

IEC Pin and Sleeve

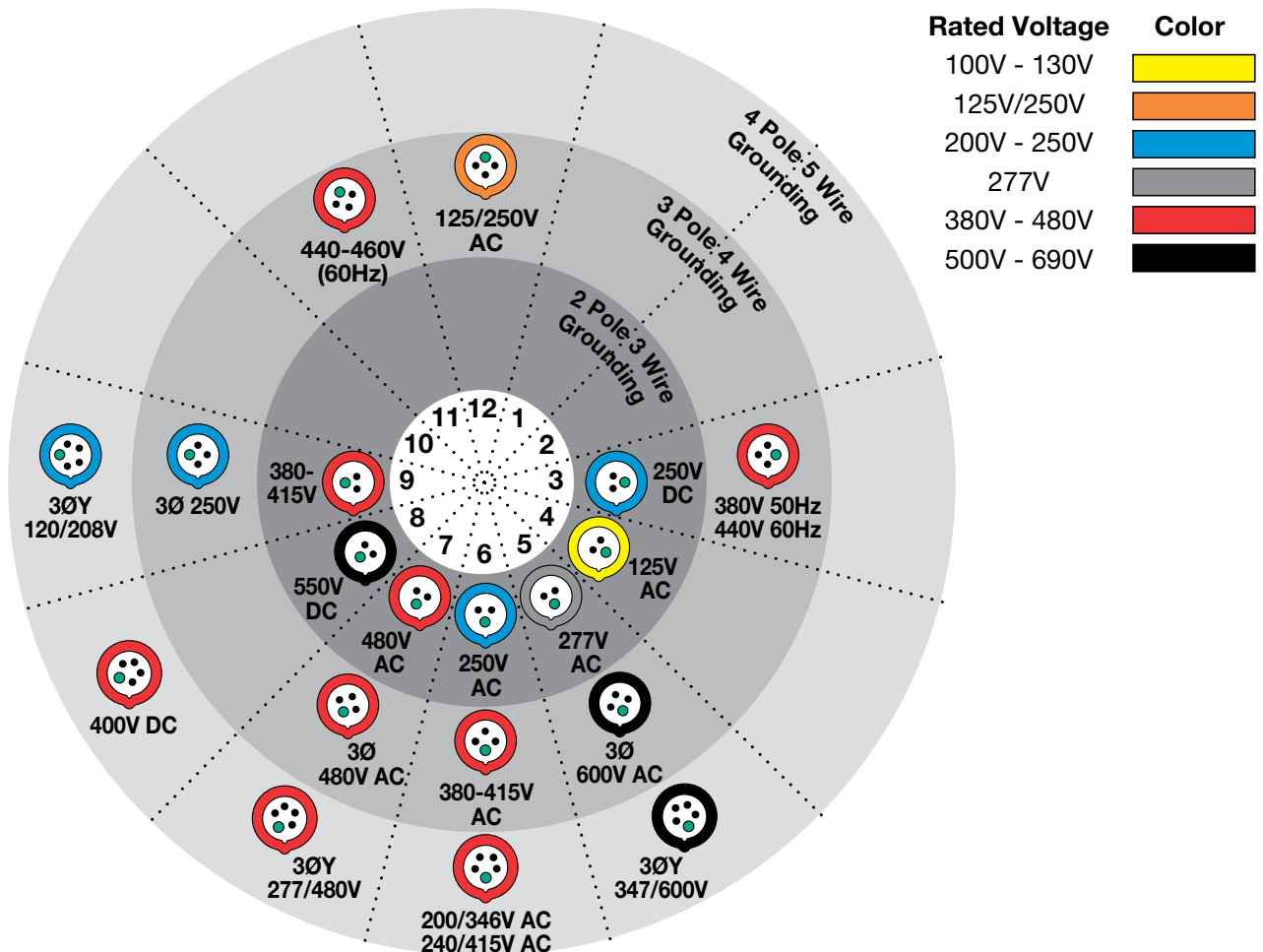
IEC Configurations Chart

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.

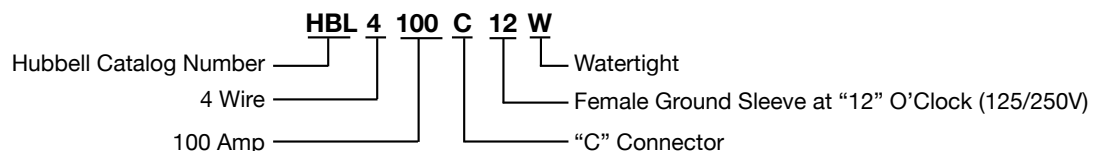
Voltage

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

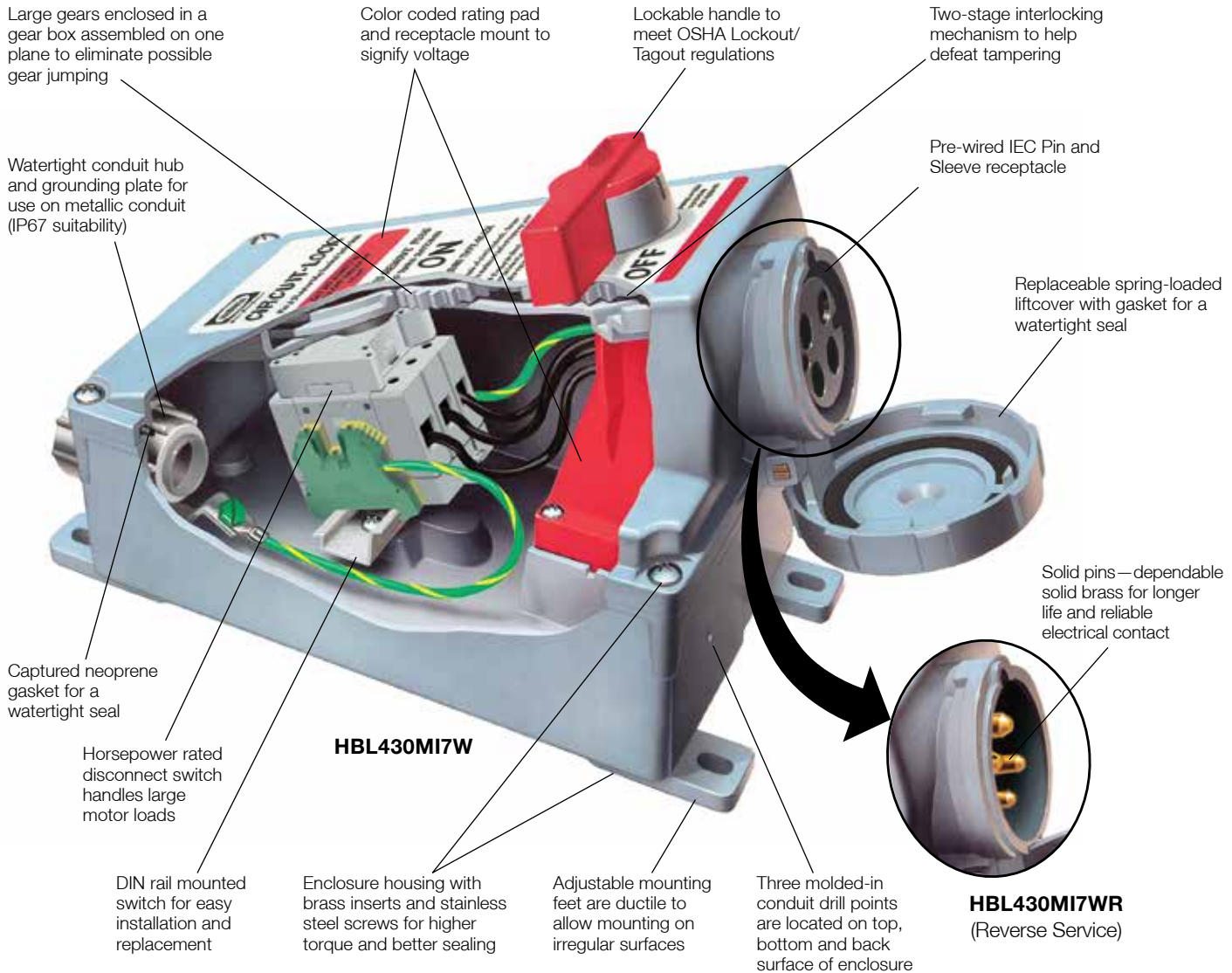


Explanation

- | | | | | | |
|--|--|--|--|--|----------------------------------|
| 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 |
|--|--|--|--|--|----------------------------------|

Unfused Circuit-Lock® Pin and Sleeve Mechanical Interlocks

Features and Benefits



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. Removing the plug and locking it out provides a visual means of verifying equipment has been disconnected. All Circuit-Lock mechanical interlocks can be locked out as a method of compliance with the OSHA Lockout/Tagout regulation.

The switch cannot be turned ON until the plug is completely engaged, and the plug cannot be removed until the switch is turned OFF. At the same time, it eliminates the possibility of making or breaking the circuit under load or making a

casual or “lazy” connection. The non-metallic enclosure can be connected to the metallic conduit and not interfere with the ground continuity.

In addition, these horsepower rated units are durable, watertight and easy to install. And they are compatible with IEC 60309-2 plugs.

These Circuit-Lock units are available in 20, 30, 60 and 100A models, and in 3, 4 and 5 wire configurations that are designed to the IEC 60309-1 and 60309-2 standards.

Hubbell’s Circuit-Lock Mechanical Interlocks are also available in “Reverse Service” versions. These units incorporate the disconnect switch and reverse service receptacle (inlet) in one compact, non-metallic and economical unit. These units are available in 30, 60 and 100A models, 4 wire configurations.

IP67
SUITABILITY

Enclosure Type 4X, 12

Rating					Unfused Circuit-Lock® Devices		Reverse Service	
Amps	Poles and Wires	Configuration		AC Voltage				
		Recep.	Plug		Mechanical Interlock	Mating Plug	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	HBL430MI9WR	HBL430P9WR
	3P 4W			3Ø 480V	HBL430MI7W	HBL430P7W	HBL430MI7WR	HBL430P7WR
	3P 4W			3Ø 600V	HBL430MI5W	HBL430P5W	HBL430MI5WR	HBL430P5WR
	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	HBL460MI12WR	HBL460P12WR
	3P 4W			3Ø 240V	HBL460MI9W	HBL460P9W	HBL460MI9WR	HBL460P9WR
	3P 4W			3Ø 480V	HBL460MI7W	HBL460P7W	HBL460MI7WR	HBL460P7WR
	3P 4W			3Ø 600V	HBL460MI5W	HBL460P5W	HBL460MI5WR	HBL460P5WR
	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	HBL4100MI12WR	HBL4100P12WR
	3P 4W			3Ø 240V	HBL4100MI9W	HBL4100P9W	HBL4100MI9WR	HBL4100P9WR
	3P 4W			3Ø 480V	HBL4100MI7W	HBL4100P7W	HBL4100MI7WR	HBL4100P7WR
	3P 4W			3Ø 600V	HBL4100MI5W	HBL4100P5W	HBL4100MI5WR	HBL4100P5WR
	4P 5W			3ØY 120/208V	HBL5100MI9W	HBL5100P9W	—	—

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

Typical Specifications

Manufacturer's Identification	Hubbell HBL430MI7W
Description	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. 20A and 30A models: Suitable for use on a circuit capable of delivering not more than 65,000 RMS symmetrical amperes, 600V when protected by class "J" fuses rated 30A.
Operations	Mechanical 10,000 cycles, electrical 6,000 cycles.
Mechanical	
Impact Resistance	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	Mechanical Interlock	Mating Plug
20	120/240V AC	2	HBL420MI12W	HBL420P12W
20	3Ø 240V AC	5	HBL420MI9W	HBL420P9W
20	3Ø 480V AC	10	HBL420MI7W	HBL420P7W
20	3Ø 600V AC	10	HBL420MI5W	HBL420P5W
30	120V AC	2	HBL330MI4W	HBL330P4W
30	240V AC	3 (208-240V AC)	HBL330MI6W	HBL330P6W
30	480V AC	7.5	HBL330MI7W	HBL330P7W
30	120/240V AC	3 (208-240V AC)	HBL430MI12W	HBL430P12W
30	3Ø 600V AC	20	HBL430MI5W	HBL430P5W
30	3Ø 480V AC	15	HBL430MI7W	HBL430P7W
30	3Ø 250V AC	7.5	HBL430MI9W	HBL430P9W
30	3ØY 347/600V AC	20	HBL530MI5W	HBL530P5W
30	3ØY 277/480V AC	15	HBL530MI7W	HBL530P7W
30	3ØY 120/208V AC	5	HBL530MI9W	HBL530P9W
32	380V AC 50Hz – 440V AC 60Hz	15 (440V AC 3Ø 60Hz)	HBL432MI3W	HBL432P3W
60	120V AC	3	HBL360MI4W	HBL360P4W
60	240V AC	7.5 (208-240V AC)	HBL360MI6W	HBL360P6W
60	480V AC	20	HBL360MI7W	HBL360P7W
60	120/240V AC	7.5 (208-240V AC)	HBL460MI12W	HBL460P12W
60	3Ø 600V AC	40	HBL460MI5W	HBL460P5W
60	3Ø 480V AC	30	HBL460MI7W	HBL460P7W
60	3Ø 250V AC	15	HBL460MI9W	HBL460P9W
60	3ØY 347/600V AC	40	HBL560MI5W	HBL560P5W
60	3ØY 277/480V AC	30	HBL560MI7W	HBL560P7W
60	3ØY 120/208V AC	15	HBL560MI9W	HBL560P9W
100	240V AC	15 (10 @ 208V AC)	HBL3100MI6W	HBL3100P6W
100	120/240V AC	15	HBL4100MI12W	HBL4100P12W
100	3Ø 600V AC	50	HBL4100MI5W	HBL4100P5W
100	3Ø 480V AC	50	HBL4100MI7W	HBL4100P7W
100	3Ø 250V AC	25 (208-240V AC)	HBL4100MI9W	HBL4100P9W
100	3ØY 120/208V AC	20	HBL5100MI9W	HBL5100P9W

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