



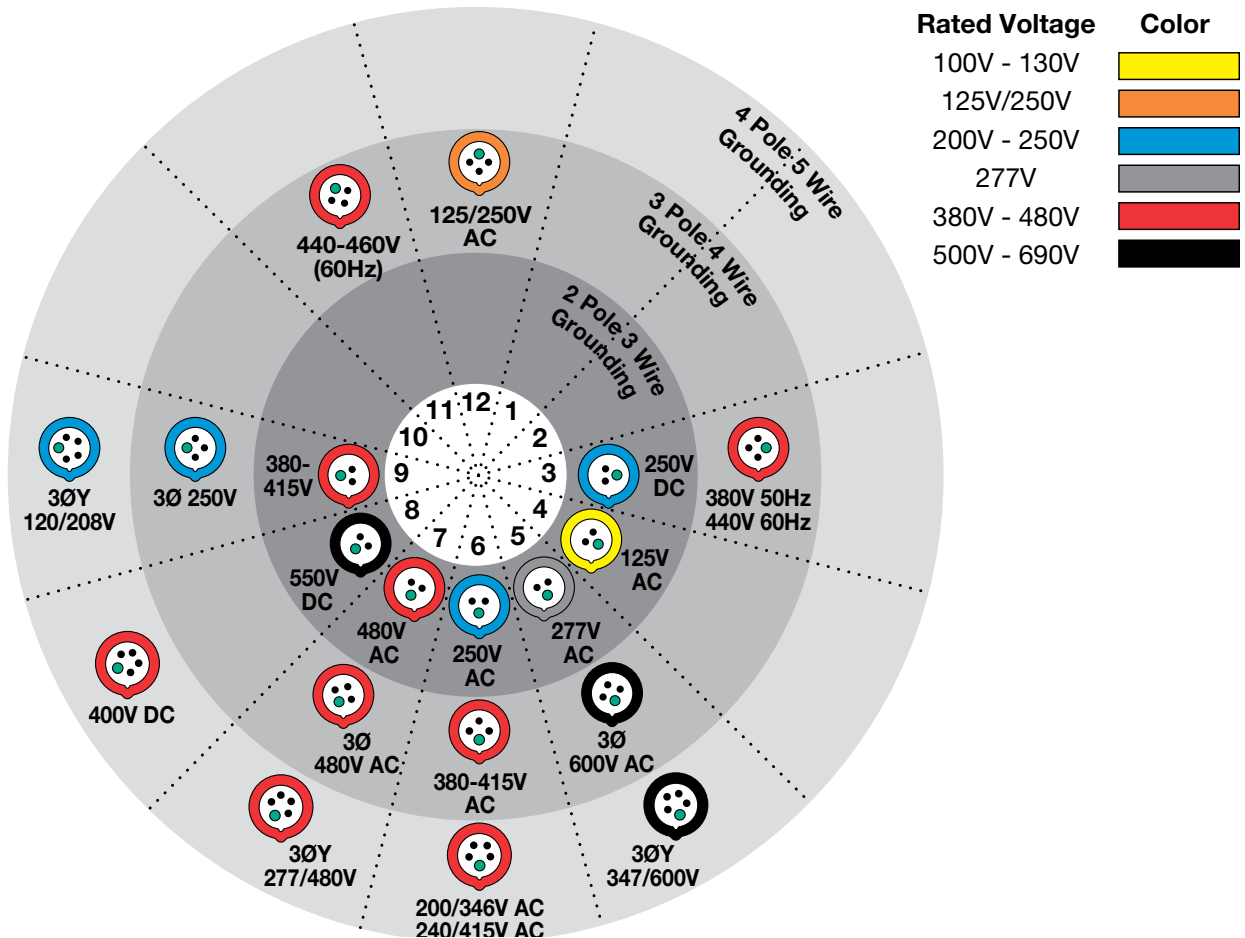
IEC Configurations Chart

Singly Rated Configurations

Hubbell Pin and Sleeve products are designed and manufactured to meet the International Standard IEC 60309-1 and IEC 60309-2. This device standard calls out a singly rated, non-interchangeable configuration for every voltage and type of service throughout the world. Pin and sleeve device housings are color coded by voltage rating.

Voltage

The voltage is determined by the location of the female ground contact relative to the housing keyway. Simply by manufacturing the device with a ground contact in a certain "clock" position, the device will be rated for a particular voltage system. The diagram shows the keying position and the color coding that is associated with each voltage.



Typical IEC Pin and Sleeve Catalog Number

HBL4100C12W

Hubbell Catalog Number — HBL 4 100 C 12 W

4 Wire — 4

100 Amp — 100

Watertight — W

Female Ground Sleeve at "12" O'Clock (125/250V) — 12

"C" Connector — C

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
W Watertight |
|--|--|--|--|--|------------------------------------|

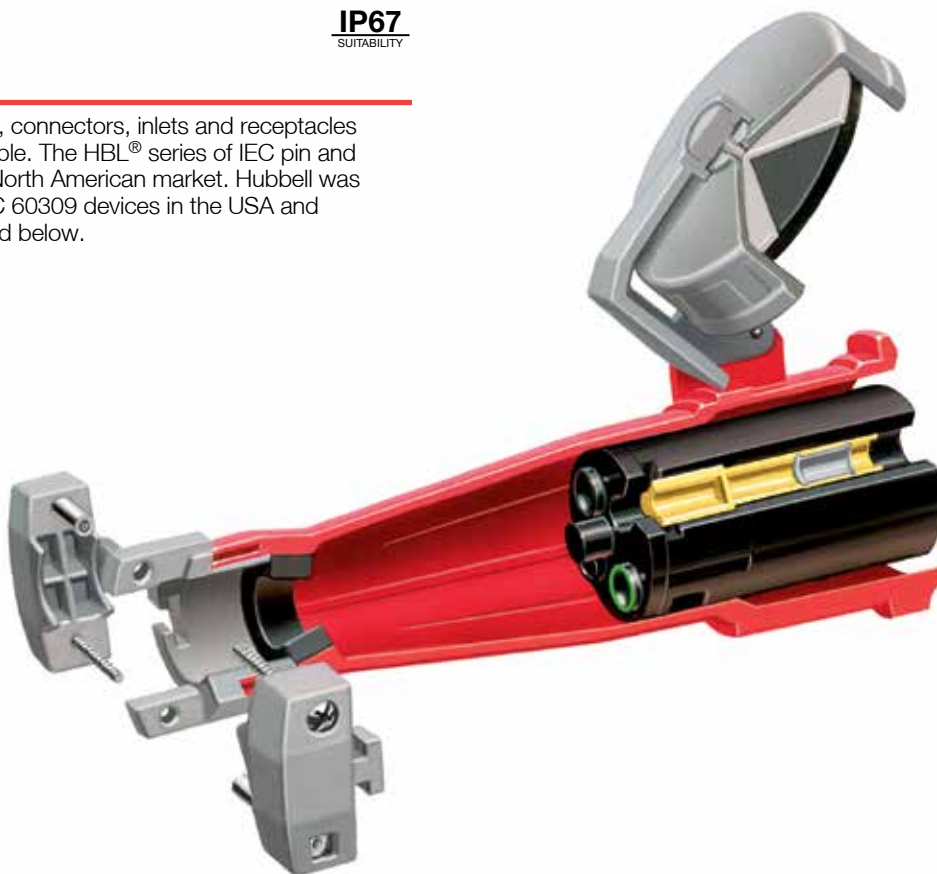


Features and Benefits

IP67
SUITABILITY

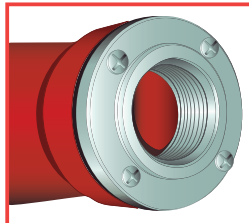
Watertight Devices

Hubbell's IEC 60309 Pin and Sleeve plugs, connectors, inlets and receptacles are the highest performing products available. The HBL® series of IEC pin and sleeve were designed for the demanding North American market. Hubbell was the first and is still only manufacturer of IEC 60309 devices in the USA and have numerous of innovative features noted below.



Housing Design

- Insulated non-metallic housing, super tough, non-conductive and chemical resistant for heavy duty industrial environments
- IEC pin and sleeve devices are color coded by voltage for easy identification
- Self-closing gasketed cover, detents into position to fully close automatically



Liquidtight Conduit Adapters

- Aluminum or non-metallic adapters are available to provide a means for attaching flexible liquidtight metal conduit to rear of Hubbell Pin and Sleeve plug or connector



Powerful Mechanical Cord Grip

- Hubbell's design incorporates two molded-in teeth to securely grip the outer cable jacket, and internal conductors to prevent slippage and strain on terminations
- Captive barrel nuts ease assembly and allow higher tightening torque for maximum cord retention



Sequential Contact Engagement

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



Watertight Cord Entrance

- The tapered bore entrance creates high compression forces on sealing gland, providing a watertight seal around cord
- Individual solid neoprene glands are supplied to match a full range of cord sizes and assure watertight performance



Multi-Contact Spring

- (60/63 and 100/125 Amp) Recessed within the female sleeve, provides and maintains high unit pressure on mating pins to minimize temperature rise
- Broaches oxide film to achieve low resistance contact for cooler operation

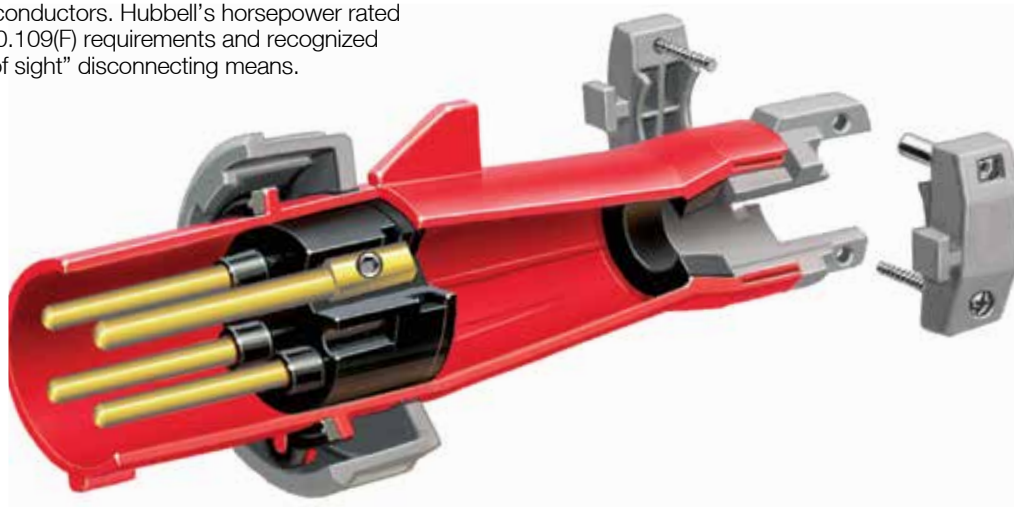


Features and Benefits

IP67
SUITABILITY

Watertight Devices

The IEC line of plugs and connectors are made with a rugged super tough, one-piece housing. The thermoset polyester contact carrier provides a high resistance to electrical tracking. They withstand higher temperatures which may result from overload or arcing. The heavy-duty, external cord grip provides superior strain relief on the conductors. Hubbell's horsepower rated plugs and receptacles meet NEC 430.109(F) requirements and recognized as an approved disconnecting/"line of sight" disconnecting means.



Housing Design

- Rugged one-piece housing, thick wall construction protects internal components, eliminates joints preventing infiltration of contaminants
- Amperage/voltage rating and catalog number molded in housing for easy identification



Shrouded Pins

- Super tough plug shroud protects pins from deforming from physical abuse
- Protects the user from the possibility of touching live contacts during insertion and withdrawal of mating parts
- Solid one-piece pins, machined from solid brass for longer life and reliable electrical contact



Safety

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



Thermoset Polyester Contact Carrier

- Molded thermoset polyester provides high resistance to electrical tracking
- Withstands higher temperatures which may result from overload or arcing
- Thermoset properties provide dimensional stability for this critical assembly



Cord Grips

- Heavy duty external cord grips provide maximum cord retention to maintain secure terminations



Swivel Pressure Pads

- 16/20 and 30/32 Amp devices feature patented swiveling pressure pad terminal screws and prevent damage to conductor strands. 60/63 and 100/125 Amp devices feature large hex-head stainless steel screws which provide higher torque levels for secure terminations

Rating						Watertight Devices				Accessories			Replacement Interiors	
Amps	Poles and Wires	Configuration Recept./ Plug/ Conn.	Plug/ Inlet	AC Voltage							Closure Caps			
						Receptacle	Plug	Connector	Inlet	Non-Metallic		Metallic	Recept./ Conn.	Plug/ Inlet
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 G-14 and G-15 for back boxes and accessories, G-16 and G-17 for product dimensions, G-18 and G-19 for product specifications and HP ratings.

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

See page G-15 for closure caps, purchased separately. PC60 and PC100 are not UL or CSA.

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

**Short housing plug HBL5100P9WSH. IP22 suitability.

†Consult factory.

Low Profile Devices

Rating						Devices		Cord Diameter
Amps	Poles and Wires	Configuration Recep./ Plug/ Conn. Inlet	AC Voltage			Plug	Receptacle	Min. Max. Inches (mm)
20	3P 4W		3Ø 250V			—	L420R9	.350" - .710" (8.3 - 15.9)
30	3P 4W		125/250V			L430P12	L430R12	.390" - .775" (9.9 - 19.7)
30	3P 4W		3Ø 250V			L430P9	L430R9	.390" - .775" (9.9 - 19.7)
Amps	Poles and Wires	Configuration Recep./ Plug/ Conn. Inlet	AC Voltage			Plug	Receptacle	Min. Max. Inches (mm)
60	3P 4W		3Ø 250V			A460P9	A460R9 With Cover: A460R9KIT	.75" - 1.25" (19.1 - 31.8)
Amps	Poles and Wires	Configuration Recep./ Plug/ Conn. Inlet	AC Voltage			Plug	Receptacle	Min. Max. Inches (mm)
60	4P 5W		3ØY 120/208V			A560P9	HBL560R9W	.89" - 1.42" (22.6 - 36.1)
100	4P 5W		3ØY 120/208V			A5100P9	HBL5100R9W	1.34" - 1.50" (34.0 - 38.1)

Specifications

Electrical

Dielectric Withstand Voltage	3000V AC
Max. Working Voltage	250V RMS
Current Interrupting	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 UL94 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

Plug	Material
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)

Note: See page G-29 for product dimensions.