

Russellstoll®

DuraGard® Nonmetallic Waterproof Connections

Washdown Duty, Chemical, Outdoor, Industrial and Marine Use Nonmetallic Plugs, Connectors Receptacles and Inlets – 20, 30 and 50 Amp, Maximum 600 VAC/250 VDC

Engineering Specifications

Performance – Electrical

Dielectric Voltage Withstand	3,000 Volts
Max. Working Voltage	6,000 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 temperature rise at full rated current after 50 cycles of overload at 150% rated current at .75-pf.
Horsepower	Per NEC 430-151 ratings

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.



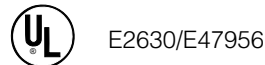
Performance – Environmental

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	V0 or better per UL94
Operating Temperatures	Maximum Continuous: 95°C / 203°F Minimum: -40°C / -40°F w/o impact
Chemicals	Resists standard industrial hydrocarbons, acids, bases and solvents.

Material

Contact Carrier	Molded arc resistant UL94-V0 phenolic thermoset
Housing, Gland Nuts Screw Collar Rings	DuraV™ UL94-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	Stainless Steel
Flap Springs	
Assembly Screws	
Nuts, Hardware	
Gland Friction Washer	20 Amp - Nylon 30 and 50 Amp - Aluminum
Cable Clamp Bushing	Neoprene

Approvals



DuraGard® Nonmetallic Waterproof Connections — Ordering Information

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Amps	Voltage Polarization	Safety Polarization (Receptacle)	Catalogue Numbers					
			Male Plug	Female Connector	Std. I.D. Bushing: Plug/Conn.*	Female Receptacle	Female Plug	Male Receptacle
2P3W 20A	125 VAC		 9P23U1	 9C23U1	Standard 0.625 For Optional Sizes See pg. 112	 9R23U1W		
	250 VAC		9P23U2	9C23U2		9R23U2W		
	277 VAC		9P23U3	9C23U3		9R23U3W		
	480 VAC		9P23U4	9C23U4		9R23U4W		
	600 VAC		9P23U5	9C23U5		9R23U5W		
	thru 600VAC/250VDC		9P23U0	9C23U0		9R23U0W		
2P3W 30A	125 VAC		9P33U1	9C33U1	Standard 0.700 For Optional Sizes See pg. 112	9R33U1W	9F33U1	9B33U1F
	250 VAC		9P33U2	9C33U2		9R33U2W	9F33U2	9B33U2F
	277 VAC		9P33U3	9C33U3		9R33U3W	9F33U3	9B33U3F
	480 VAC		9P33U4	9C33U4		9R33U4W	9F33U4	9B33U4F
	600 VAC		9P33U5	9C33U5		9R33U5W	9F33U5	9B33U5F
	thru 600 VAC/3P3W		9P33U0	9C33U0		9R33U0W	9F33U0	9B33U0F
2P3W 50A	125 VAC		9P53U1	9C53U1	Standard 0.925 For Optional Sizes See pg. 112	9R53U1W	9F53U1	9B53U1F
	250 VAC		9P53U2	9C53U2		9R53U2W	9F53U2	9B53U2F
	277 VAC		9P53U3	9C53U3		9R53U3W	9F53U3	9B53U3F
	480 VAC		9P53U4	9C53U4		9R53U4W	9F53U4	9B53U4F
	600 VAC		9P53U5	9C53U5		9R53U5W	9F53U5	9B53U5F
	thru 600 VAC/3P3W		9P53U0	9C53U0		9R53U0W	9F53U0	9B53U0F
3P4W 20A	125/250 VAC		9P24U1	9C24U1	Standard 0.625 For Optional Sizes See pg. 112	9R24U1W		
	250- 3Ø VAC		9P24U2	9C24U2		9R24U2W		
	480 3Ø VAC		9P24U4	9C24U4		9R24U4W		
	600 3Ø VAC		9P24U5	9C24U5		9R24U5W		
	thru 600VAC / 250VDC		9P24U0	9C24U0		9R24U0W		
3P4W 30A	125/250 VAC		9P34U1	9C34U1	Standard 0.750 For Optional Sizes See pg. 112	9R34U1W	9F34U1	9B34U1F
	250 3Ø VAC		9P34U2	9C34U2		9R34U2W	9F34U2	9B34U2F
	480 3Ø VAC		9P34U4	9C34U4		9R34U4W	9F34U4	9B34U4F
	600 3Ø VAC		9P34U5	9C34U5		9R34U5W	9F34U5	9B34U5F
	thru 600 VAC/4P4W		9P34U0	9C34U0		9R34U0W	9F34U0	9B34U0F
3P4W 50A	125/250 VAC		9P54U1	9C54U1	Standard 0.925 For Optional Sizes See pg. 112	9R54U1W	9F54U1	9B54U1F
	250 3Ø VAC		9P54U2	9C54U2		9R54U2W	9F54U2	9B54U2F
	480 3Ø VAC		9P54U4	9C54U4		9R54U4W	9F54U4	9B54U4F
	600 3Ø VAC		9P54U5	9C54U5		9R54U5W	9F54U5	9B54U5F
	thru 600 VAC/4P4W		9P54U0	9C54U0		9R54U0W	9F54U0	9B54U0F

□ Add Suffix - / xxxx for bushing I.D. (page 110) or conduit adapter assembled.

♦ "W" suffix is watertight "F" suffix for splashproof spring flap cover.

* Consult your Regional Sales Office.

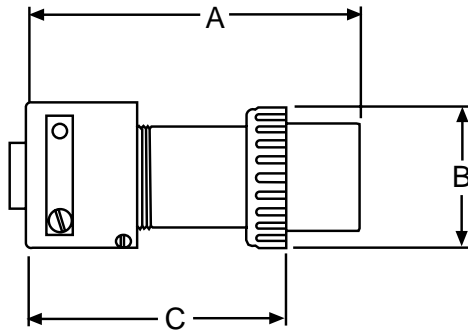
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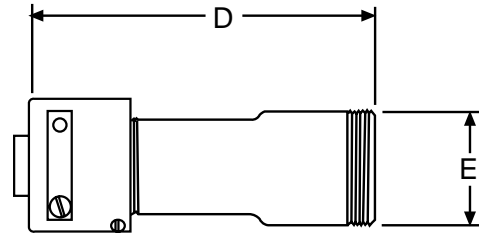
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Dimensions

Plugs and Female Plugs (30/50A only)



Connectors

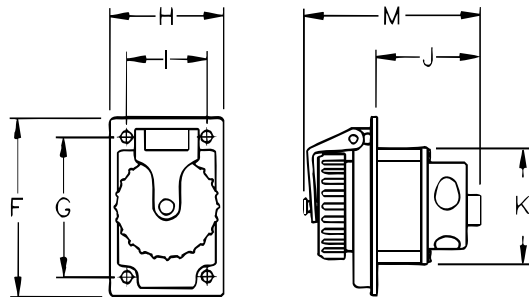


Amps		A*	B	C*	Max AWG	Terminal Ø in./mm
20 Amp	Inches	3.87	2.16	2.75	12	.140/.0055
	mm	98.3	54.9	69.9		
30 Amp	Inches	5.385	2.38	4.16	8	.235/.0092
	mm	136.6	60.5	105.7		
50 Amp	Inches	5.75	2.38	4.16	6	.235/.0092
	mm	146.1	60.5	105.7		

Amps		D	E	Max AWG	Terminal Ø in./mm
20 Amp	Inches	4.75	1.88	12	.140/.0055
	mm	120.7	47.8		
30 Amp	Inches	6.25	2.13	8	.235/.0092
	mm	158.8	54.1		
50 Amp	Inches	6.25	2.13	6	.235/.0092
	mm	158.8	54.1		

* Dimensions will vary slightly with assembly.

Receptacles and Male Receptacles (inlets – 30/50A only)



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

Amps		F	G	H	I	J	K	M	Max. AWG	Terminal Ø in/mm
20 Amp	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		
30 Amp	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		
50 Amp	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		