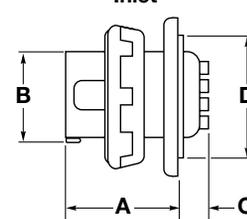
Type	A	B	Cord Grip Range
HBL5100P9WSH	8.30" (210.82)	4.92" (125.0)	1.065"-1.940" (27.1-49.3)

Connector Body Dimensions

Type	A	B	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)

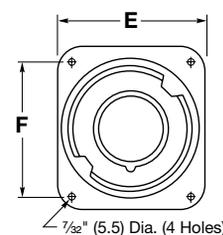


Inlet

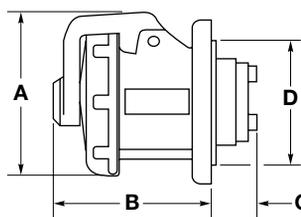


Inlet Dimensions

Type	A	B	C	D	E	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)

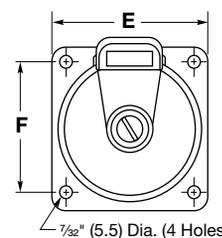


Receptacle



Receptacle Dimensions

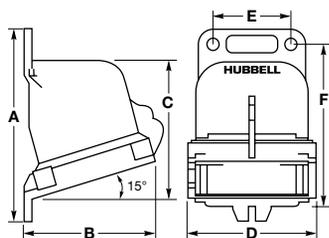
Type	A	B	C	D	E	F
HBL320R	3.33" (84.5)	2.78" (70.6)	1.02" (26.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL420R	3.66" (93.0)	2.78" (70.6)	1.02" (26.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL520R	3.94" (100.0)	2.78" (70.6)	1.02" (26.0)	2.72" (69.0)	3.75" (95.3)	3.13" (79.5)
HBL330R	4.27" (108.5)	3.09" (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.



IEC Pin and Sleeve Dimensions

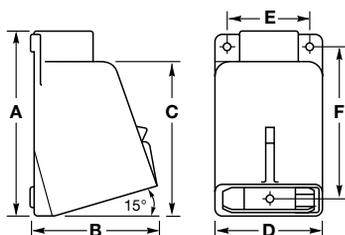


Non-Metallic Angle Box

Non-Metallic 15° Angle Back Box

Description	N.P.T. 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

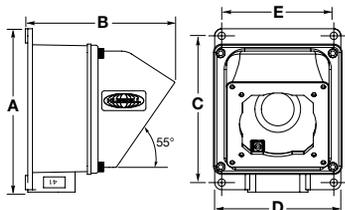
Note: * Hub is not included; order one of the following Racco® part numbers: 1 inch = 1704, 1¼ inch = 1705, 1½ inch = 1706.
These boxes meet IP67 requirement and Type 4X requirements when installed with a watertight conduit hub.



Metallic 15° Angle Box

Metallic 15° Angle Back Box

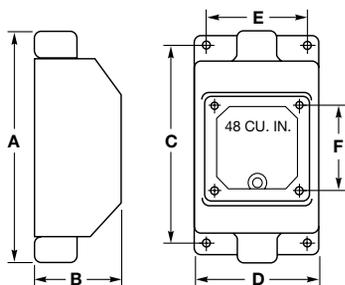
Description	N.P.T. Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
Back box for 16, 20, 30 & 32A devices.	¾"	5.12" (130.2)	4.00" (101.6)	4.19" (106.4)	3.75" (95.3)	3.00" (76.2)	4.00" (101.6)	30.00"	BB201W
Back box for 16, 20, 30 & 32A 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.	1¼"	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 55° Angle Box

Metallic 55° Angle Back Box and Adapter

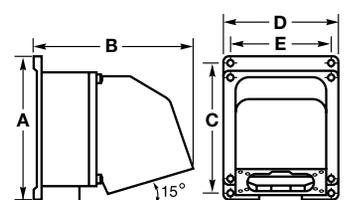
Description	N.P.T. Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Cubic Inch Capacity	Catalog Number
Feed-thru box and angle adapter for 16, 20, 30 & 32A devices.	1"	6.80" (172.4)	6.60" (167.0)	5.63" (142.9)	4.50" (114.3)	3.74" (95.0)	-	42.27"	AB203055
Angle adapter 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 Feed-Thru Box

Metallic Feed-Thru Back Box

Description	N.P.T. 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.	¾"	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 Four-Way Angle Box

Metallic Four-Way 15° Angle Back Box

Description	N.P.T. 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, 63, 100 & 125A devices.	1½"	8.75" (222.3)	9.75" (247.7)	7.75" (196.9)	6.75" (171.5)	6.00" (152.4)	-	210.00"	FW60100

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.



IEC Pin and Sleeve

Listings and Specifications

IEC Pin and Sleeve Inlet, Connector Body, Plug and Receptacle

Watertight Materials

Part	Material
Inlet	
Housing	Zytel® 101 Nylon
Locking Ring	Rynite® SST35
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
Connector Body	
Housings	Zytel® ST801 Nylon
Cord Clamps	Rynite® SST35
Glands	Solid Neoprene
Cover Arms	Rynite® SST35
Arm Springs	Stainless Steel (17-7 type)
Covers	Rynite® SST35
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	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)
Plug	
Housing	Zytel® ST801 Nylon
Locking Ring	Rynite® SST35
Sealing Gasket	Solid Neoprene
Cord Clamp	Rynite® SST35
Gland Cap	Rynite® SST35
Gland	Solid Neoprene
Cord Clamp Screws	Stainless Steel (300 Series)
Clamp Nut	Nickel-Plated Brass
Gland Clamp 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	Stainless Steel (300 Series)
Receptacle	
Housings	Zytel® 101 Nylon
Mounting Flange	Zytel® 101 Nylon
Arm Spring	Stainless Steel (17-7 type)
Cover Arm	Rynite® SST35
Cover	Rynite® SST35
Cover Screw	Nickel-plated brass
Rotating Sealing Disc	Polycarbonate
Gaskets	Solid Neoprene
Mounting Screws	Stainless Steel (300 Series)
Terminal Screws	Stainless Steel (300 Series)
Phase, Ground Sleeves	Brass
Sleeve Spring	20A and 30A Stainless Steel (300 Series); others are Beryllium Copper multi-contact inserts with silver plating

Listed to standard UL1682/ CSA C22.2 No. 182.1-02, Plugs, Receptacles and cable connectors of the Pin and Sleeve Type.

UL Classified to IEC Standards 60309-1 (Plugs, Socket Outlets, and Couplers for Industrial Purposes) for Series I (European) rated voltages and services.

When used with cord, these devices require no further investigation by UL for equipment Classification to IEC 435 or IEC 380.

Specifications

Typical Specification

Manufacturer's Identification	Hubbell HBL520P9W.
Description	Plug, Power Supply.
Type	3 Pole + Neutral + Earth.
Rating	20A, 120/208V AC, 3 Phase WYE.
Configuration	UL 1686 C2, IEC 60309-2, Clock Position 9, Watertight.
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 Standard C22.2 No. 182.1, UL Classified to IEC 60309-1 IEC 60309-2.

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IEC Pin and Sleeve Specifications and Horsepower Ratings

Performance

Electrical

Dielectric Withstand Voltage	3000V AC.
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.
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%.
Endurance	5,000 connect and disconnect cycles with load for 16A and 20A, 1,000 cycles with load and 1,000 cycles without 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

Moisture Resistance	Watertight per IEC 60309-1.
Ingress Protection	IP67 Suitability.
Flammability	HB or better per UL 94 or CSA C22.2 No. 0.17.
Operating Temperatures	Maximum Continuous 75°C; Minimum - 40°C without impact.

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 IEC Pin and Sleeve

Catalog Number	AC Voltage Rating	Horsepower
HBL420R9W HBL420P9W HBL420C9W HBL420B9W	3Ø 250	2
HBL420R7W HBL420P7W HBL420C7W HBL420B7W	3Ø 480	5
HBL420R5W HBL420P5W HBL420C5W HBL420B5W	3Ø 600	7.5
HBL520R9W HBL520P9W HBL520C9W HBL520B9W	3ØY 120/208	.5
HBL520R7W HBL520P7W HBL520C7W HBL520B7W	3ØY 277/480	5
HBL520R5W HBL520P5W HBL520C5W HBL520B5W	3ØY 347/600	7.5
HBL430R9W HBL430P9W HBL430C9W HBL430B9W	3Ø 250	3
HBL430R7W HBL430P7W HBL430C7W HBL430B7W	3Ø 480	7.5
HBL430R5W HBL430P5W HBL430C5W HBL430B5W	3Ø 600	10
HBL530R9W HBL530P9W HBL530C9W HBL530B9W	3ØY 120/208	2
HBL530R7W HBL530P7W HBL530C7W HBL530B7W	3ØY 277/480	7.5
HBL530R5W HBL530P5W HBL530C5W HBL530B5W	3ØY 347/600	10
HBL460R9W HBL460P9W HBL460C9W HBL460B9W	3Ø 250	5
HBL460R7W HBL460P7W HBL460C7W HBL460B7W	3Ø 480	10
HBL460R5W HBL460P5W HBL460C5W HBL460B5W	3Ø 600	15
HBL560R9W HBL560P9W HBL560C9W HBL560B9W	3ØY 120/208	3
HBL560R7W HBL560P7W HBL560C7W HBL560B7W	3ØY 277/480	10
HBL560R5W HBL560P5W HBL560C5W HBL560B5W	3ØY 347/600	15
HBL4100R9W HBL4100P9W HBL4100C9W HBL4100B9W	3Ø 250	10
HBL4100R7W HBL4100P7W HBL4100C7W HBL4100B7W	3Ø 480	30
HBL4100R5W HBL4100P5W HBL4100C5W HBL4100B5W	3Ø 600	30
HBL5100R9W HBL5100P9W HBL5100C9W HBL5100B9W	3ØY 120/208	10
HBL5100R7W HBL5100P7W HBL5100C7W HBL5100B7W	3ØY 277/480	30
HBL5100R5W HBL5100P5W HBL5100C5W HBL5100B5W	3ØY 347/600	30



Pin and Sleeve 20 and 30 Amps Low Profile

Features and Benefits

Brass Box Terminal
Permits high clamping pressure on conductors without damaging wire strands for best electrical conductivity

Nylon Construction
Both interior and exterior are made of tough, durable nylon

Split Sleeves
Split sleeves with 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

Solid One-Piece Pins
Solid construction. Long life, reliable electrical contact and maximum conductivity

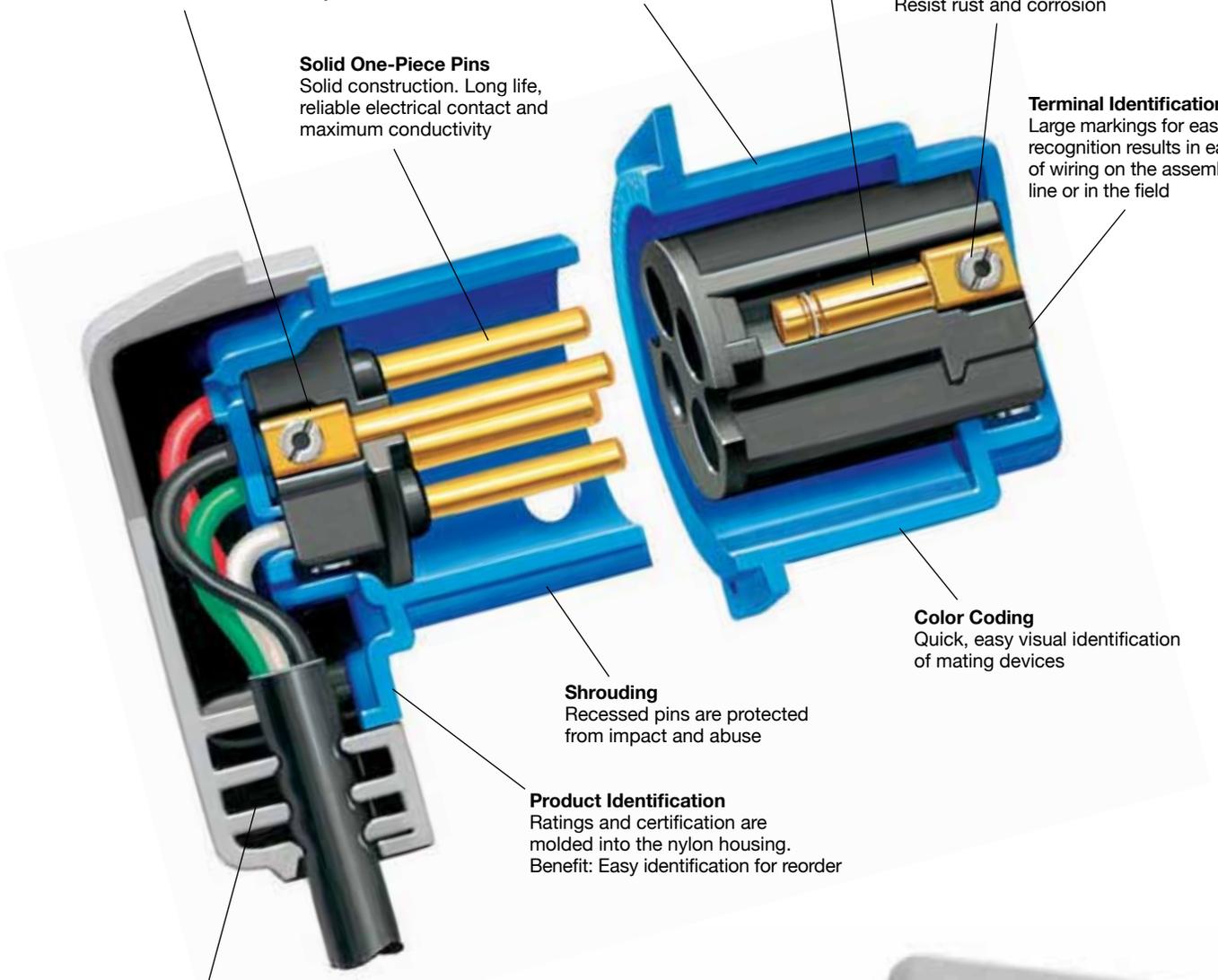
Terminal Identification
Large markings for easy recognition results in ease of wiring on the assembly line or in the field

Color Coding
Quick, easy visual identification of mating devices

Shrouding
Recessed pins are protected from impact and abuse

Product Identification
Ratings and certification are molded into the nylon housing. Benefit: Easy identification for reorder

Integrated Cord Grip
Limits strain on terminals, keeps cord connected



L420P9



L420R9



Pin and Sleeve

Low Profile Devices and Specifications

20, 30 and 60 Ampere - North American Ratings



Low Profile Devices

Amps	Poles and Wires	Configuration		AC Voltage	Plug	Receptacle	Cord Dia.	
		Recep./ Conn.	Plug/ Inlet				Min.	Max.
20	3P 4W			3Ø 250V	L420P9	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		AC Voltage	Plug	Receptacle	Cord Dia.	
		Recep./ Conn.	Plug/ Inlet				Min.	Max.
60	3P 4W			3Ø 250V	A460P9	A460R9	.75"	1.25" (19.1- 31.8)

Amps	Poles and Wires	Configuration		AC Voltage	Plug	Receptacle	Cord Dia.	
		Recep./ Conn.	Plug/ Inlet				Min.	Max.
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	Certified for current interruption 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%.
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 <HAR> 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	HB or better per UL 94 or CSA C22.2 No. 0.17.
Ingress Protection	IP22 Suitability
Operating Temperatures	Maximum Continuous 75° C; Minimum -40°C without impact.

Application Guide

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

Part	Material
Plug	
Case	Zytel® 101 Nylon
Shroud	Zytel® 101 Nylon
Pin Carrier 20 & 30A	Zytel® 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® 101 Nylon
Sleeve Carrier 20 & 30A	Zytel® 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® 101 Nylon
Panel Mount Trim Plate	Stainless Steel (300 series)

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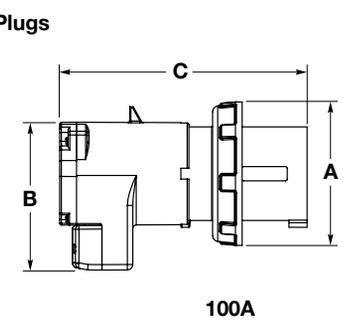
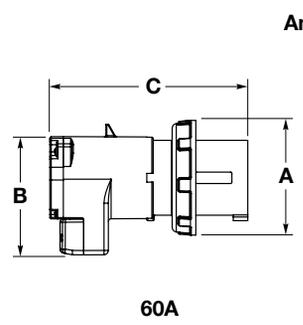
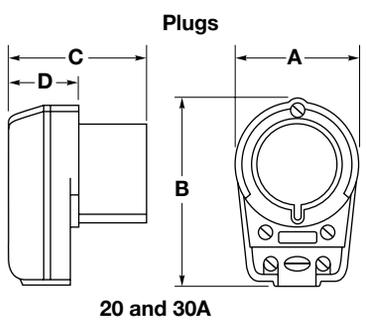
Note: See page E-17 for product dimensions.



Pin and Sleeve Low Profile Dimensions

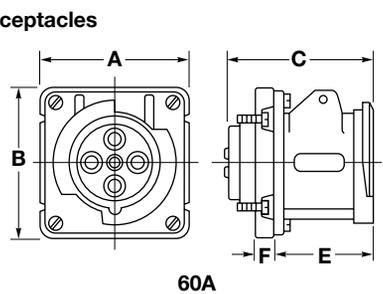
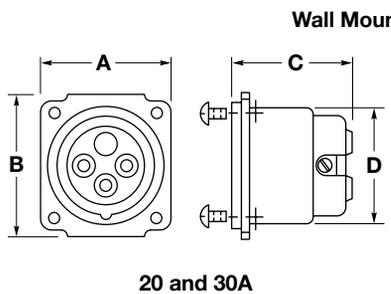
Plug Dimensions

Type	A	B	C	D	Cord Range Diameter
L420P9	2.47" (62.7)	3.78" (96.0)	2.93" (74.4)	1.49" (37.8)	.350"-.710" (8.9-18.0)
L430P12	2.97" (75.4)	4.18" (106.2)	3.50" (88.9)	1.71" (43.4)	.390"-.775" (9.9-19.7)
A460P9	3.38" (85.9)	4.25" (108.0)	7.00" (177.8)	-	.75"-1.25" (19.1- 31.8)
A5100P9	4.92" (125.00)	5.07" (128.81)	8.60" (218.35)	-	1.34"-1.50" (34.0- 38.1)

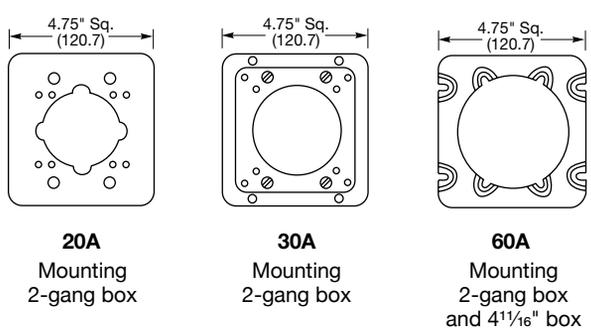


Wall Mount Receptacle Dimensions

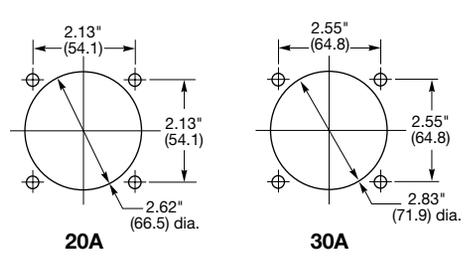
Type	A	B	C	D	E	F
L420R9	2.60" (66.0)	2.81" (71.4)	2.28" (57.9)	2.38" (60.5)	-	-
L430R12	3.12" (79.2)	3.12" (79.2)	2.77" (70.4)	2.76" (70.1)	-	-
A460R9	4.50" (114.3)	4.50" (114.3)	4.48" (113.8)	-	3.62" (91.9)	.50" (12.7)



Adapter Plate (Included with "L" and "A" series receptacles)



Panel Cutout





IEC Pin and Sleeve

Unfused Circuit-Lock® Pin and Sleeve Mechanical Interlocks*Features and Benefits*

Large gears enclosed in a gear box assembled on one plane to eliminate possible gear jumping

Color coded rating pad and receptacle mount to signify voltage

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)

Pre-wired IEC Pin and Sleeve receptacle

Replaceable spring-loaded liftcover with gasket for a watertight seal

Captured neoprene gasket for a watertight seal

Horsepower rated disconnect switch handles large motor loads

HBL430MI7W

Adjustable mounting feet are ductile to allow mounting on irregular surfaces

DIN rail mounted switch for easy installation and replacement

Enclosure housing 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

Hubbell Circuit-Lock® 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. At the same time, it eliminates the possibility of making

or breaking the circuit under load or making a casual or "lazy" connection. The switch cannot be turned ON until the plug is inserted properly, and the plug cannot be removed until the switch is turned OFF. 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.

The use of these interlocks can upgrade your facility to a complete Pin and Sleeve system. All Circuit-Lock mechanical interlocks can be locked out as a method of compliance with the OSHA Lockout/Tagout regulation.

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.

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

IEC Pin and Sleeve Unfused Circuit-Lock® Devices

20, 30, 60 and 100 Ampere – North American Ratings, 32 Ampere – International Rating

IP67
SUITABILITY



Rating					Unfused Circuit-Lock® Devices	
Amps	Poles and Wires	Configuration Recep.	Plug	AC Voltage	Mechanical Interlock	Mating Plug
20	3P 4W			120/240V	HBL420MI12W	HBL420P12W
	3P 4W			3Ø 240V	HBL420MI9W	HBL420P9W
	3P 4W			3Ø 480V	HBL420MI7W	HBL420P7W
	3P 4W			3Ø 600V	HBL420MI5W	HBL420P5W
30	2P 3W			120V	HBL330MI4W	HBL330P4W
	2P 3W			240V	HBL330MI6W	HBL330P6W
	2P 3W			480V	HBL330MI7W	HBL330P7W
	3P 4W			120/240V	HBL430MI12W	HBL430P12W
	3P 4W			3Ø 240V	HBL430MI9W	HBL430P9W
	3P 4W			3Ø 480V	HBL430MI7W	HBL430P7W
	3P 4W			3Ø 600V	HBL430MI5W	HBL430P5W
	4P 5W			3ØY 120/208V	HBL530MI9W	HBL530P9W
	4P 5W			3ØY 277/480V	HBL530MI7W	HBL530P7W
	4P 5W			3ØY 347/600V	HBL530MI5W	HBL530P5W
32	3P 4W			380V 50HZ-440V 60Hz	HBL432MI3W	HBL432P3W
60	2P 3W			120V	HBL360MI4W	HBL360P4W
	2P 3W			240V	HBL360MI6W	HBL360P6W
	2P 3W			480V	HBL360MI7W	HBL360P7W
	3P 4W			120/240V	HBL460MI12W	HBL460P12W
	3P 4W			3Ø 240V	HBL460MI9W	HBL460P9W
	3P 4W			3Ø 480V	HBL460MI7W	HBL460P7W
	3P 4W			3Ø 600V	HBL460MI5W	HBL460P5W
	4P 5W			3ØY 120/208V	HBL560MI9W	HBL560P9W
	4P 5W			3ØY 277/480V	HBL560MI7W	HBL560P7W
	4P 5W			3ØY 347/600V	HBL560MI5W	HBL560P5W
100	2P 3W			240V	HBL3100MI6W	HBL3100P6W
	3P 4W			120/240V	HBL4100MI12W	HBL4100P12W
	3P 4W			3Ø 240V	HBL4100MI9W	HBL4100P9W
	3P 4W			3Ø 480V	HBL4100MI7W	HBL4100P7W
	3P 4W			3Ø 600V	HBL4100MI5W	HBL4100P5W
	4P 5W			3ØY 120/208V	HBL5100MI9W	HBL5100P9W

Note: 20, 30 and 32A – 1 inch N.P.T. hub supplied; 60 and 100A – 1¼ inch hub supplied.





IEC Pin and Sleeve

Circuit-Lock® Pin and Sleeve Mechanical Interlocks

Accessories and Dimensions



HBLAC1



HBLAC2



HBL30RGB

HBL30RNB



MICPK30



CA3430MI



HBL30MIRS



HBLRFT2

Auxiliary Contacts for 20, 30, 32, 60 and 100A switch, 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

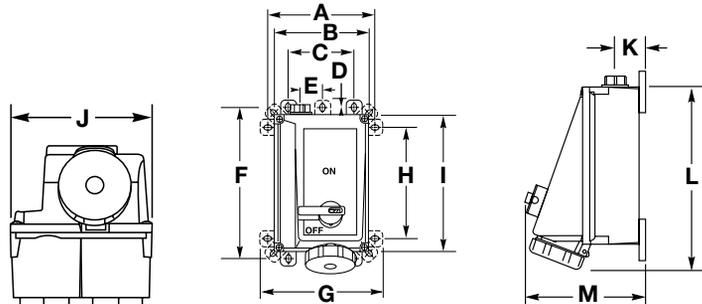
Replacement Switches

Description	Catalog Number
For 20A mechanical interlocks.	HBLDS3RS
For 30 and 32A mechanical interlocks.	HBL30MIRS
For 60 and 100A mechanical interlocks.	HBLDS60100RS

Replacement Mounting Feet

Description	Catalog Number
For 20, 30, 32, 60 and 100A mechanical interlocks.	HBLRFT2*

Note: * Package of 10 feet and 10 screws.



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)
B	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)
H	8.00" (203.2)	9.75" (247.7)	9.75" (247.7)
I	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" N.P.T.	1.25" N.P.T.	1.25" N.P.T.

Note: ** 30 and 32A, 3 and 4W = 11.50" (292.1); 30A 5W = 11.59" (294.4).



IEC Pin and Sleeve Unfused Circuit-Lock®

Specifications and Horsepower Ratings

Typical Specifications

Manufacturer's Description	Identification Hubbell HBL430MI7W Circuit-Lock® Pin and Sleeve Mechanical Interlock.
Electrical Type	3 Pole + Earth.
Rating	30A, 480V AC, 3 Phase.
Configuration	IEC 60309-2, UL1686 C2, Clock position 7.
Enclosure Type	Outdoor - 4X (Watertight, Washdown); Indoor - 12 (Dust-tight, Falling Dirt and Noncorrosive Liquids)
Ingress Protection	IP67 Suitability.
Enclosure Material	Non-metallic, enclosure suitable for metallic conduit.
Certification	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	Valox®	Top	Valox®
Handle	Valox®	Conduit Hub	Zinc
Enclosure Gasket	Neoprene	Shaft	Valox®
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

Electrical	
Dielectric Voltage	Withstands 3,000V AC Min.
Max. Working Voltage	600V AC RMS.
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 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 the external label and molded into the receptacle mount.
Mounting	External adjustable feet.

Environmental

Moisture Resistance	Outdoor - 4X (Watertight, Washdown); Indoor - 12 (Dust-tight, Falling Dirt and Noncorrosive Liquids).
Ingress Protection	IP67 Suitability.
Flammability	UL94-5VA and V-0 Classification.
Operating Temperature	Max. Continuous +75°C; Min. Continuous -40°C.
UV Resistance	All materials are UV stabilized.

Horsepower Ratings

Amps	AC Voltage Rating	Horsepower	Catalog Number	Mating Plug Catalog Number
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

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

IEC Pin and Sleeve

"Reverse Service" Unfused Circuit-Lock® Mechanical Interlocks*Features and Benefits*

Large gears enclosed in a gear box assembled on one plane to eliminate possible gear jumping

Color coded rating pad and receptacle mount to signify voltage

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

Pre-wired IEC Pin and Sleeve reverse service receptacle

Solid pins—dependable solid brass for longer life and reliable electrical contact

Captured neoprene gasket for a watertight seal

Replaceable spring-loaded liftcover with gasket for a watertight seal

Horsepower rated disconnect switch handles large motor loads

Adjustable mounting feet are ductile to allow mounting on irregular surfaces

HBL430MI7WR

DIN rail mounted switch for easy installation and replacement

Enclosure housing 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

Hubbell Circuit-Lock® Reverse Service Mechanical Interlocks

The National Electric Code 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 "Reverse Service" Circuit-Lock® Mechanical Interlock incorporates the disconnect switch and reverse service receptacle (inlet) in one compact non-metallic and economical unit.

At the same time, it eliminates the possibility of making or breaking the circuit under load or making a casual or "lazy" connection.

The switch cannot be turned ON until the reverse service plug has been inserted properly, and the reverse service plug cannot be removed until the switch is turned OFF. The non-metallic enclosure can be connected to metallic conduit and not interfere with the ground continuity.

These horsepower rated units are durable, watertight and easy to install and all "Reverse Service" Circuit-Lock® Mechanical Interlocks can be locked out as a method of compliance with OSHA Lockout/Tagout regulation.

These Circuit-Lock® units are available in 30, 60 and 100A, 4 wire configurations.



Rating					Unfused Circuit-Lock® Devices	
Amps	Poles and Wires	Configuration Recep./ Conn.	Plug/ Inlet	AC Voltage	Mechanical Interlock	Mating Plug
30	3P 4W			3Ø 240V	HBL430MI9WR	HBL430P9WR
	3P 4W			3Ø 480V	HBL430MI7WR	HBL430P7WR
	3P 4W			3Ø 600V	HBL430MI5WR	HBL430P5WR
60	3P 4W			120/240V	HBL460MI12WR	HBL460P12WR
	3P 4W			3Ø 240V	HBL460MI9WR	HBL460P9WR
	3P 4W			3Ø 480V	HBL460MI7WR	HBL460P7WR
	3P 4W			3Ø 600V	HBL460MI5WR	HBL460P5WR
100	3P 4W			120/240V	HBL4100MI12WR	HBL4100P12WR
	3P 4W			3Ø 240V	HBL4100MI9WR	HBL4100P9WR
	3P 4W			3Ø 480V	HBL4100MI7WR	HBL4100P7WR
	3P 4W			3Ø 600V	HBL4100MI5WR	HBL4100P5WR

Note: 30A – 1 inch N.P.T. hub supplied; 60 and 100A – 1 inch hub supplied.



HBLAC1



HBLAC2



HBL30RGB

HBL30RNB

Auxiliary Contacts for 30, 60 and 100A switch, 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



MICPK30

Ground Block

Description	Catalog Number
For 30A switches.	HBL30RGB
For 60 and 100A switches.	HBL60100RGB

Neutral Block

Description	Catalog Number
For 30A switches.	HBL30RNB
For 60A switches.	HBL60RNB
For 100A switches.	HBL100RNB



CA3430MI

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 60A mechanical interlocks.	CA60MI
For 100A mechanical interlocks.	CA100MI



HBL30MIRS

Replacement Switches

Description	Catalog Number
For 30A switches.	HBL30MIRS
For 60 and 100A switches.	HBLDS60100RS

Replacement Mounting Feet

Description	Catalog Number
For 30, 60 and 100A mechanical interlocks.	HBLRFT2*



HBLRFT2



IEC Pin and Sleeve "Reverse Service" Unfused Circuit-Lock®

Specifications and Horsepower Ratings

Specifications

Typical Specifications

Manufacturer's Description	Identification Hubbell HBL460MI7WR Circuit-Lock® Pin and Sleeve Reverse Mechanical Interlock.
Electrical Type	3 Pole + Earth.
Rating	60A, 480V AC 3 Phase.
Configuration	IEC 60309-2 Clock position 7.
Enclosure Type	Outdoor - 4X (Watertight, Washdown); Indoor - 12 (Dust-tight, Falling Dirt and Noncorrosive Liquids).
Ingress Protection	IP67 Suitability.
Enclosure Material	Non-metallic, enclosure suitable for metallic conduit.
Certification	UL Listed, CSA Certified.
Materials	UV resistant thermoplastic Valox® top and base. High heat thermoset interiors, 300 series stainless steel enclosure screws, zinc conduit hub.

Performance

Electrical

Dielectric Voltage	Withstands 3,000V AC Min.
Max. Working Voltage	600V AC RMS.
Current Interrupting	Certified for current interrupting.
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

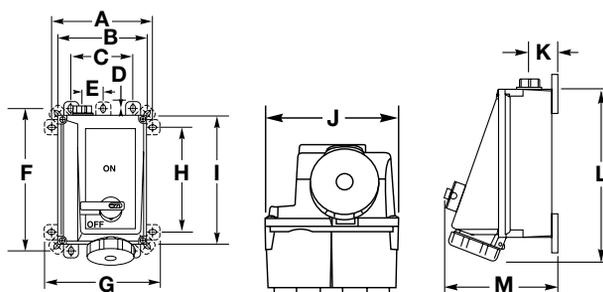
Impact Resistance	In accordance with UL 746C.
Terminal Identification	In accordance with UL, CSA and international conventions.
Product Identification	Identification and rating are part of the external label and molded into the receptacle mount.
Mounting	External adjustable feet.

Environmental

Moisture Resistance	Outdoor - 4X (Watertight, Washdown) Indoor - 12 (Dust-tight, Falling Dirt and Noncorrosive Liquids).
Ingress Protection	IP67 Suitability.
Flammability	UL94-5VA and V-0 Classification.
Operating Temperature	Max. Continuous 75°C; Min. Continuous -40°C.
UV Resistance	All materials are UV stabilized.

Dimensions

KEY	30A Inches (mm)	60A Inches (mm)	100A Inches (mm)
A	7.75 (196.9)	7.75 (196.9)	7.75 (196.9)
B	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)
H	8.00 (203.2)	9.75 (247.7)	9.75 (247.7)
I	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	11.00 (279.4)	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" N.P.T.	1.25" N.P.T.	1.25" N.P.T.



Horsepower Ratings

Amps	Poles and Wires	AC Voltage Rating	Horsepower	Catalog Number	Reverse Service Plug Catalog Number
30	3P 4W	3Ø 240V AC	7.5	HBL430MI9WR	HBL430P9WR
30	3P 4W	3Ø 480V AC	15	HBL430MI7WR	HBL430P7WR
30	3P 4W	3Ø 600V AC	20	HBL430MI5WR	HBL430P5WR
60	3P 4W	120/240V AC	7.5	HBL460MI12WR	HBL460P12WR
60	3P 4W	3Ø 240V AC	15	HBL460MI9WR	HBL460P9WR
60	3P 4W	3Ø 480V AC	30	HBL460MI7WR	HBL460P7WR
60	3P 4W	3Ø 600V AC	40	HBL460MI5WR	HBL460P5WR
100	3P 4W	120/240V AC	15	HBL4100MI12WR	HBL4100P12WR
100	3P 4W	3Ø 240V AC	25	HBL4100MI9WR	HBL4100P9WR
100	3P 4W	3Ø 480V AC	50	HBL4100MI7WR	HBL4100P7WR
100	3P 4W	3Ø 600V AC	50	HBL4100MI5WR	HBL4100P5WR

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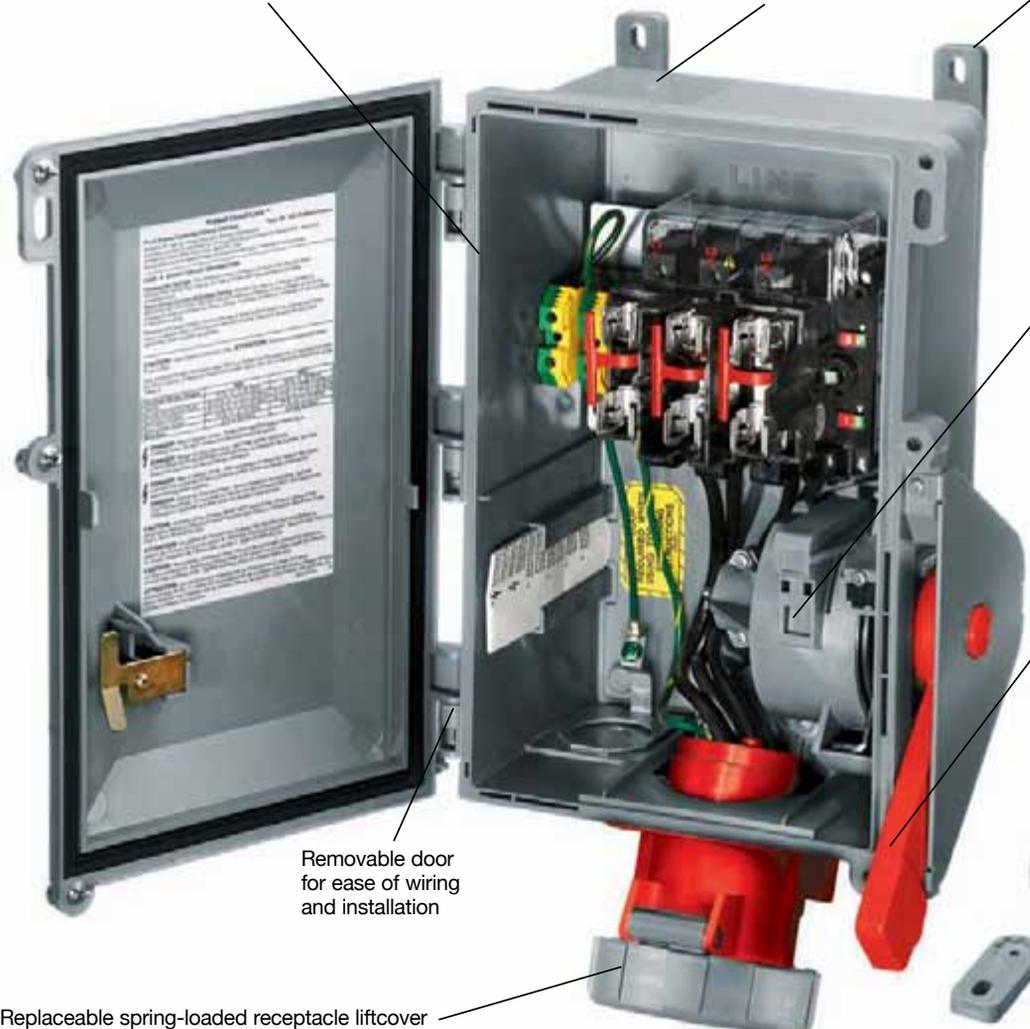
IEC Pin and Sleeve Fused Circuit-Lock® Pin and Sleeve Mechanical Interlocks

Features and Benefits

Non-metallic enclosure meets UL 50 Type 4X (watertight) 12K (dust-tight) and IP66 suitability requirements. Enclosure is molded of rugged thermoplastic Valox® to resist abuse, corrosion and enhance safety. All external hardware is stainless steel

Three molded-in conduit drill points are located on the top, bottom, and back surface of enclosure. Conduit hub provided: 30A 1 inch N.P.T., 60A 1 1/4 inch N.P.T.

Adjustable mounting feet (4) can be mounted in any 1 of 3 positions for ease of installation



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

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

Removable door for ease of wiring and installation

Replaceable spring-loaded receptacle liftcover with gasket ensures dust tight rating; liftcover provides watertight seal when turned and locked

HBL430MIF7W



Conduit hub and mounting feet are supplied with each IEC Mechanical Interlock



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.



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.



Stainless steel 1/4 inch turn door fasteners for quick, easy access to fuses.



Enclosure door can be locked to prevent unauthorized access. Additionally, if the switch is ON, the door can not be opened.

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



IEC Pin and Sleeve

Fused Circuit-Lock® Devices and Accessories

30 and 60 Ampere – North American Ratings

IP66
SUITABILITY



Rating					Fused Circuit-Lock® Devices	
Amps	Poles and Wires	Configuration Recep./ Conn.	Plug/ Inlet	AC Voltage	Mechanical Interlock	Mating Plug
30	3P 4W			120/240V	HBL430MIF12W	HBL430P12W
	3P 4W			3Ø 240V	HBL430MIF9W	HBL430P9W
	3P 4W			3Ø 480V	HBL430MIF7W	HBL430P7W
	3P 4W			3Ø 600V	HBL430MIF5W	HBL430P5W
	4P 5W			3ØY 277/480V	HBL530MIF7W	HBL530P7W
	4P 5W			3ØY 347/600V	HBL530MIF5W	HBL530P5W
60	3P 4W			120/240V	HBL460MIF12W	HBL460P12W
	3P 4W			3Ø 240V	HBL460MIF9W	HBL460P9W
	3P 4W			3Ø 480V	HBL460MIF7W	HBL460P7W
	3P 4W			3Ø 600V	HBL460MIF5W	HBL460P5W
	4P 5W			3ØY 120/208V	HBL560MIF9W	HBL560P9W

Note: 30A – 1 inch N.P.T. hub supplied; 60A – 1¼ inch hub supplied.

ACFSNO

MICPK30

CA3430MI

HBLRFT2

Auxiliary Contacts

Description	Catalog Number
Auxiliary contact, normally open, A600 pilot duty, break before break.	ACFSNO
Auxiliary contact, normally closed, A600 pilot duty, break before break.	ACFSNC

Watertight Closure Plug Kits

Description	Catalog Number
For 30A Circuit-Lock® unfused and fused Pin & Sleeve mechanical interlocks.	MICPK30
For 60 & 100A Circuit-Lock® unfused and fused Pin & Sleeve mechanical interlocks.	MICPK60

Replacement Flip Covers

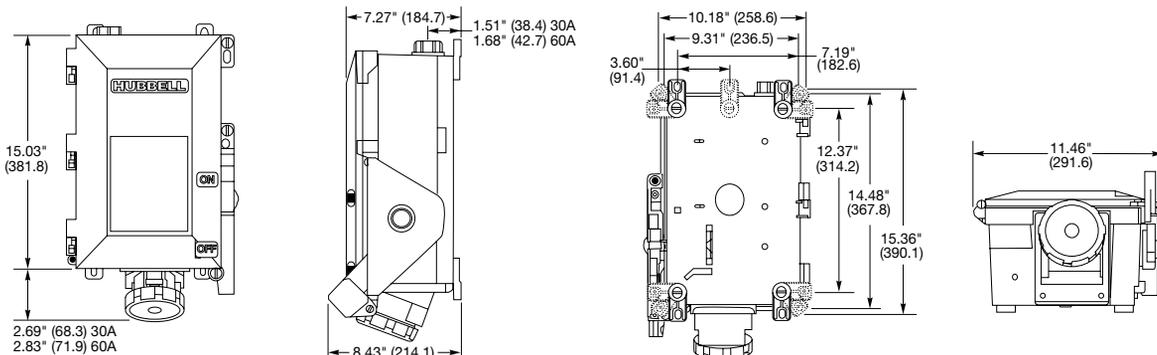
Description	Catalog Number
For 30A, 3 and 4 wire mechanical interlocks.	CA3430MI
For 30A, 5 wire mechanical interlocks.	CA530MI
For 60A mechanical interlocks.	CA60MI

Replacement Mounting Feet

Description	Catalog Number
Replacement mounting feet and screws for 30 & 60A fused mechanical interlocks.	HBLRFT2*

Note: * Package of 10 feet and 10 screws.

Dimensions





IEC Pin and Sleeve

Fused Circuit-Lock®

Specifications and Horsepower Ratings

Specifications**Typical Specifications**

Manufacturer's Description	Identification Hubbell HBL460MIF7W.
Electrical Type	Fused Circuit-Lock Pin and Sleeve Mechanical Interlock.
Rating	3 Pole + Earth.
Configuration	60A, 480V AC, 3 Phase.
Enclosure Type	IEC 60309-2, UL1686C2, Clock Position 7.
Certification	Outdoor - 4X (Watertight, Washdown); Indoor - 12K (Dust-tight, Falling dirt). UL Listed, CSA Certified.

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.

Materials

Part	Material
Base	Valox®
Top	Valox®
Handle	Valox®
Conduit Hub	Zinc, 30A-1", 60A-1¼" N.P.T.
Enclosure Gasket	Neoprene
Shaft	Brass
Shaft Seal	Neoprene.
Ground Plate	Galvanized Steel
Enclosure Screws	Stainless Steel
Mounting Inserts	Brass
Hinge Pin	Nickel-Plated Brass
Hinge Spring	Stainless Steel

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 100,000 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	Outdoor - 4X (Watertight, Washdown); Indoor - 12K (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 **	Catalog Number	Use Pin and Sleeve Plug Catalog Number
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
30	3ØY 347/600V	7.5	20	HBL530MIF5W	HBL530P5W
60	3Ø 600V AC	15	40	HBL460MIF5W	HBL460P5W
60	3Ø 480V AC	15	30	HBL460MIF7W	HBL460P7W
60	3Ø 240V AC	7.5	15	HBL460MIF9W	HBL460P9W
60	120/240V AC	3*	7.5*	HBL460MIF12W	HBL460P12W
60	3ØY 120/208V	7.5	15	HBL560MIF9W	HBL560P9W

Note: * 208-240V AC L-L.

** Requires time delay fuses.

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Pin and Sleeve Devices

IEC Pin and Sleeve Terminal Identification

IEC Pin and Sleeve Terminal Identification – Rear View

Description	Rating		Terminal Marking Pattern			
	Domestic	International	Receptacle and Connector		Plug and Inlet	
			Domestic	International	Domestic	International
3 wire	125V AC 277V AC	100-130V				
3 wire	250V AC 480V AC 600V AC	200-250V 380-415V AC				
4 wire	125/250V AC 1ØY 120/208V	—				
4 wire	(3Ø Δ) 250V AC 480V AC 600V AC	380-415V AC				
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				

Note: For Insulgrip Pin and Sleeve catalog number explanation, see table below.
Pilot contacts supplied on 4 and 5W 63 and 125 Amp international rated devices.

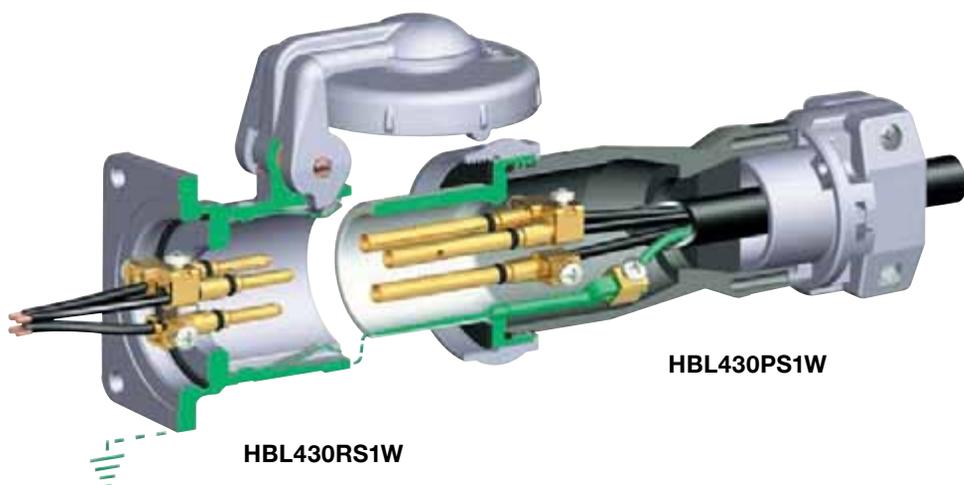
Catalog Numbering System EXAMPLE: HBL430RS2WR						
Manufacturer	No. of Wires	Amperage	Device Type	Grounding Style	Environment	Specialized
HBL=Hubbell	3=2P 3W 4=3P 4W 5=4P 5W 200=Amp	30=Amp 60=Amp 100=Amp	R=Receptacle P=Plug C=Connector	S1=Style I S2=Style II	W=Watertight, UL Type 4X	R=Reversed Service



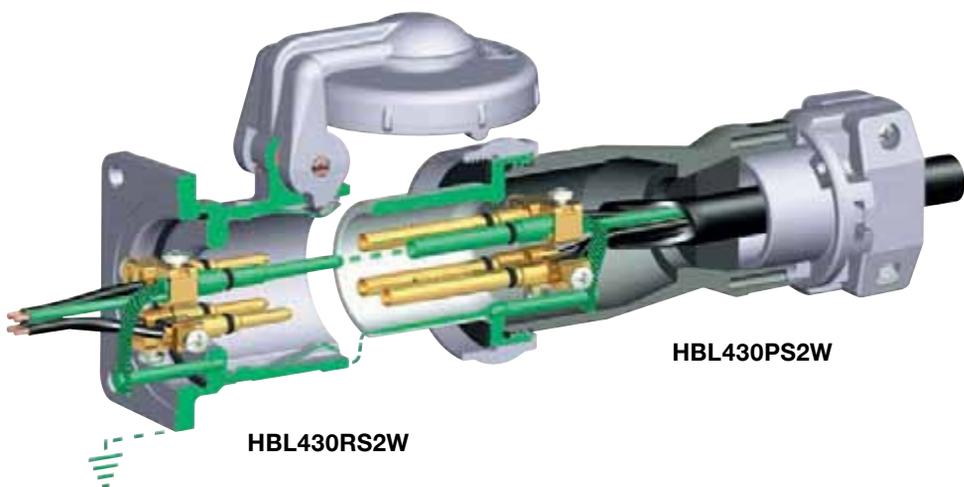
UL 1686 C1 Pin and Sleeve

Insulgrip® Pin and Sleeve Devices*Features and Benefits, Hubbell Offers Two Approaches***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			



UL 1686 C1 Pin and Sleeve

Insulgrip® Pin and Sleeve Devices*Features and Benefits***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

Spring-Loaded, Gasketed Cover

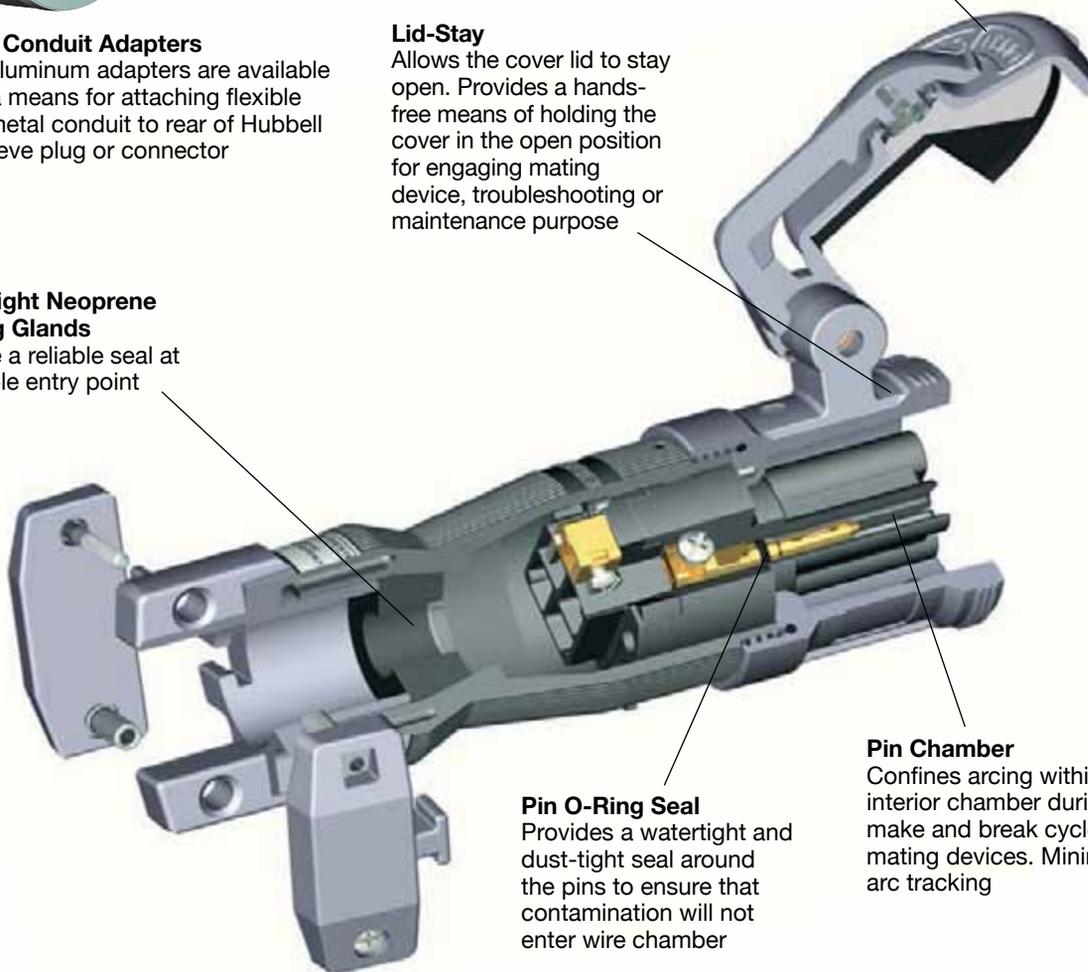
Provides a UL Type 4X watertight, dust-tight seal on connectors and receptacles

Lid-Stay

Allows the cover lid to stay open. Provides a hands-free means of holding the cover in the open position for engaging mating device, troubleshooting or maintenance purpose

Watertight Neoprene Sealing Glands

Provide a reliable seal at the cable entry point

**Pin O-Ring Seal**

Provides a watertight and dust-tight seal around the pins to ensure that contamination will not enter wire chamber

Pin Chamber

Confines arcing within the interior chamber during make and break cycle of mating devices. Minimizes arc tracking

**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.

**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.

**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.



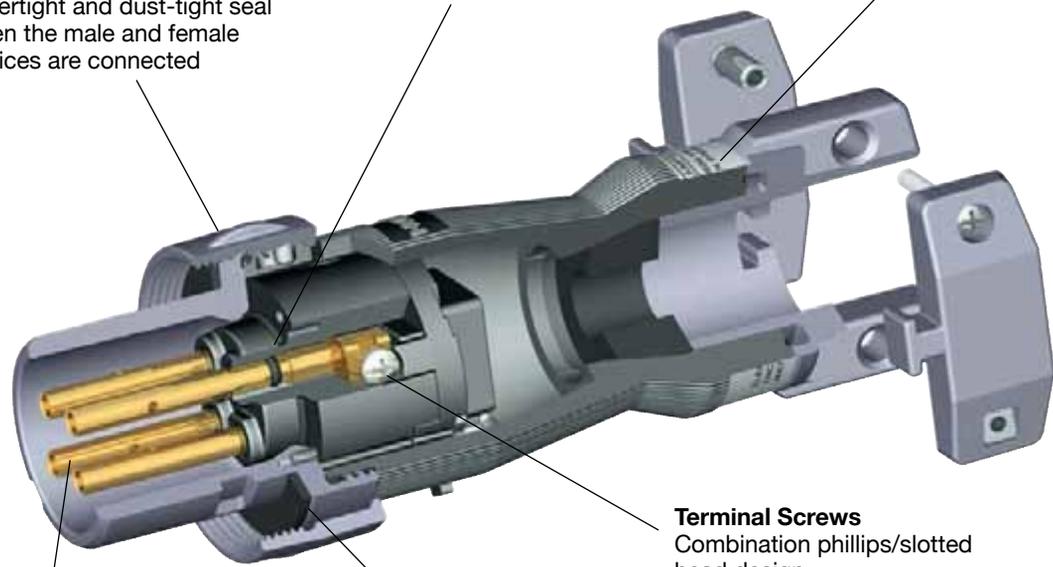
UL 1686 C1 Pin and Sleeve Insulgrip® Pin and Sleeve Devices

Features and Benefits

Locking Ring
Provides a UL Type 4X watertight and dust-tight seal when the male and female devices are connected

Sleeve O-Ring Seal
Provides a watertight and dust-tight seal around the sleeves. Assures that contamination will not enter wire chamber

Product Marking
Catalog number and rating visible while in use. Markings are color coded differentiating Style I and Style II devices



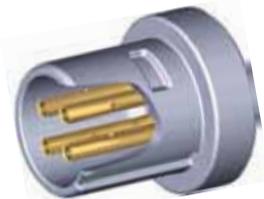
All-Brass Sleeve Contacts
Provide reliable electrical contact with mating pins. Ensures reliable electrical contact with minimum heat build-up over time

Shroud/Housing Seal
Provides a watertight and dust-tight seal when mated with receptacle or connector

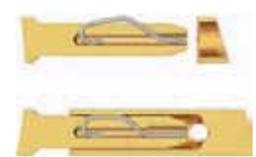
Terminal Screws
Combination phillips/slotted head design



Thermoplastic Housing
Provides excellent insulating, impact, corrosion, and UV resistant properties. Protects users and internal components in the roughest of environments.



Shrouded Sleeves
The shroud protects contact sleeves from deforming from physical abuse. The design protects the user from the possibility of touching live contacts during insertion and withdrawal of mating parts.



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.



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.





UL 1686 C1 Pin and Sleeve

Insulgrip® Pin and Sleeve Devices - Style I and II

30, 60, 100 and 200 Ampere, 600/250 Voltage AC/DC, 50-400 Hertz

Rating				Style I Devices			Replacement 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†	IN4200MS1†
	4P 5W		600/250	HBL5200RS1W	HBL5200PS1W	HBL5200CS1W	IN5200FS1†	IN5200MS1†
Rating				Style II Devices			Replacement 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		600/250	HBL3200RS2W	HBL3200PS2W	HBL3200CS2W	IN3200FS2†	IN3200MS2†
	3P 4W		600/250	HBL4200RS2W	HBL4200PS2W	HBL4200CS2W	IN4200FS2†	IN4200MS2†
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.

** While in use or with cover closed.

† Consult factory.

Corrosion resistant cord sets are available on page W-17 of this catalog.

UL 1686 C1 Pin and Sleeve

“Reversed Service” Insulgrip® Pin and Sleeve Devices - Style I and II

30, 60, 100 and 200 Ampere, 600/250 Voltage AC/DC, 50-400 Hertz



Rating				Style I Devices			Replacement 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		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†	IN4200FS1†
	4P 5W		600/250	HBL5200RS1WR	HBL5200PS1WR	HBL5200CS1WR	IN5200MS1†	IN5200FS1†
Rating				Style II Devices			Replacement 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†	IN3200FS2†
	3P 4W		600/250	HBL4200RS2WR	HBL4200PS2WR	HBL4200CS2WR	IN4200MS2†	IN4200FS2†
Rating				Corrosion Resistant Devices			Accessories	
Amps	Poles and Wires	Receptacle/Connector Configuration*	Maximum Voltage AC/DC	 Inlet	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.
 ** While in use or with cover closed.
 † Consult factory.
 Corrosion resistant cord sets are available on page W-17 of this catalog.



UL 1686 C1 Pin and Sleeve

Insulgrip® Pin and Sleeve Device Accessories



MB301W



MB304W



MB601003W



MB601006W



MB2003W



CC3430

ILR1



SAB34

074093403

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	N.P.T. Hub Size	Catalog Number
Back box for 30A devices.	30	3/4"	MB301W
	30	1"	MB302W

Metallic 15° Angle Back Box*

Description	Amps	N.P.T. Hub Size	Catalog Number
Back box for 60A devices.	60	1"	MB601W
	60	1 1/4"	MB602W
	60	1 1/2"	MB603W

Metallic Feed-Thru Back Box*

Description	Amps	N.P.T. Hub Size	Catalog Number
Straight feed-thru box for 30A devices.	30	3/4"	MB303W
	30	1"	MB304W
Straight feed-thru box for 60A devices.	60	1"	MB604W
	60	1 1/4"	MB605W
	60	1 1/2"	MB606W

Metallic Four-Way Angle Back Box*

Description	Amps	N.P.T. Hub Size	Catalog Number
Four-way 15° angle box for 60 and 100A devices.	60/100	1 1/4"	MB601002W
	60/100	1 1/2"	MB601003W
	60/100	2"	MB601004W
Four-way 45° angle box for 200A devices.	200	2"	MB2003W
	200	2 1/2"	MB2004W
45° Angle adapter only for 200A devices.	200	-	AA20045

Metallic Four-Way Feed-Thru 15° Angle Back Box*

Description	Amps	N.P.T. Hub Size	Catalog Number
Four-way feed-thru, 15° angle for 60 and 100A devices.	60/100	1 1/4"	MB601006W
	60/100	1 1/2"	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	CC200	-

Note: ** Locking Ring only.

Liquidtight Adapters

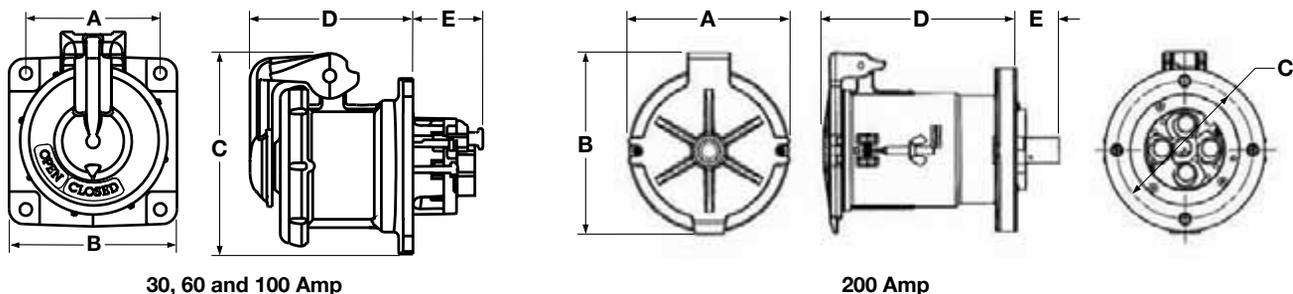
Rating of Hubbell Pin and Sleeve Device	Liquidtight Conduit Size	Hubbell Liquidtight Adapter Catalog Number	Optional Kellems Liquidtight Conduit Grip Catalog Number
30 Amp	1/2" N.P.T.	SAB12	074093402
	3/4" N.P.T.	SAB34	074093403
	1" N.P.T.	SAB100	074093404
60 Amp	1" N.P.T.	SAC100	074093404
	1 1/4" N.P.T.	SAC125	074093405
100 Amp	1 1/4" N.P.T.	SAD125	074093405
	1 1/2" N.P.T.	SAD150	074093406



UL 1686 C1 Pin and Sleeve Insulgr[®] Pin and Sleeve Device Dimensions

Receptacle Dimensions

Amps	Type	A		B		C		D		E	
		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)	4.70 (119)	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)	4.70 (119)	4.70 (119)	5.30 (135)	5.30 (135)	1.54 (39)	1.54 (39)
	5100R	3.50 (89)		4.25 (108)		4.70 (119)		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)	

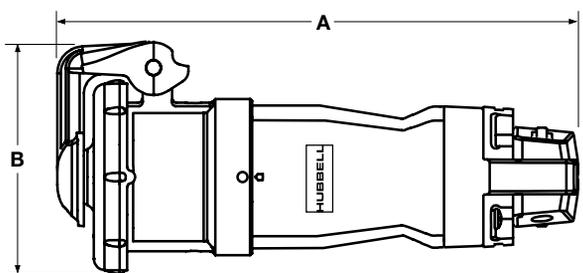
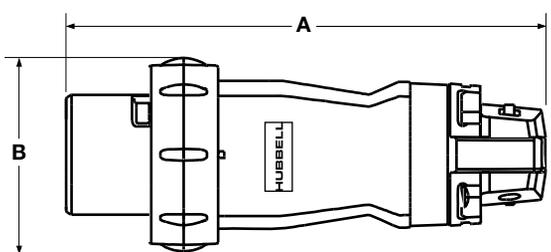


Plug Dimensions

Amps	Type	A		B		Cord Grip Range
		Style I	Style II	Style I	Style II	
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)	9.60 (244)	3.40 (86)	3.70 (94)	.500-1.45 (12.7-36.8)
	560P	9.60 (244)		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	3200P		11.13 (282)		6.35 (161)	1.00-2.50 (25.4-63.5)
	4200P	11.13 (282)	11.13 (282)	6.35 (161)	6.70 (170)	1.00-2.50 (25.4-63.5)
	5200P	11.13 (282)		6.70 (170)		1.00-2.50 (25.4-63.5)

Connector Body Dimensions

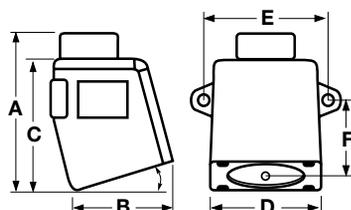
Amps	Type	A		B		Cord Grip Range
		Style I	Style II	Style I	Style II	
30	330C	8.38 (213)	8.38 (213)	3.74 (95)	3.74 (95)	.375-1.20 (9.5-30.5)
	430C	8.38 (213)	8.38 (213)	3.74 (95)	3.74 (95)	.375-1.20 (9.5-30.5)
	530C	8.38 (213)		3.74 (95)		.375-1.20 (9.5-30.5)
60	360C	9.90 (251)	9.90 (251)	3.50 (89)	3.50 (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)





UL 1686 C1 Pin and Sleeve

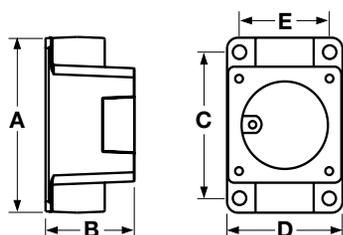
Insulgrip® Pin and Sleeve Device Dimensions



Metallic Angle Box

Metallic Angle Back Box

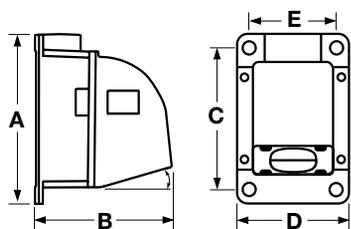
Description	N.P.T. Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Catalog Number
30° Angle back box for 30A devices.	¾"	4.87" (124.0)	2.94" (75.0)	4.02" (102.0)	3.40" (86.0)	4.25" (108.0)	2.12" (54.0)	MB301W
	1"	4.87" (124.0)	2.94" (75.0)	4.02" (102.0)	3.40" (86.0)	4.25" (108.0)	2.12" (54.0)	MB302W
15° Angle back box for 60A devices.	1"	–	4.80" (121.9)	–	–	5.25" (133.4)	2.69" (68.3)	MB601W
	1¼"	–	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



Metallic Feed-Thru Box

Metallic Feed-Thru Back Box

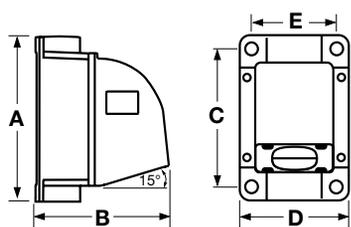
Description	N.P.T. Hub Size	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inch (mm)	E Inch (mm)	F Inch (mm)	Catalog Number
Back box for 30A devices.	¾"	5.35" (136.0)	2.91" (74.0)	4.53" (115.0)	3.59" (91.0)	2.62" (67.0)	–	MB303W
	1"	5.35" (136.0)	2.91" (74.0)	4.53" (115.0)	3.59" (91.0)	2.62" (67.0)	–	MB304W
Back 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
	1¼"	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	N.P.T. 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 60 and 100A devices.	1¼"	7.92" (201.0)	8.52" (216.0)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	–	MB601002W
	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 200A devices.	2"	10.82" (274.8)	9.86" (250.4)	9.50" (241.3)	8.17" (207.5)	6.75" (171.5)	–	MB2003W
	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 Feed-Thru Angle Box

Metallic Four-Way Feed-Thru 15° Angle Back Box

Description	N.P.T. 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 for 60 and 100A devices.	1¼"	7.98" (202.7)	8.55" (217.2)	7.00" (178.0)	6.14" (156.0)	4.88" (124.0)	–	MB601006W
	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.



UL 1686 C1 Pin and Sleeve Insulgr[®] Pin and Sleeve Device Listings

Materials (30, 60, 100, and 200 Amp)

Plug	Material
Housing	Valox [®] 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 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

Housing	Valox [®] 357 (200 Amp Aluminum)
Connector Shroud	Epoxy Painted Aluminum
Cord Clamps	Rynite [®] SST35
Clamp Nut	Nickel Plated Brass
Gland Cap	Rynite [®] SST35 (200A Aluminum)
Gland	Neoprene
O-Rings, Gaskets & Seals	Neoprene
Contact Carrier	Thermoset Polyester
Retainer	Thermoset Polyester
Pin	Brass (M-Series - Nickel-plated 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	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 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

Valox[®] is a trademark of SABIC Innovative Plastics, acquired from General Electric Company.
Rynite[®] is a registered trademark of E.I. DuPont Corp.

Dimensions in Inches (mm)

Typical Specification

Manufacturer's Identification Hubbell HBL430PS2W.

Description Plug, Power Supply.

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

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.
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 and Moisture Resistance	Type 3, 4, 4X per UL 50 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 (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	Valox [®] 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.



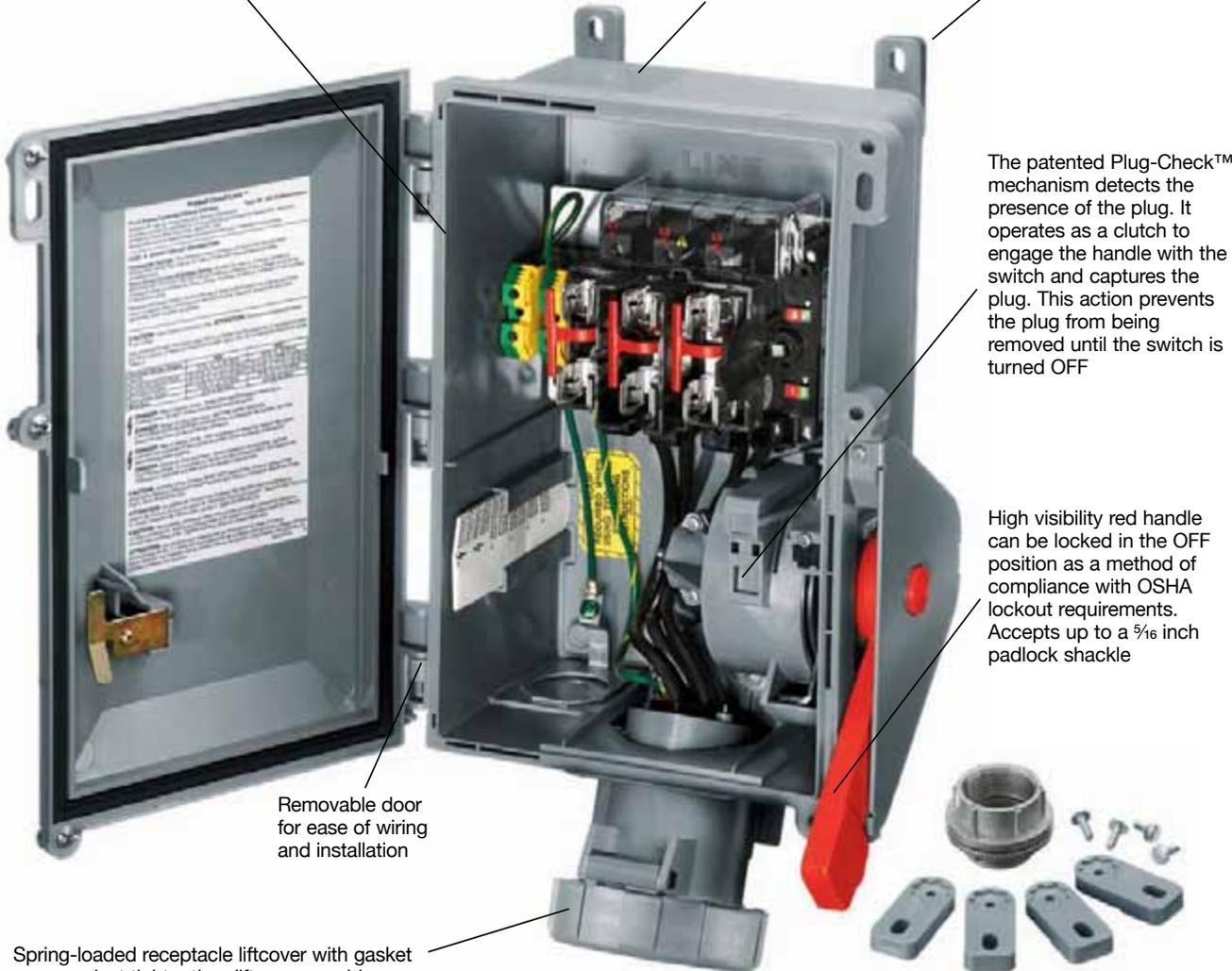
Pin and Sleeve Insulgrip® Mechanical Interlocks

Features and Benefits

Non-metallic enclosure meets UL 50 Type 4X (watertight) 12K (dust-tight) and IP66 suitability requirements. Enclosure is molded of rugged thermoplastic Valox® to resist abuse, corrosion and enhance safety. All external hardware is stainless steel

Three “molded in” conduit drill points are located on the top, bottom, and back surface of enclosure. Conduit hub provided: 30A 1 inch N.P.T., 60A 1 1/4 inch N.P.T.

Adjustable mounting feet (4) can be mounted in any 1 of 3 positions for ease of installation



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

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

Removable door for ease of wiring and installation

Spring-loaded receptacle liftcover with gasket ensures dust tight rating; liftcover provides watertight seal when turned and locked

HBL430MIFS2W

Conduit hub and mounting feet are supplied with each Insulgrip® Mechanical Interlock



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.



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.



Stainless steel 1/4 turn door fasteners for quick, easy access to fuses.



Enclosure door can be locked to prevent unauthorized access. Additionally, if the switch is ON, the door cannot be opened.

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



Pin and Sleeve

Insulgrip® Mechanical Interlocks - Style II, Fused and Unfused

30 and 60 Ampere, 600/250 Voltage AC/DC, 50-400 Hertz

Style II - Fused

Rating				Insulgrip® 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

Style II - Unfused

Rating				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 N.P.T. hub supplied; 60A – 1¼ 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.

Auxiliary Contacts

Description	Catalog Number
Auxiliary contact, normally open, A600 pilot duty, break before break.	ACFSNO
Auxiliary contact, normally closed, A600 pilot duty, break before break.	ACFSNC



ACFSNO

Watertight Closure Plug Kits

Description	Catalog Number
For 30A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK30
For 60A Circuit-Lock® unfused and fused Pin and Sleeve mechanical interlocks.	MICPK60



MICPK30

Replacement Mounting Feet

Description	Catalog Number
Replacement mounting feet and screws for 30 and 60A fused mechanical interlocks.	HBLRFT2*



HBLRFT2



Pin and Sleeve

Technical Information

Specifications, HP Ratings and Dimensions

Typical Specifications

Manufacturer's Identification	Hubbell HBL460MIFS2W.
Description	Fused Insulgrip® Pin and Sleeve Mechanical Interlock.
Electrical Type	3 Pole + Earth.
Rating	60A, 250VDC/600VAC.
Configuration	Per UL 1686 C1.
Enclosure Type (UL 50)	Outdoor - 4X (Watertight, Washdown) Indoor - 12K (Dust Tight, Falling Dirt).
Ingress Protection	IP66 Suitability.
Certification	UL Listed, CSA Certified.

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 door from opening while the receptacle is energized. The switch cannot be turned on until the plug is fully inserted.

Materials

Part	Material
Base, Door and Handle	Valox®
Conduit Hub	Zinc, 30A – 1 in., 60A – 1¼ in. N.P.T.
Enclosure Gasket and Shaft Seal	Neoprene
Shaft and Mounting Inserts	Brass
Ground Plate	Galvanized Steel
Enclosure Screws and Hinge Spring	Stainless Steel
Hinge Pin	Nickel-Plated Brass
Contact Carrier	Thermoset Polyester

Performance**Electrical**

Dielectric Voltage	Withstands 3,000VAC Min.
Max. Working Voltage	250VDC/600VAC.
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 100,000 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 housing.
Mounting	External adjustable feet.

Environmental

Moisture Resistance	Outdoor - 4X (Watertight, Washdown) Indoor - 12K (Dust-tight, Falling dirt).
Ingress Protection	IP66 Suitability.
Flammability	UL94-5VA and V-0 Classification.
Operating Temperatures	Max. Continuous +60°C; Min. Continuous -40°C w/o impact.
UV Resistance	All exposed insulating materials are UV stabilized.
Fuse Types	UL Listed Class "J". CSA Certified HRCI-J.

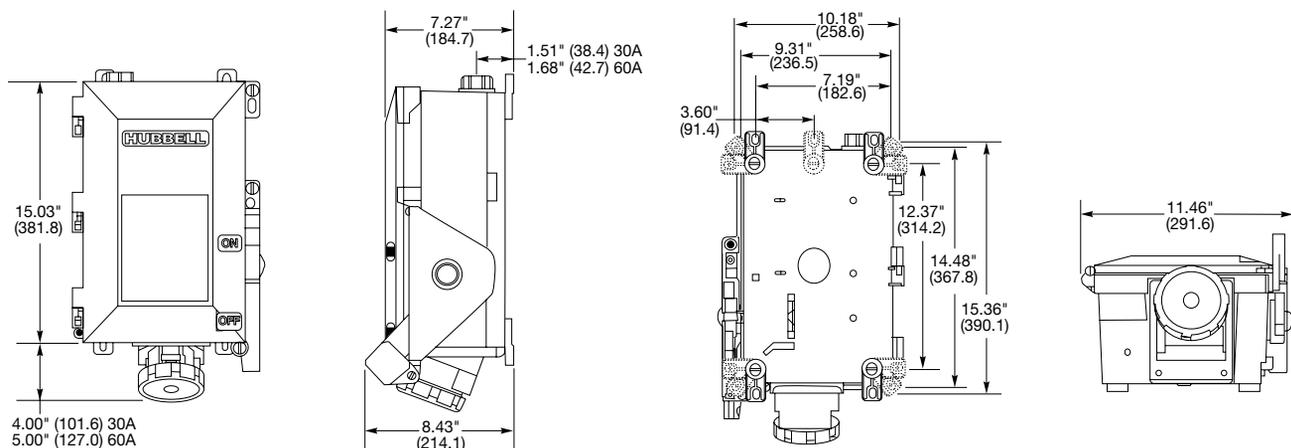
Horsepower Ratings**30A Horsepower Ratings****3 Phase A.C.**

	Standard	Maximum*
200-240V	3	7.5
480V	5	15
600V	7.5	20

60A Horsepower Ratings**3 Phase A.C.**

	Standard	Maximum*
200-240V	7.5	15
480V	15	30
600V	15	40

Note: * Requires time delay fuses.

Dimensions

Note: 30A – 1 inch N.P.T. hub supplied; 60A – 1¼ inch hub supplied.

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