

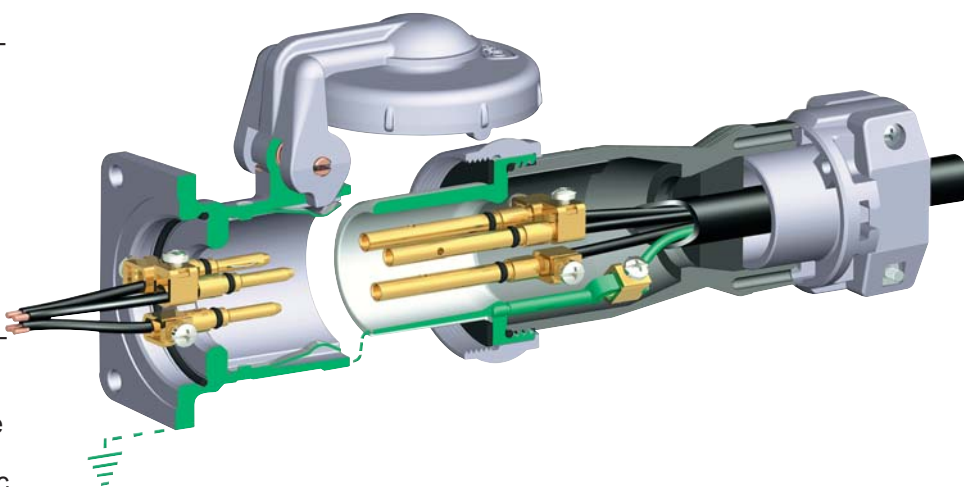
## Pin and Sleeve

**INSULGRIP® Pin & Sleeve Devices***Features and Benefits, Hubbell Offers Two Approaches***Ground Path**

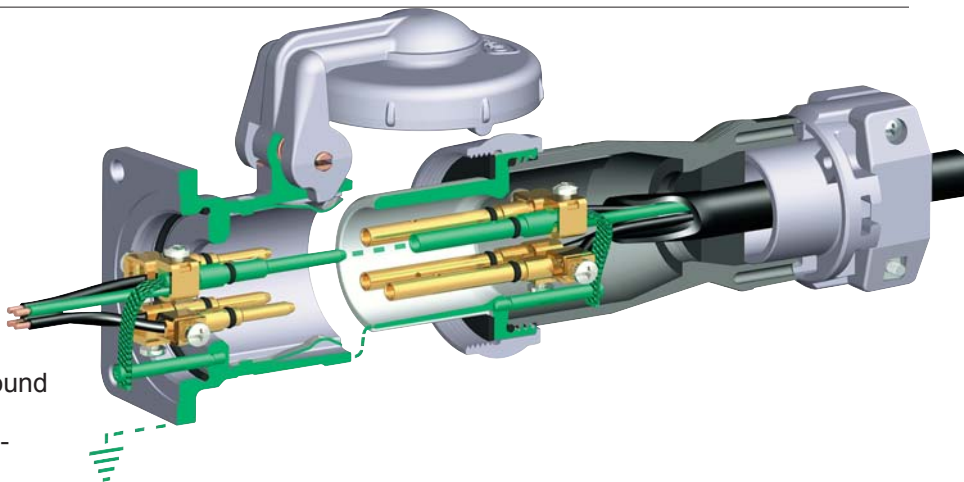
To reduce the likelihood of electrical shock, the National Electrical Code requires that non-current carrying metallic components be grounded. Insulgrip Pin & Sleeve wiring devices offer two styles of grounding.

**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 3P4W 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 3P4W 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.

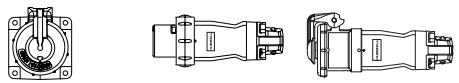













## Pin &amp; Sleeve

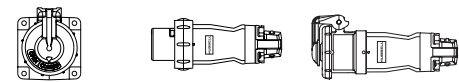








**INSULGRIP® Pin & Sleeve Devices Ordering Information**

30, 60, 100 and 200 Ampere, 600/250 Voltage AC/DC

**Ordering Information****Style I**

Amps	Poles and Wires	Receptacle/Connector Configuration	Maximum Voltage AC/DC				Replacement Interiors	
				Receptacle	Plug	Connector	Connectors & Receptacles	Plugs
30	2P 3W		600/250	HBL330RS1W	HBL330PS1W	HBL330CS1W	IN330FS1	IN330MS1
30	3P 4W		600/250	HBL430RS1W	HBL430PS1W	HBL430CS1W	IN430FS1	IN430MS1
30	4P 5W		600/250	HBL530RS1W	HBL530PS1W	HBL530CS1W	IN530FS1	IN530MS1
60	2P 3W		600/250	HBL360RS1W	HBL360PS1W	HBL360CS1W	IN360FS1	IN360MS1
60	3P 4W		600/250	HBL460RS1W	HBL460PS1W	HBL460CS1W	IN460FS1	IN460MS1
60	4P 5W		600/250	HBL560RS1W	HBL560PS1W	HBL560CS1W	IN560FS1	IN560MS1
100	2P 3W		600/250	HBL3100RS1W	HBL3100PS1W	HBL3100CS1W	IN3100FS1	IN3100MS1
100	3P 4W		600/250	HBL4100RS1W	HBL4100PS1W	HBL4100CS1W	IN4100FS1	IN4100MS1
100	4P 5W		600/250	HBL5100RS1W	HBL5100PS1W	HBL5100CS1W	IN5100FS1	IN5100MS1
200	3P 4W		600/250	HBL4200RS1W	HBL4200PS1W	HBL4200CS1W	IN4200FS1†	IN4200MS1†
200	4P 5W		600/250	HBL5200RS1W	HBL5200PS1W	HBL5200CS1W	IN5200FS1†	IN5200MS1†

**Style II**

Amps	Poles and Wires	Receptacle/Connector Configuration	Maximum Voltage AC/DC				Replacement Interiors	
				Receptacle	Plug	Connector	Connectors & Receptacles	Plugs
30	2P 3W		600/250	HBL330RS2W	HBL330PS2W	HBL330CS2W	IN330FS2	IN330MS2
30	3P 4W		600/250	HBL430RS2W	HBL430PS2W	HBL430CS2W	IN430FS2	IN430MS2
60	2P 3W		600/250	HBL360RS2W	HBL360PS2W	HBL360CS2W	IN360FS2	IN360MS2
60	3P 4W		600/250	HBL460RS2W	HBL460PS2W	HBL460CS2W	IN460FS2	IN460MS2
100	2P 3W		600/250	HBL3100RS2W	HBL3100PS2W	HBL3100CS2W	IN3100FS2	IN3100MS2
100	3P 4W		600/250	HBL4100RS2W	HBL4100PS2W	HBL4100CS2W	IN4100FS2	IN4100MS2
200	2P 3W		600/250	HBL3200RS2W	HBL3200PS2W	HBL3200CS2W	IN3200FS2†	IN3200MS2†
200	3P 4W		600/250	HBL4200RS2W	HBL4200PS2W	HBL4200CS2W	IN4200FS2†	IN4200MS2†

† Consult factory.

**Catalog Numbering System EXAMPLE: HBL430RS2W**

Manufacturer	No. of Wires	Amperage	Device Type	Grounding Style	Environment	Specialized
HBL=Hubbell	3=2P 3W 4=3P 4W 5=4P 5W	30=Amp 60=Amp 100=Amp 200=Amp	R=Receptacle P=Plug C=Connector	S1=Style I S2=Style II	W=Watertight, UL Type 4X	R=Reversed Service (See E-26)

**New Pole & Wire Terminology**

Style I			Style II		
New	Old	No. of Contacts	New	Old	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			

# Pin and Sleeve INSULGRIP® Pin & Sleeve Device Listings

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

Part	Material
<b>Plug</b>	
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.
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.
<b>Connector Body</b>	
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.
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.
<b>Receptacle</b>	
Housing/Flange	Epoxy Painted Aluminum.
O-Rings, Gaskets & Seals	Neoprene.
Contact Carrier	Thermoset Polyester.
Retainer	Thermoset Polyester.
Pin	Brass.
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.

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## Typical Specification

**Manufacturer's Identification** Hubbell HBL430PS2W.

**Description** Plug, Power Supply.

**Type** 3 Pole + Earth.

**Max. Rating** 30 Amp, 250V DC, 600V AC.

**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). Certified for current interrupting at full rated current.
Current Interrupting	
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 & 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 w/o impact -25° w/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.