



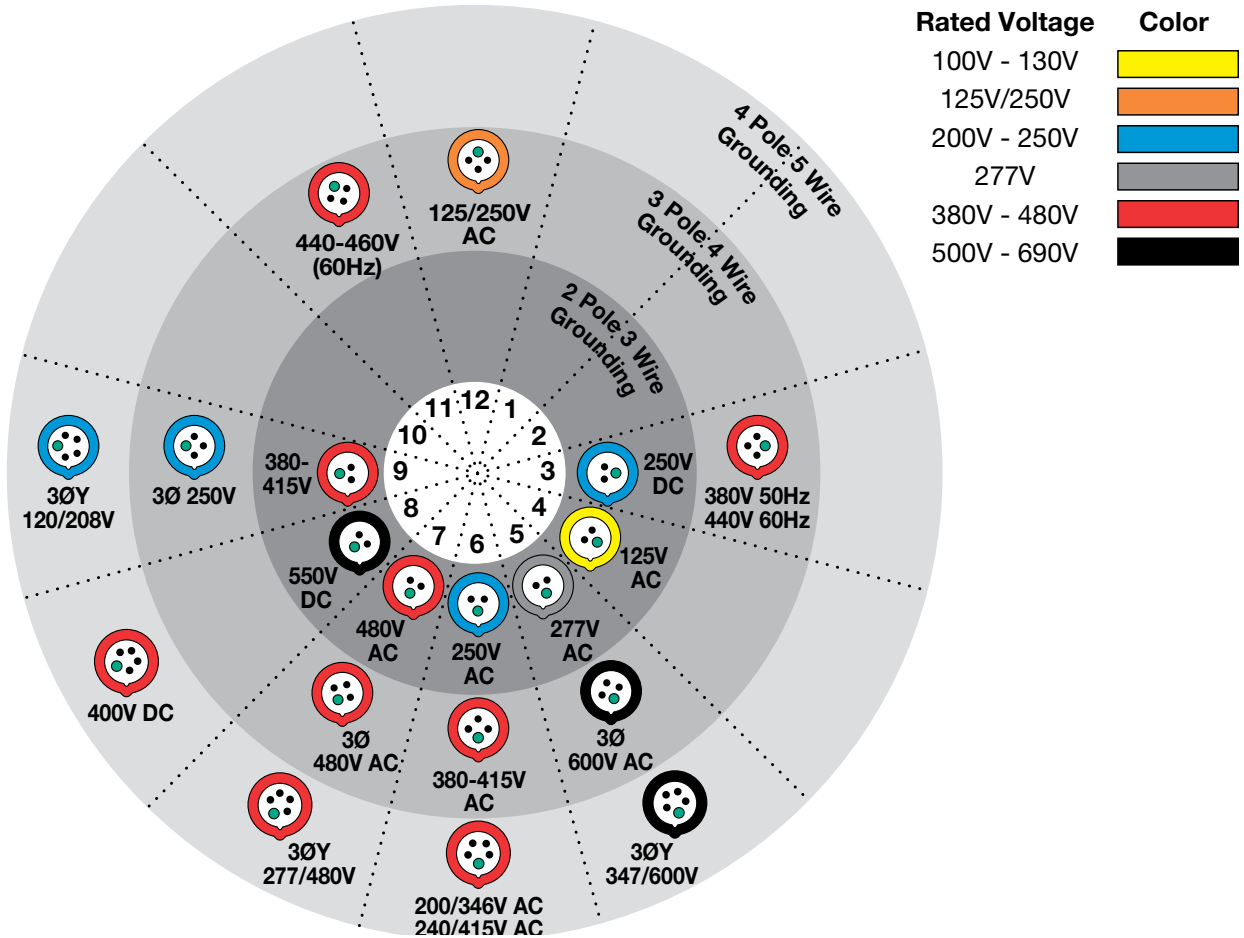
## IEC Configurations Chart

### Singly Rated Configurations

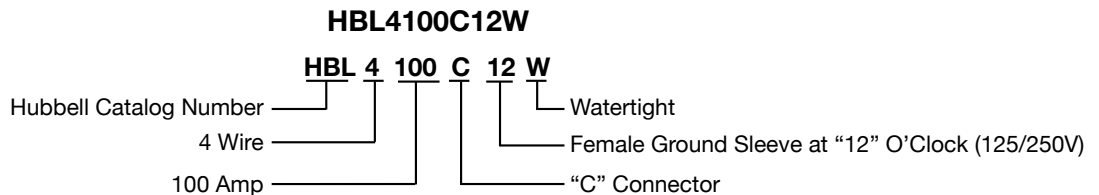
Hubbell Pin and Sleeve products are designed and manufactured to meet the International Standard IEC 60309-1 and IEC 60309-2. This device standard calls out a singly rated, non-interchangeable configuration for every voltage and type of service throughout the world. Pin and sleeve device housings are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



#### Explanation

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| <p><b>1 (HBL) Designates Hubbell Catalog Number</b></p> | <p><b>2 First Digit</b><br/>                 3-3 wire<br/>                 4-4 wire<br/>                 5-5 wire</p> | <p><b>3 Next Series Of Digits</b><br/>                 Preceding a letter<br/>                 20-20 Amp<br/>                 30-30 Amp<br/>                 60-60 Amp<br/>                 100-100 Amp</p> | <p><b>4 Letter</b><br/>                 P-Plug<br/>                 R-Receptacle<br/>                 C-Connector<br/>                 B-Inlet<br/>                 MI-Mechanical Interlock<br/>                 MIF-Mechanical Interlock Fused</p> | <p><b>5 Last Digit(s)</b><br/>                 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.</p> | <p><b>6 Letter: W</b><br/>                 Watertight</p> |
|---|---|---|---|---|---|



Rating					Watertight Devices				Accessories			Replacement Interiors	
Amps	Poles and Wires	Configuration Recept./ Plug/ Conn. Inlet	AC Voltage		Receptacle	Plug	Connector	Inlet	Back Boxes		Closure Caps	Recept./ 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 G-12 and G-13 for back boxes and accessories, G-14 and G-15 for product dimensions, G-16 and G-17 for product specifications and HP ratings.

See page G-13 for closure caps, purchased separately. PC320, PC420, PC520, PC3430, PC530 are not UL or CSA.

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

†Consult factory.



## Watertight Materials

Part	Material
<b>Inlet</b>	
Housing	Zytel® 101 Nylon*
Locking Ring	Reinforced Thermoplastic Polyester
Mounting Flange	Zytel® 101 Nylon
Mounting Screws	Stainless Steel (300 Series)
Contact Carrier	High-Impact Thermoset
Retainer	High-Impact Thermoset
Ground, Phase Pins	Brass (M-Series - Nickel-plated brass)
Terminal Screws	Stainless Steel (300 Series)
Assembly Screws (2)	Stainless Steel (300 Series)
Gaskets	Solid Neoprene

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.

<b>Connector Body</b>	
Housing	Zytel® ST801 Nylon
Cord Clamps	Reinforced Thermoplastic Polyester
Glands	Solid Neoprene
Cover Arms	Reinforced Thermoplastic Polyester
Arm Springs	Stainless Steel (17-7 type)
Covers	Reinforced Thermoplastic Polyester
Cover Screw	Nickel-plated brass
Rotating Sealing Disc	Polycarbonate
Gaskets	Solid Neoprene
Contact Carrier	High-Impact Thermoset
Retainer	High-Impact Thermoset
Phase, Ground Sleeves	Brass
Sleeve Spring	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)

<b>Plug</b>	
Housing	Zytel® ST801 Nylon
Locking Ring	Reinforced Thermoplastic Polyester
Sealing Gasket	Solid Neoprene
Cord Clamp	Reinforced Thermoplastic Polyester
Gland Cap	Reinforced Thermoplastic Polyester
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)

<b>Receptacle</b>	
Housing	Zytel® 101 Nylon
Mounting Flange	Zytel® 101 Nylon
Arm Spring	Stainless Steel (17-7 type)
Cover Arm	Reinforced Thermoplastic Polyester
Cover	Reinforced Thermoplastic Polyester
Cover Screw	Nickel-plated brass
Rotating Sealing Disc	Polycarbonate
Gaskets	Solid Neoprene
Mounting Screws	Stainless Steel (300 Series)
Terminal Screws	Stainless Steel (300 Series)
Phase, Ground Sleeves	Brass
Sleeve Spring	20A and 30A Stainless Steel (300 Series); others are Beryllium Copper multi-contact inserts with silver plating

## 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

Note: \*All devices on page G-11 have Valox® housings.

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



## 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 (Except DC rated devices).
Temperature Rise	Max. 30°C temperature rise at full rated current after 50 cycles of overload at 150% of rated current at a power 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

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