

DuraGard® Waterproof Connections

In this section...



DuraGard® Waterproof Connections

Overview	54–57
20 Amp.....	58–59
30 Amp.....	60–61
50 Amp.....	62–63
60 Amp.....	64
Accessories	65–66
Safety Interlocks.....	67
Dimensions.....	68
Engineering Specifications.....	69–70

Thomas&Betts

A Member of the ABB Group

www.tnb.com

DuraGard® Waterproof Connections

Non-Metallic Plugs, Connectors, Receptacles and Inlets — 20, 30, 50 and 60 Amp, Maximum 600VAC/250VDC



Safety

- **Truly waterproof:** Not just watertight, but waterproof (tested under 1000 PSI)
- **Exclusive waterproof features:** The only thermoplastic connector designed to prevent short circuits due to water ingress under high water pressure
- **Different power supply ratings can't mix:** Six single-rate device polarizations ensure exact voltage, frequency and phase differentiation
- **Added safety measures:** Safety ground makes first, breaks last
- **Ultimate waterproof connection:** Watertight mated or unmated, while many watertight specifications cover mated connections only

Durability

- **Designed for durability:** DuraV® housing material specially selected for hot or cold and chemical washdown duty (flame-safe UL® 94-V0 rated housings)
- **Versatile functionality:** Pin and sleeve design enables higher current flow at cooler temperatures due to large contact circular areas
- **Built to last:** A longer system life under corrosive environments

Performance

- **Long life:** Round, self-cleaning, constant-pressure pin and sleeve contacts of solid CDA 360 brass for long, reliable electrical life
- **Easy installation:** Drop-in assemble interior and easy pressure screw wire termination
- **Reliability:** DurOring™ sealing system for each pin and sleeve and interior assembly
- **Application flexibility:** Bushing size available for every cable diameter
- **Continuous operation:** Superior performance in corrosive environments

DuraGard® Waterproof Connections

Russellstoll® Pin and Sleeve Power Connectors

Russellstoll® Line Selections for Outdoor (and Indoor) Applications

DuraGard® to 3P4W 20 through 60A

The toughest design and construction in thermoplastic safety, durability and performance in UL 94-V0 flame-rated DuraV® material. With DurOring™ sealed pins, sleeves and interiors are watertight even unmated. A 30A and 50A Circuit Breaker Interlock line in DuraV® are the best choices for standard voltage polarization options through 600VAC (Interlock to 480VAC).

Interlocked Outlets 20 through 60A

USCG Accepted 20–50A convenience Interlocked Receptacles accept DuraGard® plugs. Built from aluminum or brass for rough-service installations, in Switched or Circuit Breaker formats, their extremely heavy-duty designs provide maximum durability.

IEC (IP67) to 4P5W 20 to 100A

Thermoplastic international standard IEC 309-2 or CEE-17 connector usage is growing especially in OEM, export and standard performance applications. The IP67 style is watertight when mated and directly interchangeable with other manufacturers. International designations shadow U.S. amperage ratings: 20/(16), 30/(32), 60/(63) and 100/(125) amps. IP67 devices have screw collars or flap/screw covers, with catalog number “W” suffixes.



Typical Application Groups

Marine

- Lighting Connectors
- Shore-to-Ship Power
- Low-Power Welding
- Power Distribution Panels
- Shipboard Power Outlets
- Barge Power Connection

Food Processing, Brewery/ Beverage, Pulp and Paper, Pharmaceuticals, Portable Building Power

- Welding Outlets
- Motor Power Connections
- Lighting Systems
- Machinery Interconnections
- Process Control Power Systems

Construction and Agricultural

- Generator Set Panels
- Portable Tools and Equipment
- Irrigation Systems Panels
- Portable Lighting and Equipment

OEMs

- Export Machinery
- Critical Power Connections and Welding Systems
- Transportable Equipment

Usage

- Any application where electrical connections need protection from water and/or dust entrance to the contacts or the wiring compartment
- Cable-to-connector sealing and device locking designs are critical

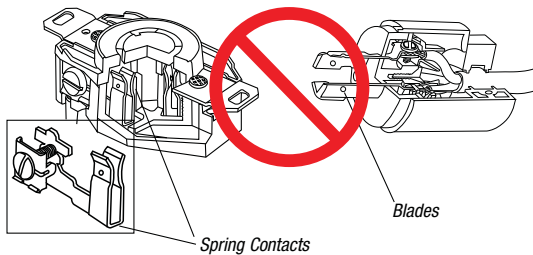
DuraGard® Waterproof Connections

Washdown Duty, Chemical, Outdoor, Industrial and Marine Use Non-Metallic Plugs, Connectors Receptacles and Inlets — 20, 30, 50 and 60 Amp, Maximum 600VAC/250VDC

DuraGard® Pin and Sleeve Connections

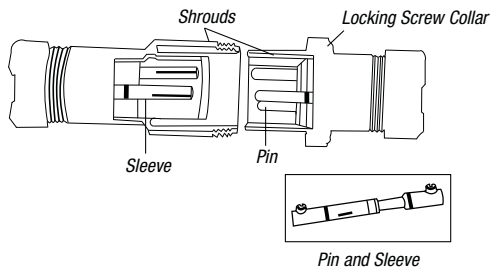
Pin and Sleeve contact devices consist of round male pins that are inserted into tubular female sleeves. Current flows through a large pin-to-sleeve circular contact area. Because current is not restricted through point contact only, higher current flow and cooler operating temperatures are achieved in a compact connection. Wiping action during insertion or withdrawal provides positive self cleaning. Shrouded pins and sleeves are protected from physical damage or casual access and aid in polarization features of the line. The shroud and screw collar completely lock plugs to receptacles or connectors for a reliable connection. Step on the cord, kick or drop a plug — your connection will remain tight. **Pin and Sleeve devices are the safety standard for high-current applications worldwide.**

Bladed Plug and Receptacle



Spring blade contact designs offer point contact only, with minimal mechanical support in receptacles. Higher heat is generated in use as contacts loosen with age and dirt accumulation, resulting in failures. Exposed blade contacts can easily be damaged. Contacts are both the electrical and mechanical locking method.

Pin and Sleeve Connector and Plug



Pin and Sleeve design enables higher current flow at cooler temperatures due to large circular contact area. Sleeves act as retainers for the pins, making a reliable connection. Shrouded pins and sleeves are protected from damage and inadvertent access. Locking housing screw collars provide for a reliable, long-lasting connection with electrical contacts separate.



The Water Spray Test

1000-PSI water spray was directly applied at the face of DuraGard® receptacles. No damage occurred, and no water penetrated the housing or cord seal. DuraGard® plugs, connectors and receptacles are designed to withstand water spray test at 1000 PSI. No extra boots or adapters required.

DuraGard®: Designed for the Toughest Washdown Applications



Pulp and Paper



Food Processing



Beverage and Bottling



Pharmaceutical Manufacturing

DuraGard® Waterproof Connections

Washdown Duty, Chemical, Outdoor, Industrial and Marine Use Non-Metallic Plugs, Connectors Receptacles and Inlets — 20, 30, 50 and 60 Amp, Maximum 600VAC/250VDC

The Ultimate in Waterproof Connections

20, 30, 50 and 60 Amp, 600VAC
20 Amp, 250VDC

Lockout Capable (30/50/60A Plugs):

- Access hole (not seen) for padlock hasp
- Interlock engagement CDA 360 solid brass pin and sleeve contacts

High Reliability, High-Performance Connections:

- CDA 360 solid brass pin and sleeve contacts

Long-Lasting Self-Cleaning Connections:

- Full round pin and sleeve contacts

Fast, Easy, Rear-Load Wiring and Assembly:

- Drop-in assembly interior
- Sleeve and cable bushing
- Easy-in pressure screw wiring terminations

Waterproof Cable Sealing:

- Neoprene compression bushing cable locking system
- Locking bushing nut with external cable clamps
- Bushing sizes available for any cable size

Waterproof Locking Connections:

- Locking screw collars with O-ring gaskets
- Housing mechanical support and pin and sleeve connection

Safety Specified Voltage Connections:

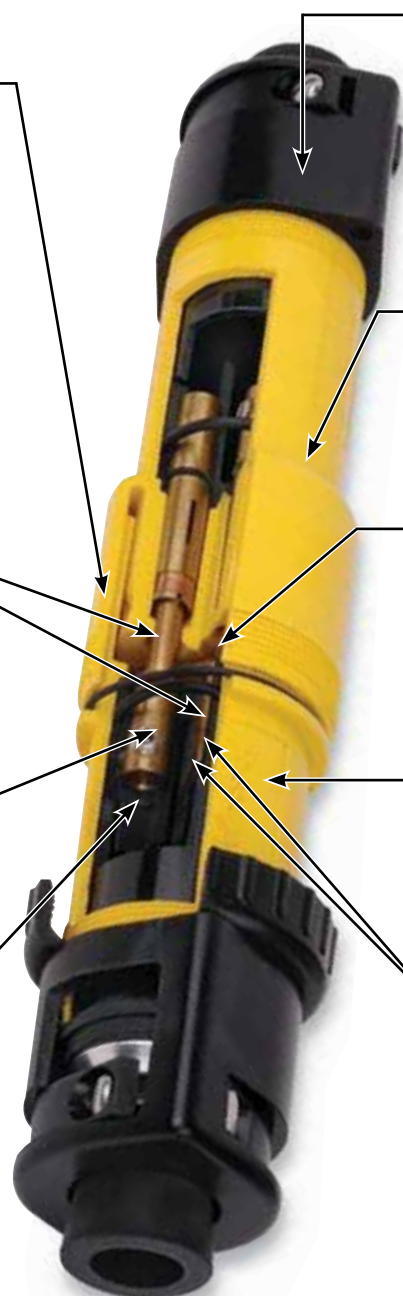
- Safety ground makes first breaks last
- Voltage polarized to meet NEC® 210-7 and OSHA standards

Durable and UL® 94-V0 Flame Rated Housings:

- DuraV® high-impact body and collars
- Thermoset interiors
- Deadfront construction

Dry Wiring Compartments:

- DurOring™ Sealing System for each pin and sleeve and interior assembly



(50-Amp Plug and Connector Shown)

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

DuraGard® Waterproof Connections

20 Amp Standard Service



Male Plug

Female Connector

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

POLE	WIRE	SAFETY POLARIZATION (RECEPTACLE)	VOLTAGE	CAT. NO.	CAT. NO.
2	3		125VAC	9P23U1	9C23U1
			250VAC	9P23U2	9C23U2
			277VAC	9P23U3	9C23U3
			480VAC	9P23U4	9C23U4
			600VAC	9P23U5	9C23U5
			through 600VAC/250VDC	9P23U0	9C23U0
3	4		125/250VAC	9P24U1	9C24U1
			3Ø 250VAC	9P24U2	9C24U2
			3Ø 480VAC	9P24U4	9C24U4
			3Ø 600VAC	9P24U5	9C24U5
			through 600VAC/250VDC	9P24U0	9C24U0

□ Add suffix — / xxx for bushing I.D. (page 65) or conduit adapter assembled.

◆ "W" suffix is watertight; "F" suffix for splash-proof spring flap cover.

* Consult Technical Services.

DuraGard® Waterproof Connections



Female Receptacle

STANDARD BUSHING I.D.: PLUG/CONN.*	CAT. NO. <input type="checkbox"/>
Standard .625"; or optional size, see page 65	9R23U1W
	9R23U2W
	9R23U3W
	9R23U4W
	9R23U5W
	9R23U0W
Standard .625"; or optional size, see page 65	9R24U1W
	9R24U2W
	9R24U4W
	9R24U5W
	9R24U0W

Add suffix — / xxxx for bushing I.D. (**page 65**) or conduit adapter assembled.

◆ "W" suffix is watertight; "F" suffix for splash-proof spring flap cover.

* Consult Technical Services.

DuraGard® Waterproof Connections

30 Amp Standard Service



Male Plug



Female Connector

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

POLE	WIRE	SAFETY POLARIZATION (RECEPTACLE)	VOLTAGE	CAT. NO.	CAT. NO.
2	3		125VAC	9P33U1	9C33U1
			250VAC	9P33U2	9C33U2
			277VAC	9P33U3	9C33U3
			480VAC	9P33U4	9C33U4
			600VAC	9P33U5	9C33U5
			through 600VAC/250VDC	9P33U0	9C33U0
3	4		125/250VAC	9P34U1	9C34U1
			3Ø 250VAC	9P34U2	9C34U2
			3Ø 480VAC	9P34U4	9C34U4
			3Ø 600VAC	9P34U5	9C34U5
			through 600VAC/250VDC	9P34U0	9C34U0

□ Add suffix — / xxx for bushing I.D. (page 65) or conduit adapter assembled.

◆ "W" suffix indicates watertight receptacle;

"F" suffix indicates splash-proof spring flap cover included.

* Consult Technical Services.

DuraGard® Waterproof Connections

30 Amp Reverse Service



Female Receptacle



Female Plug



Male Receptacle

STANDARD BUSHING I.D.: PLUG/CONN.*	CAT. NO. ♦	CAT. NO. □	CAT. NO. ♦
Standard .700"; for optional size, see page 65	9R33U1W	9F33U1	9B33U1F
	9R33U2W	9F33U2	9B33U2F
	9R33U3W	9F33U3	9B33U3F
	9R33U4W	9F33U4	9B33U4F
	9R33U5W	9F33U5	9B33U5F
	9R33U0W	9F33U0	9B33U0F
Standard .750"; for optional size, see page 65	9R34U1W	9F34U1	9B34U1F
	9R34U2W	9F34U2	9B34U2F
	9R34U4W	9F34U4	9B34U4F
	9R34U5W	9F34U5	9B34U5F
	9R34U0W	9F34U0	9B34U0F

□ Add suffix — / xxx for bushing I.D. (page 65) or conduit adapter assembled.

♦ "W" suffix indicates watertight receptacle;
"F" suffix indicates splash-proof spring flap cover included.

* Consult Technical Services.

DuraGard® Waterproof Connections

50 Amp Standard Service



Male Plug

Female Connector

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

POLE	WIRE	SAFETY POLARIZATION (RECEPTACLE)	VOLTAGE	CAT. NO. <input type="checkbox"/>	CAT. NO. <input type="checkbox"/>
2	3		125VAC	9P53U1	9C53U1
			250VAC	9P53U2	9C53U2
			277VAC	9P53U3	9C53U3
			480VAC	9P53U4	9C53U4
			600VAC	9P53U5	9C53U5
			through 600VAC/250VDC	9P53U0	9C53U0
3	4		125/250VAC	9P54U1	9C54U1
			3Ø 250VAC	9P54U2	9C54U2
			3Ø 480VAC	9P54U4	9C54U4
			3Ø 600VAC	9P54U5	9C54U5
			through 600VAC/250VDC	9P54U0	9C54U0

Add suffix — / xxxx for bushing I.D. (page 65) or conduit adapter assembled.

◆ "W" suffix is watertight; "F" suffix for splash-proof spring flap cover.

DuraGard® Waterproof Connections

50 Amp Reverse Service



Female Receptacle



Female Plug



Male Receptacle

STANDARD BUSHING I.D.: PLUG/CONN.*	◆ CAT. NO.	□ CAT. NO.	◆ CAT. NO.
Standard .925"; for optional size, see page 65	9R53U1W	9F53U1	9B53U1F
	9R53U2W	9F53U2	9B53U2F
	9R53U3W	9F53U3	9B53U3F
	9R53U4W	9F53U4	9B53U4F
	9R53U5W	9F53U5	9B53U5F
	9R53U0W	9F53U0	9B53U0F
Standard .925"; For optional size, see page 65	9R54U1W	9F54U1	9B54U1F
	9R54U2W	9F54U2	9B54U2F
	9R54U4W	9F54U4	9B54U4F
	9R54U5W	9F54U5	9B54U5F
	9R54U0W	9F54U0	9B54U0F

□ Add suffix — / xxx for bushing I.D. (**page 65**) or conduit adapter assembled.

◆ "W" suffix is watertight; "F" suffix for splash-proof spring flap cover.

* Consult Technical Services.

DuraGard® Waterproof Connections

60 Amp Standard Service



Male Plug

Female Connector

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

POLE	WIRE	SAFETY POLARIZATION (RECEPTACLE)	VOLTAGE	CAT. NO. <input type="checkbox"/>	CAT. NO. <input type="checkbox"/>
2	3		125VAC	9P63U1	9C63U1
			250VAC	9P63U2	9C63U2
3	4		125/250VAC	9P64U1	9C64U1
			3Ø 250VAC	9P64U2	9C64U2

Add suffix — / xxxx for bushing I.D. (page 65) or conduit adapter assembled.

◆ "W" suffix is watertight; "F" suffix for splash-proof spring flap cover.

60 Amp Reverse Service



Female Receptacle

Female Plug

Male Receptacle

STANDARD BUSHING I.D.: PLUG/CONN.*	CAT. NO. <input type="checkbox"/>	CAT. NO. <input type="checkbox"/>	CAT. NO. <input type="checkbox"/>
Standard 1.000"; for optional size, see page 65	9R63U1	9F63U1	9B63U1
	9R63U2	9F63U2	9B63U2
Standard 1.000"; for optional size, see page 65	9R64U1	9F64U1	9B64U1
	9R64U2	9F64U2	9B64U2

Add suffix — / xxxx for bushing I.D. (page 65) or conduit adapter assembled.

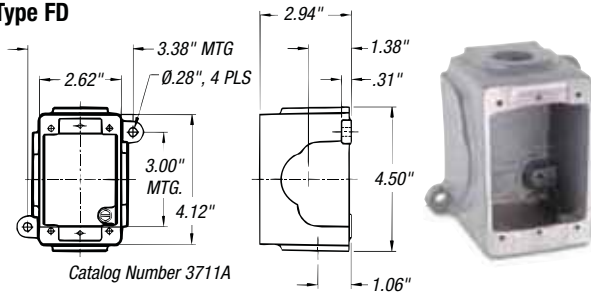
◆ "W" suffix is watertight; "F" suffix for splash-proof spring flap cover.

* Consult Technical Services.

DuraGard® Waterproof Connections

Conduit Boxes (For Surface Mounting)

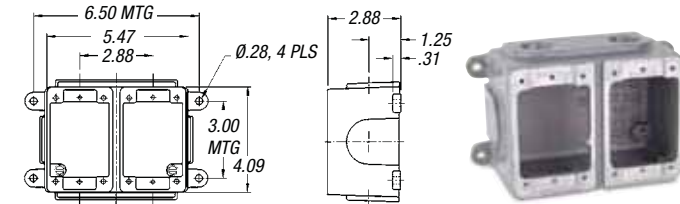
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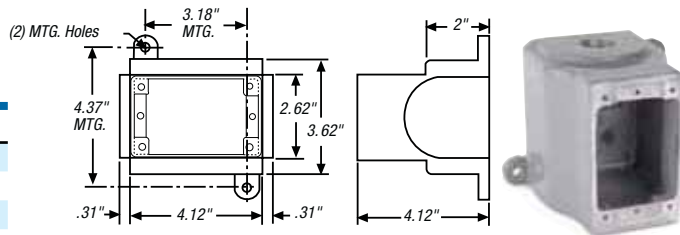
Catalog Number 3711A

	CAST ALUMINUM	CAST BRASS	USE WITH
Single	3711A	3731-RS	20A
Double	3712A	3732-RS	30A
DSFD	3781A	—	50A

Note: 3/4" NPT Hole Std. Additional accessories are available. Please consult your Thomas & Betts representative.

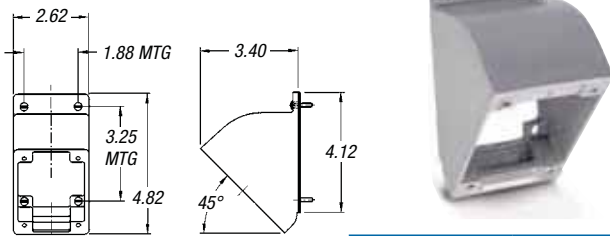


Catalog Number 3712A



Catalog Number 3781A

45° Angle Adapter



Catalog Number 3678A

	CAST ALUMINUM	CAST BRASS
	3678A	3678B

Conduit Adapter Kits (Plugs or Connectors)



SIZE	20 AMP	30 AMP	50 AMP	60 AMP
1/2"	9X2C50	9X3C50	—	—
3/4"	9X2C75	9X3C75	9X5C75	9X6C75
1"	—	9X3C10	9X5C10	9X6C10

Cable Bushings



20-Amp Cable Bushing

MAX. CABLE O.D. (INCHES)	20 AMP	30, 50 & 60 AMP
.375	C16984A	—
.437	C16984B	—
.500	C16984C	—
.545	—	2000-11
.562	C16984D	—
.606	B16506	—
.620	—	2000-03
.625	B16524	—
.700	—	2000-04
.750	—	2000-01
.800	—	2000-06
.870	—	2000-02
.925	—	2000-12
1.000	—	2000-05

(Minimum limit 85% of O.D. size for sealing.)
Material — Oil-resistant Neoprene.
State catalog number followed by slash (/) and Max. Cable O.D.; example: 9P33U1/1000 will order the 1.000" bushing instead of the standard .700" bushing for the 9P33U1.

Replacement Caps



	20 AMP	30 AMP	50 AMP	60 AMP
Screw Cap (Connector)	9X2PSC	9X3PSC	9X5PSC	9X6PSC
Cup Cap (Plug)	—	9X3CC	9X3CC	9X3CC
Screw Cap (Receptacle)	—	7X3RCW	7X5RCW	7X6RCW
Flap Cap (Receptacle)	—	7X3RCF	7X5RCF	7X6RCF

DuraGard® Waterproof Connections

Replacement Interiors



Russellstoll® Pin and Sleeve Power Connectors

		CAT. NO.	
AMPS	VOLTAGE POLARIZATION	MALE INTERIOR ASSEMBLY	FEMALE INTERIOR ASSEMBLY
2P3W 20A	125VAC	9XM23U1	9XF23U1
	250VAC	9XM23U2	9XF23U2
	277VAC	9XM23U3	9XF23U3
	480VAC	9XM23U4	9XF23U4
	600VAC	9XM23U5	9XF23U5
	through 600VAC/250VDC	9XM23U0	9XF23U0
2P3W 30A	125VAC	9XM33U1	9XF33U1
	250VAC	9XM33U2	9XF33U2
	277VAC	9XM33U3	9XF33U3
	480VAC	9XM33U4	9XF33U4
	600VAC	9XM33U5	9XF33U5
	through 600VAC/250VDC	9XM33U0	9XF33U0
2P3W 50A	125VAC	9XM53U1	9XF53U1
	250VAC	9XM53U2	9XF53U2
	480VAC	9XM53U4	9XF53U4
	600VAC	9XM53U5	9XF53U5
	through 600VAC/250VDC	9XM53U0	9XF53U0
	3P4W 20A	125/250VAC	9XM24U1
3Ø 250VAC		9XM24U2	9XF24U2
3Ø 480VAC		9XM24U4	9XF24U4
3Ø 600VAC		9XM24U5	9XF24U5
through 600VAC/250VDC		9XM24U0	9XF24U0
3P4W 30A		125/250VAC	9XM34U1
	3Ø 250VAC	9XM34U2	9XF34U2
	3Ø 480VAC	9XM34U4	9XF34U4
	3Ø 600VAC	9XM34U5	9XF34U5
	through 600VAC/250VDC	9XM34U0	9XF34U0
	3P4W 50A	125/250VAC	9XM54U1
3Ø 250VAC		9XM54U2	9XF54U2
3Ø 480VAC		9XM54U4	9XF54U4
3Ø 600VAC		9XM54U5	9XF54U5
through 600VAC/250VDC		9XM54U0	9XF54U0
2P3W 60A		125VAC	9XM63U1
	250VAC	9XM63U2	9XF63U2
3P4W 60A	125/250VAC	9XM64U1	9XF64U1
	3Ø 250VAC	9XM64U2	9XF64U2

DuraGard® Waterproof Connections

Safety Interlocks

Circuit Breaker Interlocked Outlet:

- 30A and 50A ranges and polarizations to 480VAC
- 22kA interrupt capacity breaker
- Easy handle reset after trip
- Auxiliary switch or other options

User Friendly — Flexible Mounting:

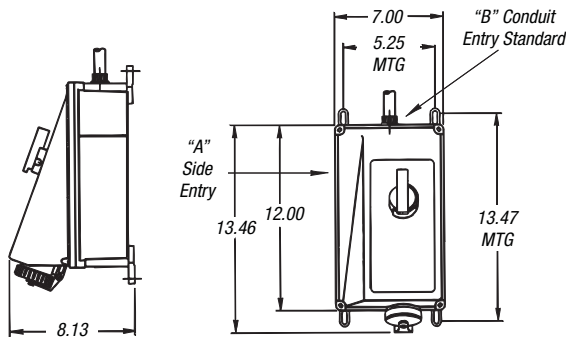
- Variable footprint mounting tabs
- Compact size fits 8" standard I-beam webs
- Conduit entry from top, bottom or side (¾", 1" or 1¼" NPT)
- Large red handle with lockout access

Flame Rated and DuraV® Tough Housing:

- UL® 94-V0 housing and interior with stainless steel components
- High-impact thermoplastic housing
- NEMA 4X construction



The **only** non-metallic, 22kAIC, 30A and 50A series circuit breaker interlocked receptacle available today!



Russellstoll® Pin and Sleeve Power Connectors

3P4W EXAMPLES SHOWN:				CAT. NO.		
AMPS	VOLTAGE POLARIZATION	SAFETY INTERLOCK WITH CIRCUIT BREAKER	CIRCUIT BREAKER TRIP RATING	MATING PLUG	ROTARY CONTROLLER	REPLACEMENT INTERIOR
3P4W 30A	125/250VAC	9MT34U1W30B	30A	9P34U1	9MI34U1WNAB	9XL34U1
	3Ø 250VAC	9MT34U2W30B	30A	9P34U2	9MI34U2WNAB	9XL34U2
	3Ø 480VAC	9MT34U4W30B	30A	9P34U4	9MI34U4WNAB	9XL34U4
	3Ø 600VAC	9MT34U5W30B	30A	9P34U5	9MI34U5WNAB	9XL34U5
	through 600VAC/3P4W	9MT34U0W30B	30A	9P34U0	9MI34U0WNAB	9XL34U0
	3P4W 50A	125/250VAC	9MT54U1W50B	50A	9P54U1	9MI54U1WNAB
3Ø 250VAC		9MT54U2W50B	50A	9P54U2	9MI54U2WNAB	9XL54U2
3Ø 480VAC		9MT54U4W50B	50A	9P54U4	9MI54U4WNAB	9XL54U4
3Ø 600VAC		9MT54U5W50B	50A	9P54U5	9MI54U5WNAB	9XL54U5
through 600VAC/3P4W		9MT54U0W50B	50A	9P54U0	9MI54U0WNAB	9XL54U0

Note: 1. Change suffix for alternate trip ratings. Example: 9MT54U2W30B — 50-amp, 3P4W, safety interlock with 30-amp circuit breaker, conduit top entry.

◆ Change "W" to "F" for flap cap access. Example: 9MI34U2F30B — 30-amp, 3P4W, safety interlock with rotary controller and flap cap.

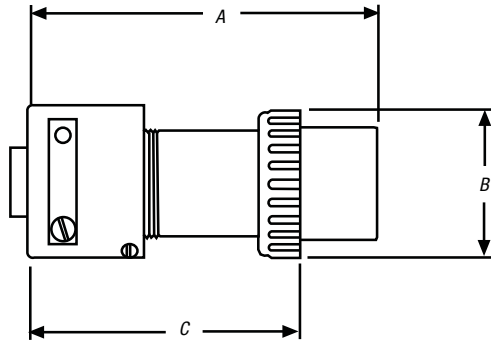
(Minimum limit 85% of O.D. size for sealing.)

Foot and Hardware Replacement Kit: Cat. No. 9XLMF (non-metallic) and Cat. No. 9XLMF-SS (stainless steel).

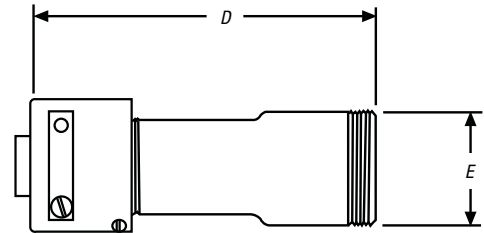
DuraGard® Waterproof Connections

Russellstoll® Pin and Sleeve Power Connectors

Plugs and Female Plugs



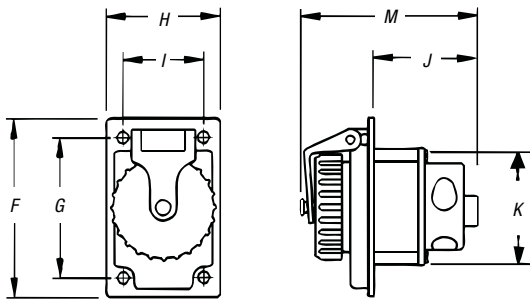
Connectors



AMPS		A*	B	C*	D	E	MAX AWG	TERMINAL Ø IN./MM
20A	Inches	3.87	2.16	2.75	4.75	1.88	12	.140/.0055
	mm	98.3	54.9	69.9	120.7	47.8		
30A	Inches	5.385	2.38	4.16	6.25	2.13	8	.235/.0092
	mm	136.6	60.5	105.7	158.8	54.1		
50A	Inches	5.75	2.38	4.16	6.25	2.13	6	.235/.0092
	mm	146.1	60.5	105.7	158.8	54.1		
60A	Inches	5.75	2.38	4.16	6.25	2.13	6	.235/.0092
	mm	146.1	60.5	105.7	158.8	54.1		

* Dimensions will vary slightly with assembly.

Receptacles and Male Receptacles



Screw cover shown. Flap cover also available; no dimensional changes.

AMPS		F	G	H	I	J	K	M	MAX. AWG	TERMINAL Ø IN./MM
20A	Inches	4.14	3.25	2.66	1.88	1.49	2.26	3.17	12	.140/.0055
	mm	105.2	82.6	67.6	47.8	37.8	57.4	80.5		
30A	Inches	4.14	3.25	2.66	1.88	2.44	2.71	4.12	8	.235/.0092
	mm	105.2	82.6	67.6	47.8	62.0	68.8	104.6		
50A	Inches	4.14	3.25	2.66	1.88	2.44	2.71	4.12	6	.235/.0092
	mm	105.2	82.6	67.6	47.8	62.0	68.8	104.6		
60A	Inches	4.14	3.25	2.66	1.88	2.44	2.71	4.12	6	.235/.0092
	mm	105.2	82.6	67.6	47.8	62.0	68.8	104.6		

DuraGard® Waterproof Connections

Plugs, Connectors and Receptacles

Performance — Electrical

Dielectric Voltage Withstand	3000 volts
Max. Working Voltage	6000 volts RMS (minimum creepage and minimum clearance per UL 840)
Circuit Interrupting/ Load Breaking	UL® Listed and CSA Certified for circuit interrupting at full rated current
Temperature Rise	Max. 30° C/86° F temperature rise at full rated current after 50 cycles of overload at 150% rated current at .75 pf

Performance — Mechanical

Impact Resistance	Per UL 1682 Paragraph 34
Cord Accommodation	Round portable service cords. 10 standard diameters from .405" to 1.00", custom sizes to spec
Terminal Identification	In accordance with UL 1682
Cable Pull Out Force	In accordance with UL 1682
Product Identification	Identification label and molded in name
Lockout/Tagout	Lockout/tagout hole on plug complies with OSHA Reg. 29 CFR 1910.147

Performance — Environmental

Moisture Resistance	Per UL 1682 Paragraph 49 Watertight/ flap screw cover on receptacle, O-rings on all pins and sleeves, interiors and plug shell. Watertight even when not engaged
Flammability	VO or better per UL 94
Operating Temperatures	Maximum continuous: 95° C/203° F Minimum: -40° C/-40° F without impact
Chemicals	Resists standard industrial hydrocarbons, acids, bases and solvents



Russellstoll® Pin and Sleeve Power Connectors

Material

Contact Carrier Interior	Molded arc-resistant UL 94-V0 phenolic thermoset
Housing, Gland Nuts, Screw Collar Rings	DuraV® UL 94-V0, high-impact Thermoplastic
O-Rings	Buna-N (Nitrile)
Contacts: Pins and Sleeves	Brass CDA 360
Hinge Pins (Receptacle)	Stainless steel
Terminals	Brass CDA 360
Terminal Screws, Flap Springs, Assembly Screws, Nuts, Hardware	Stainless steel
Gland Friction Washer	20 amp — Nylon 30, 50 and 60 amp — Aluminum
Cable Clamp Bushing	Neoprene

Approvals*



* TUV & PSE listed product also available; contact Technical Services.

DuraGard® Waterproof Connections

Safety Interlocks

Performance — Electrical

Dielectric Voltage Withstand	3000 volts
Max. Working Voltage	480 volts RMS (minimum creepage distance and minimum clearance per UL® 840) (using circuit breaker)
Circuit Interrupting/ Load Breaking	UL Listed and CSA Certified for circuit interrupting at full rated current
Temperature Rise	Max. 30° C/86° F temperature rise at full rated current after 50 cycles of overload at 150% rated current at .75 pf
Shrouded Contacts	Complies with California Code Title 8, Art. 51, S2510.7(b) for devices exceeding 300VAC

Performance — Mechanical

Impact Resistance	Per UL 1682 Paragraph 34
Wiring Accommodation	Conduit entries at top, side and bottom, .750" NPT top entry standard
Terminal Identification	In accordance with UL 1682
Plug Pull Out Force	In accordance with UL 1682
Product Identification	Identification label
Lockout/Tagout	Lockout/tagout access on switch complies with OSHA Reg. 29 CFR 1910.147

Performance — Environmental

Moisture Resistance	Per UL 1682 Paragraph 49. Watertight/ flap screw cover on receptacle, O-rings on all pins and sleeves, interiors and plug shell. Watertight even when not engaged (screw cover closed/locked)
Flammability	V0 or better per UL 94
Operating Temperatures	Maximum continuous: 95° C/203° F Minimum: -40° C /-40° F without impact (Note: per C/B trip at elevated temps.)
Chemicals	Resists standard industrial hydrocarbons, acids, bases and solvents
UV Resistance	UV-stabilized material

Material

Contact Carrier Interior	Molded arc-resistant UL 94-V0 thermoset material
Housing, Gland Nuts, Screw Collar Rings	DuraV® UL 94-V0, high-impact Thermoplastic
O-Rings	Buna-N (Nitrile)
Contacts: Pins and Sleeves	Brass CDA 360
Hinge Pins (Receptacle)	Stainless steel
Terminals	Brass CDA 360
Terminal Screws, Flap Springs, Assembly Screws, Nuts, Hardware	Stainless steel
Gland Friction Washer	20 amp — Nylon 30, 50 and 60 amp — Aluminum
Cable Clamp Bushing	Neoprene

Approvals

