

Electrical Interconnection Systems for Heavy-Duty Applications

Russellstoll[®]

MaxGard[®]

J-Line[™]

DuraGard[®]

FS/FD[™]

UniGard[®]

DuraTite[®]

Ever-Lok[®]

Control Circuit

Industrial Interlock

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

www.tnb.com

Russellstoll®

Russellstoll® Interconnection Systems Stand Up to Your Toughest Environments.

When you're dealing with electrical connections in wet, corrosive or hazardous environments, performance, safety and durability are of paramount importance. Russellstoll® MaxGard® and DuraGard® interconnection systems provide superior waterproof connections in rugged, corrosion-resistant, waterproof, UL 94-V0 rated housings. You can rely on Russellstoll® plugs, connectors and receptacles to safely provide power where you need it — even under the harshest indoor and outdoor conditions.

Heavy Industrial/Marine
Applications

Washdown and Light Marine
Applications

Industrial and Commercial
Applications

Control Circuit and Industrial/
Interlock Applications

Hazardous Location
Applications



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- Offering a best-of-class warranty and returns policy
- Uniform carton labeling with additional bar-coding for convenient inventory management
- Nationwide network of stocking electrical distributors
- Outstanding customer service capability
- Supplying you with the right products, convenient packaging, on-time delivery and competitive pricing



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Russellstoll Application Guide

This catalog has been divided into sections based on standard application groups. Below is a description of each of the six general categories in which Russellstoll products appear. Applications are not limited to those listed below.

Heavy Industrial/Marine Applications: Outdoor, Severe or High Abuse Environments



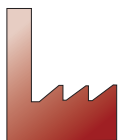
- Industrial hook-ups
- Shore-to-ship power connections stations
- Portable generator sets
- Mills and process plants
- Agriculture
- Portable power connections
- Aerospace manufacturing and airports
- Lift stations
- Irrigation and wastewater equipment
- Industrial and shipyard welding
- Power distribution centers
- Job site power: For telephone power and communications equipment

Washdown and Light Marine Applications: Watertight/Waterproof



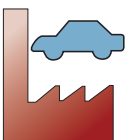
- Food processing plants
- Pharmaceutical manufacturing
- Bottling and beverage plants
- Barge and workboat applications
- Pulp and paper factories
- Outdoor construction sites

Industrial and Commercial Applications



- Entertainment (lighting and sound systems)
- Machinery
- Computer-related equipment
- Welding installations
- Construction sites
- Facilities' electrical power

Control Circuit and Industrial Interlock Applications



Automotive/Industrial Interlock systems were designed for the needs of the manufacturing industry. These devices are used where safety requirements mandate a mechanically interlocked system for connection and removal of plugs under full load.

- Automatic press
- Heavy-duty portable welding
- Portable systems
- Machine tool control or Servo systems
- Shipyard maintenance power
- Battery chargers
- Automated welder applications
- Food processing
- Temporary power connections

Hazardous Location Applications: Class I, Div. 1/Class II, Div. 1



- Aerospace
- Steel mills and mining
- Petroleum
- Chemical
- Food processing
- Waste treatment

Computer Systems: Data Center and OEM Products



- Raised floor applications
- Main power connections
- Critical power for test, instrumentation, telephone and medical equipment

| | | AMPERAGE | | | | | | |
|--|--|----------|----|----|----|-----|-----|-----|
| | | 20 | 30 | 50 | 60 | 100 | 200 | 400 |
|  Heavy Industrial/Marine (pages 5–66) | MaxGard® | | ✓ | — | ✓ | ✓ | ✓ | ✓ |
| | J-Line™ | | ✓ | — | ✓ | ✓ | ✓ | — |
| | | | | | | | | |
|  Washdown and Light Marine (pages 67–118) | DuraGard® | ✓ | ✓ | ✓ | ✓ | — | — | — |
| | FS/FD™ | ✓ | ✓ | — | — | — | — | — |
| | Mechanically Interlocked Receptacles | ✓ | ✓ | ✓ | — | — | — | — |
| | UniGard® (IEC 309) IP67 | ✓ | ✓ | — | ✓ | ✓ | — | — |
|  Industrial and Commercial (pages 119–142) | DuraTite™ | ✓ | ✓ | — | — | — | — | — |
| | Standard Ever-Lok® (+Midget) | ✓ | ✓ | ✓ | — | — | — | — |
| | Heavy Service Ever-Lok® | — | ✓ | — | ✓ | ✓ | — | — |
| | UniGard® (IEC 309) IP44 | ✓ | ✓ | — | ✓ | ✓ | — | — |
|  Control Circuit and Industrial Interlock (pages 143–162) | Control Circuit Connectors | ✓ | — | — | — | — | — | — |
| | Industrial Interlock Systems (Custom Products) | ✓ | ✓ | — | ✓ | ✓ | ✓ | ✓ |
|  Hazardous Location (pages 163–174) | MaxGard® | — | ✓ | — | ✓ | ✓ | — | — |
| | Interlocked Switch Receptacles | ✓ | ✓ | — | — | — | — | — |
| | Delayed Action Circuit Breaking Receptacles | ✓ | ✓ | — | — | — | — | — |
| | Safe Ground Indicator System | — | — | — | — | — | — | — |
|  Computer Systems (pages 175–185) | FS/FD and Angle Type DP | ✓ | ✓ | ✓ | ✓ | — | — | — |
| | Spec Grade | ✓ | ✓ | ✓ | — | — | — | — |
| | DuraGard® | ✓ | ✓ | ✓ | ✓ | — | — | — |
| | UniGard® (IEC) | ✓ | ✓ | — | ✓ | — | — | — |

T&B Russellstoll Specification Project Information: RFQ

(Copy and Fax)

Fax Quote Request Form

Regional Office: _____ Inquiry Date: _____
 File or Quote (T&B): _____ Response Date: _____
 Customer Name: _____ Project Contact: _____
 Installation Site: _____ Position/Company: _____
 Customer Contact: _____ Contact Phone: _____
 Position: _____ Contact Fax/Email: _____
 Customer Phone: _____ Other: _____
 T&B Rep. and Phone: _____
 T&B Rep. Fax/Email: _____

Please fill out as much information as possible; better information makes a better bid!

Project Type: (circle) [New/Expanded Facility]

[New Equipment]

[Competitive Replacement]

Other/Note: _____

| Specification | Definition | Information |
|--|---|-------------|
| 1. Application/Usage or System | How used, connectors for ... What is needed or requested? Heavy-duty or standard service? | |
| 2. Environment and Operational | Indoor or outdoor; Washdown? Chemical, XP or other needs Temperature range service issues | |
| 3. Amperage and Voltage | Full load motor amps (3 phase?) System amperage or request Note any DC apps./specials | |
| 4. Poles/Wires and Cable and Control Contacts? | XpYw and cable type and O.D. Control contacts? And why needed? Conductor stranding — Superflex? | |
| 5. Enclosure Specs and Mounting (Interlocks) | Switched, fused, circuit breaker NEMA style and cast aluminum/brass Environmental/usage issues | |
| 6. Competitive Issues | Competitor ratings or specs List Cat. #'s, quantities, prices Direct mate or crossover OK? | |
| 7. Response Type and Timing | Quantities, pricing issues Budget info or formal quote Project schedule for bids | |
| 8. Other Requirements: Issues or Drawings | Specs or drawings needed Other competitive/channel issues Special colors, coatings, specs Added device features requests | |

Fax this form to: 800-888-0690

Thanks for specifying Russellstoll: The Maximum in Safety, Durability and Performance!



Russellstoll®

Heavy Industrial/Marine Applications: Outdoor, Severe or High-Abuse Environments



Heavy Industrial/Marine



MaxGard® Interconnection Systems

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J-Line™ Interconnection Systems

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MaxGard® Interconnection Systems Overview

Defined

- Any application where electrical connections need protection from water and/or dust ingress to contacts or wiring compartment
- Cable-to-connector sealing and watertight device locking designs are critical
- Metal connectors are usually preferred for long service life

Russellstoll Line Selections for Outdoor (and Indoor) Applications

MaxGard®
4P5W + 2 Opt.
30 through 400A

The widest range and toughest construction. Safety, durability and performance by design in copper-free, cast aluminum, epoxy powder-coated housings. Built to last, from 30 through 400 amp application, with a full interlock line, too. Optional 2-control contacts and more than 200 individual voltage polarization options through 600VAC/250VDC, 4P5W. O-ringed sealed pins, sleeves and interiors.



Typical Application Groups

Marine

- Lighting Systems
- Shore-to-Ship Power
- Welding Stations
- Power Distribution Centers
- Shipboard Power Outlets
- Barge Power Connection

Construction and Agricultural

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

Government Municipal and Utilities

- Portable Building Power
- Army Corps of Engineers
- Utilities Panels
- Emergency Power Systems
- Sewage Pumping Stations
- Light and Controls
- Telephone Vault Systems
- Cellular Telephone Masts

OEMs

- GenSet and Welding Systems
- Transportable Equipment

MaxGard® Interconnection Systems Overview

30A–400A (30–200A Load Breaking), Maximum 600VAC/250VDC

Receptacles, Inlets, Plugs, Connectors, Interlocked Receptacles, Explosion-Proof Interlocked Receptacles

Benefits

Russellstoll builds a variety of benefits into one plug, receptacle and interlock system for your application. The MaxGard system: **Maximum Safety**, **Durability** and **Performance** in electrical interconnections.

Safety

- **Waterproof construction:** Standard Neoprene O-ringed interior components provide environmental separation at the front of each device: they don't have to be connected together just to be called "watertight"
- **Different power supply ratings can't mix:** 24 single-rate device polarizations ensure exact voltage, frequency and phase differentiation plus a few specials, too. In every current range
- **Plugs stay in:** Standard delayed action pull and turn withdrawal offers all plugs an XP rating (30–100 amps). All system components use mating screw collars
- **Foreign objects stay out:** All receptacles and connectors have a gated rotating disk on the face of the interior, engaged on insertion

Durability

- **At least — durability:** Rugged cast aluminum housings with two layers of electrostatic epoxy coating are standard, along with stainless steel hardware. Available with flap or screw covers. Interiors are molded from a tough reinforced UL94-V0 thermoset polyester
- **The best connections for life:** Pins and sleeves are made from CDA 360 and Marine-grade CDA 485 brass; 200 and 400 amp lines are silver-plated as well.
- **The most power available in the most packages:** 30, 60, 100, 200- and 400-amp lines in one system with cast aluminum NEMA 4X interlocks: steel 30, 60 and 100 amp NEMA 12 interlocks or cast aluminum XP interlocks in 30, 60 and 100 amp ranges

Performance

- **Any configuration you need:** Through 4-pole 5-wire configurations, all have a safety center earth ground pin design that makes first and breaks last. This applies to all of our plugs, connectors, receptacles, male inlets and interlock systems
- **More control available:** Two optional pilot/control pins for contactors, load monitor circuits, shunt trip or any other communication functions you need
- **Ease of assembly:** Solderless pressure-type screw terminals with hex socket heads and rear-access, take-apart housings provide quick wiring access. No interior removal required for wiring receptacles and connectors
- **More power:** 150% non-UL ratings allow extending MaxGard installations to 600 amp custom loads, with separate disconnect service



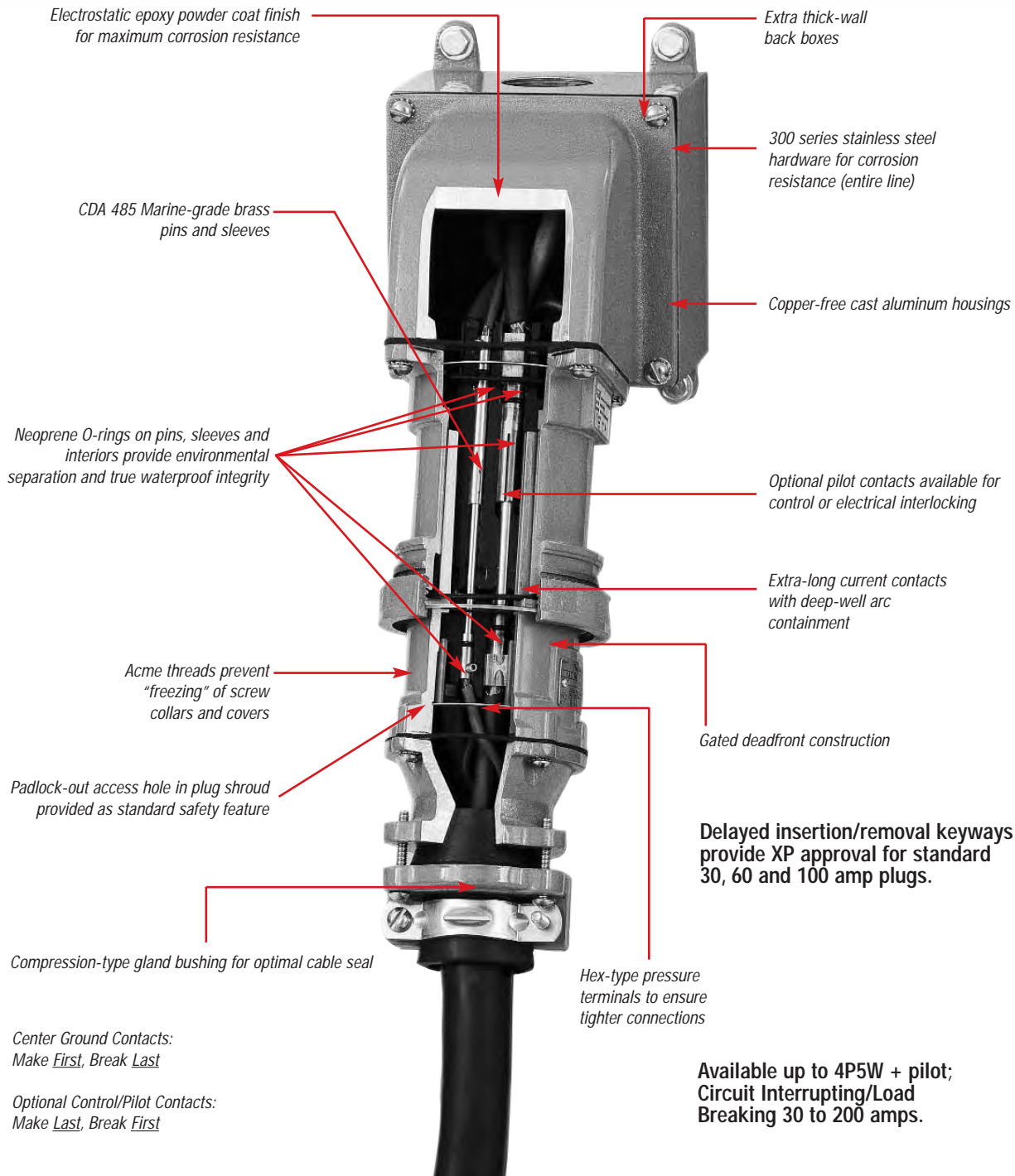
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MaxGard® Interconnection Systems Overview

Heavy Industrial/Marine — MaxGard®

30A–400A (30–200A Load Breaking), Maximum 600VAC/250VDC Receptacles, Inlets, Plugs, Connectors, Interlocked Receptacles, Explosion-Proof Interlocked Receptacles

Plug and Receptacle with Angle Adapter and Junction Box



Electrostatic epoxy powder coat finish for maximum corrosion resistance

Extra thick-wall back boxes

CDA 485 Marine-grade brass pins and sleeves

300 series stainless steel hardware for corrosion resistance (entire line)

Copper-free cast aluminum housings

Neoprene O-rings on pins, sleeves and interiors provide environmental separation and true waterproof integrity

Optional pilot contacts available for control or electrical interlocking

Extra-long current contacts with deep-well arc containment

Acme threads prevent "freezing" of screw collars and covers

Gated deadfront construction

Padlock-out access hole in plug shroud provided as standard safety feature

Delayed insertion/removal keyways provide XP approval for standard 30, 60 and 100 amp plugs.

Compression-type gland bushing for optimal cable seal

Hex-type pressure terminals to ensure tighter connections

Center Ground Contacts:
Make First, Break Last

Optional Control/Pilot Contacts:
Make Last, Break First

Available up to 4P5W + pilot;
Circuit Interrupting/Load
Breaking 30 to 200 amps.

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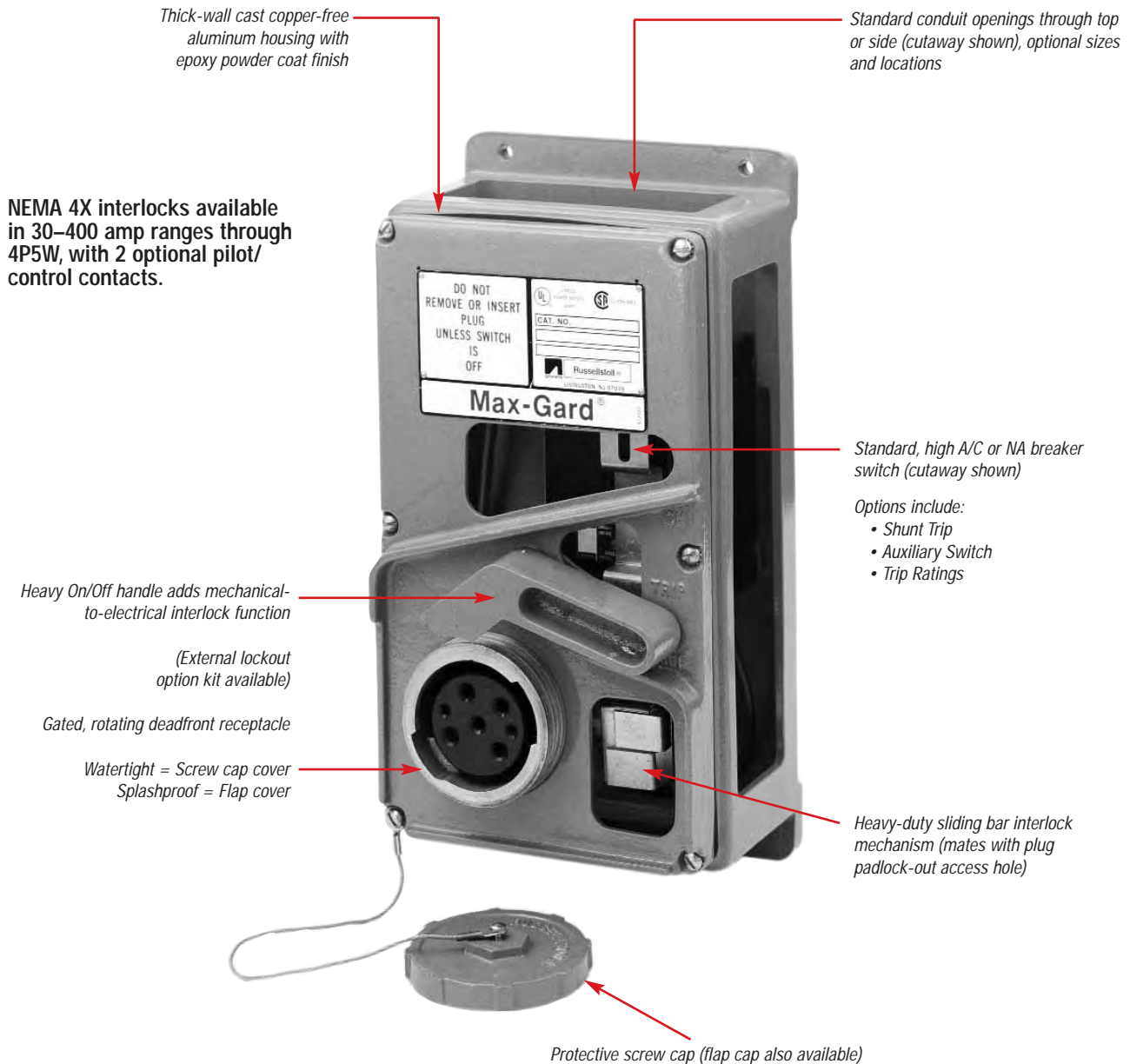
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MaxGard® Interconnection Systems Overview

30A–400A (30–200A Load Breaking), Maximum 600VAC/250VDC Receptacles, Inlets, Plugs, Connectors, Interlocked Receptacles, Explosion-Proof Interlocked Receptacles

Cast Aluminum Circuit Breaker Interlocked Receptacle (Cutaway View)

Heavy Industrial/Marine — MaxGard®



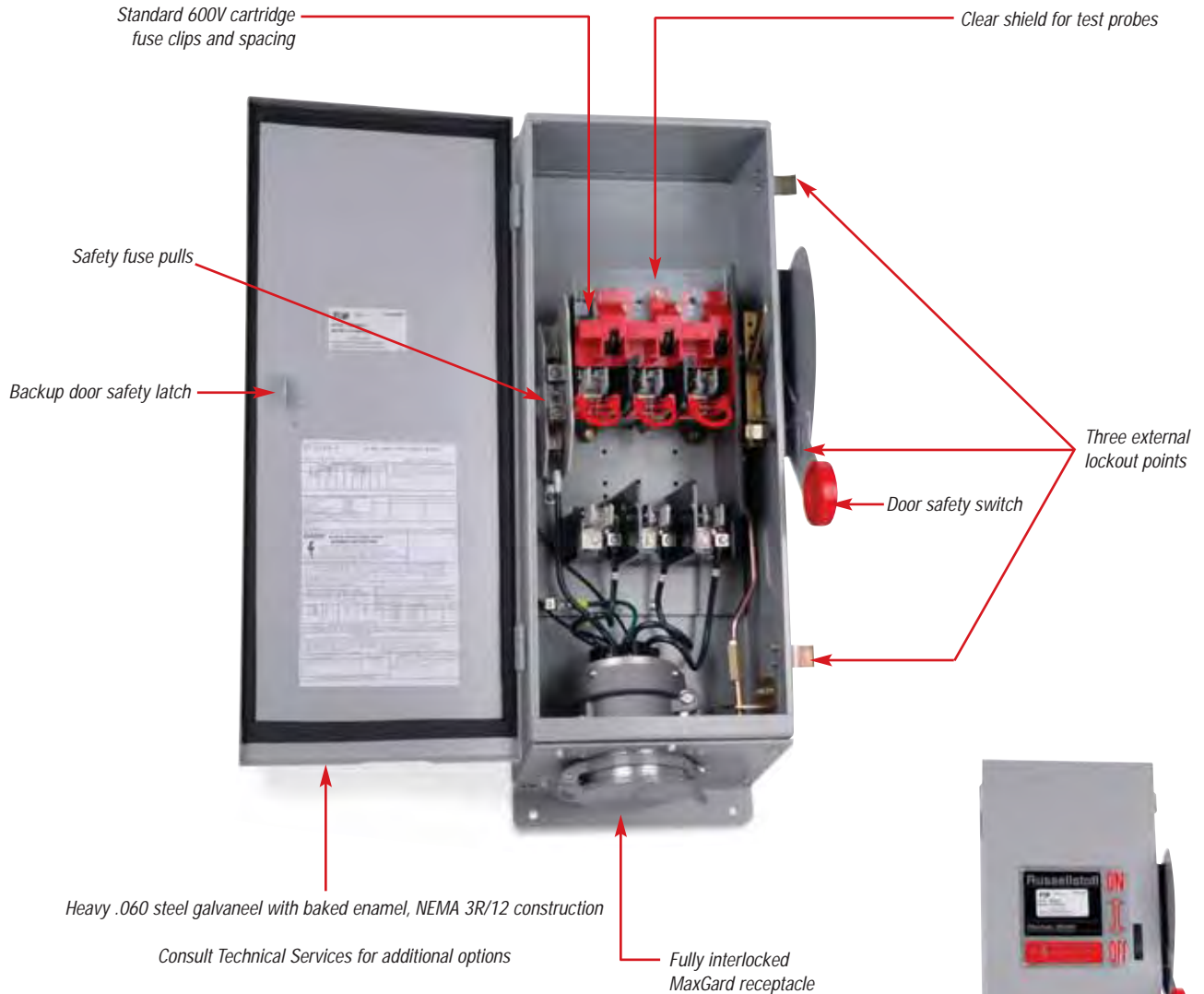
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MaxGard® Interconnection Systems Overview

30A–400A (30–200A Load Breaking), Maximum 600VAC/250VDC
Receptacles, Inlets, Plugs, Connectors, Interlocked Receptacles, Explosion-Proof Interlocked Receptacles

Fused-Disconnect Switch* Interlocked Receptacle

Available in 30, 60 and 100 amp sizes, all polarizations through 600VAC.



Meets Federal specification
WS865C, UL File #E5239
Meets UL 98, 50, 1682, 508, 231
Meets NEC® Table 373-6(b)
Meets major automotive specs

* Also available as switch only

Heavy Industrial/Marine — MaxGard®

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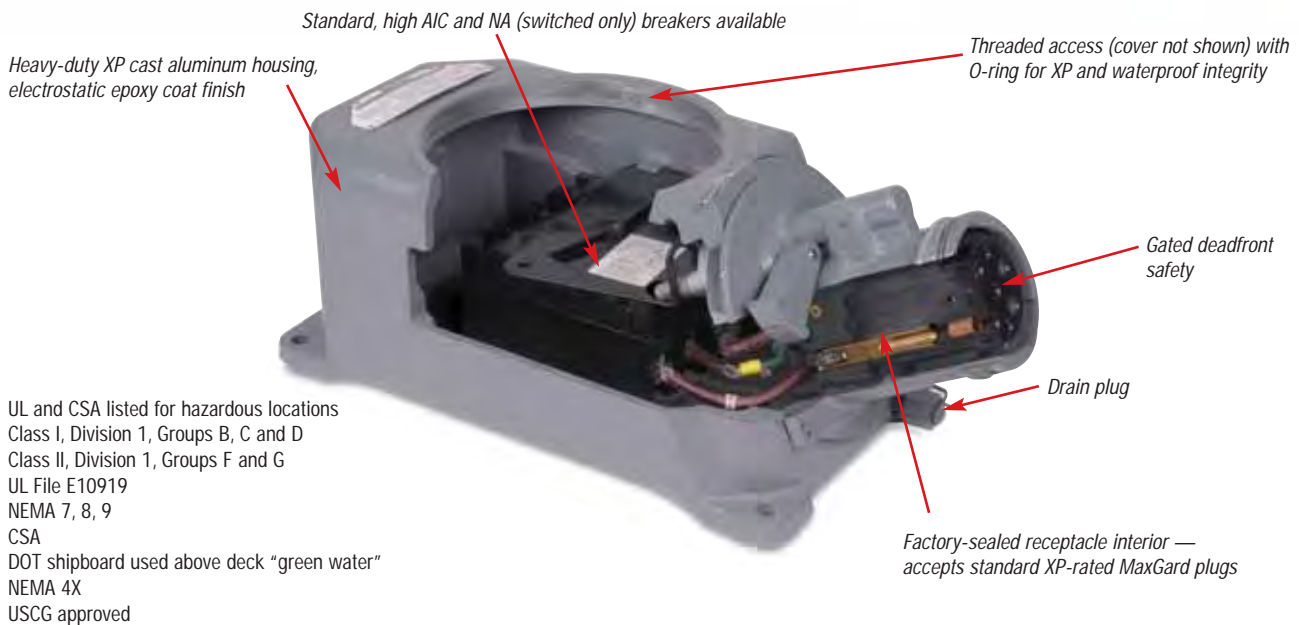
MaxGard® Interconnection Systems Overview

30A–400A (30–200A Load Breaking), Maximum 600VAC/250VDC

Receptacles, Inlets, Plugs, Connectors, Interlocked Receptacles, Explosion-Proof Interlocked Receptacles

Explosion-Proof Waterproof Circuit Breaker Interlocked Receptacle

Available in 30, 60 and 100 amp sizes, all polarizations.



MaxGard® DBRE and DSRE series interlocks are explosion proof and waterproof, (O-ring sealed) along with optional control contacts, fully UL Listed.

Explosion-Proof Waterproof Non-Interlocked Receptacle

Available in 30A 480VAC max., all polarizations.

- Factory-sealed interior (no filled conduits)
- Easy low-cost installation



30A–400A Plugs, Connectors, Receptacles, Inlets and Interlocked Receptacles

Receptacles, Plugs and Connectors

| Feature | Russellstoll MaxGard® | Crouse-Hinds Arkite®** | Appleton Powertite®*** |
|--|-----------------------|------------------------|------------------------|
| Center ground contact | Yes | No | No |
| 24 single-rated factory polarizations | Yes | No | No |
| Gated deadfront construction | Yes | No | No |
| Two optional control contacts | Yes | No | No |
| Marine-grade CDA485 brass pins/sleeves (200–400 amp silver-plated) | Yes | No | No |
| O-rings/environmental separation, full line | Yes | No | No |
| Available to 5-wire (4-pole, 5-wire) | Yes | 30 and 60 amp only | No |
| Complete line epoxy powder coated — standard | Yes | No | Some |

Interlocked XP Receptacles

| Feature | Russellstoll DBRE/DSRE Series | Crouse-Hinds EPC Series | Appleton EBR Series (with FB breaker) |
|--|-------------------------------|-------------------------|---------------------------------------|
| Waterproof (DurORing™) O-ring sealing | Yes | No | No |
| Available to 5-wire (4-pole, 5-wire) through 100 amp | Yes | No | No |
| Gated deadfront | Yes | No | No |
| Center ground sleeve contact | Yes | No | No |
| 24 single-rated factory polarizations | Yes | No | No |
| Class I, Div. 1, Groups B, C, D | Yes | Yes | Yes |
| Class II, Div. 1, Groups F and G | Yes | Yes | Yes* |
| Meets Coast Guard (was CG259) approvals | Yes | No | No |

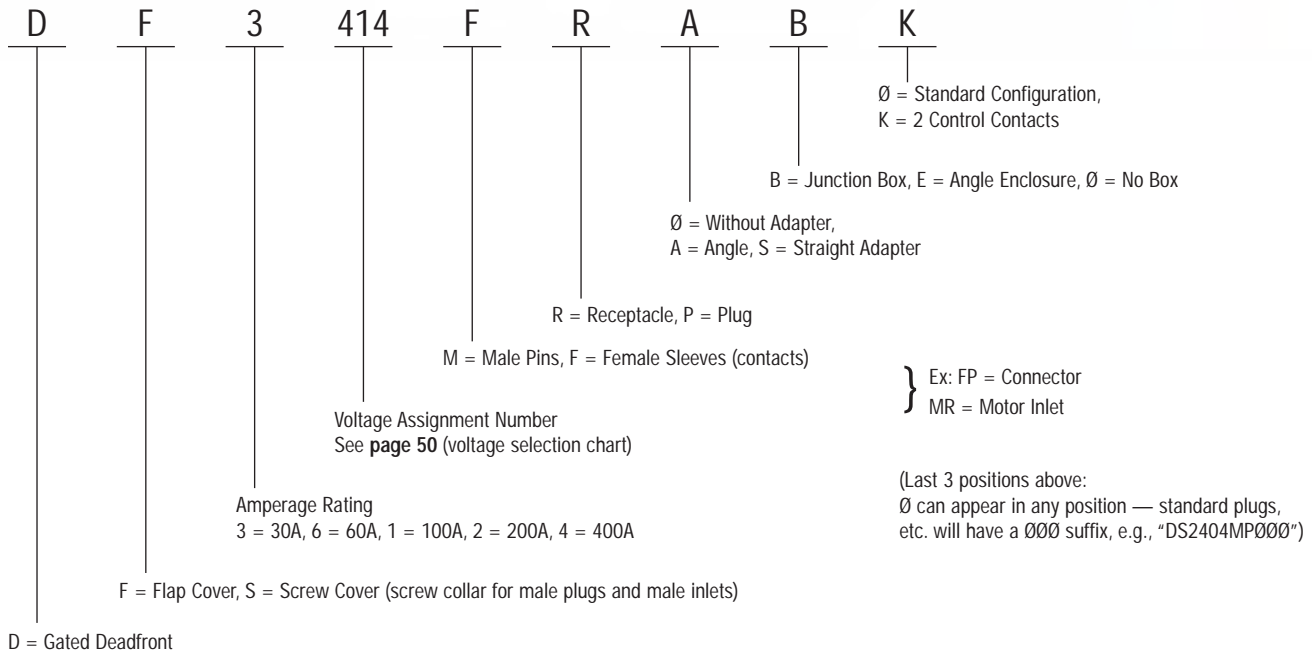
* Group F excepting electrically conductive dusts

** Crouse-Hinds and Arkite are trademarks of Cooper Industries, Inc.

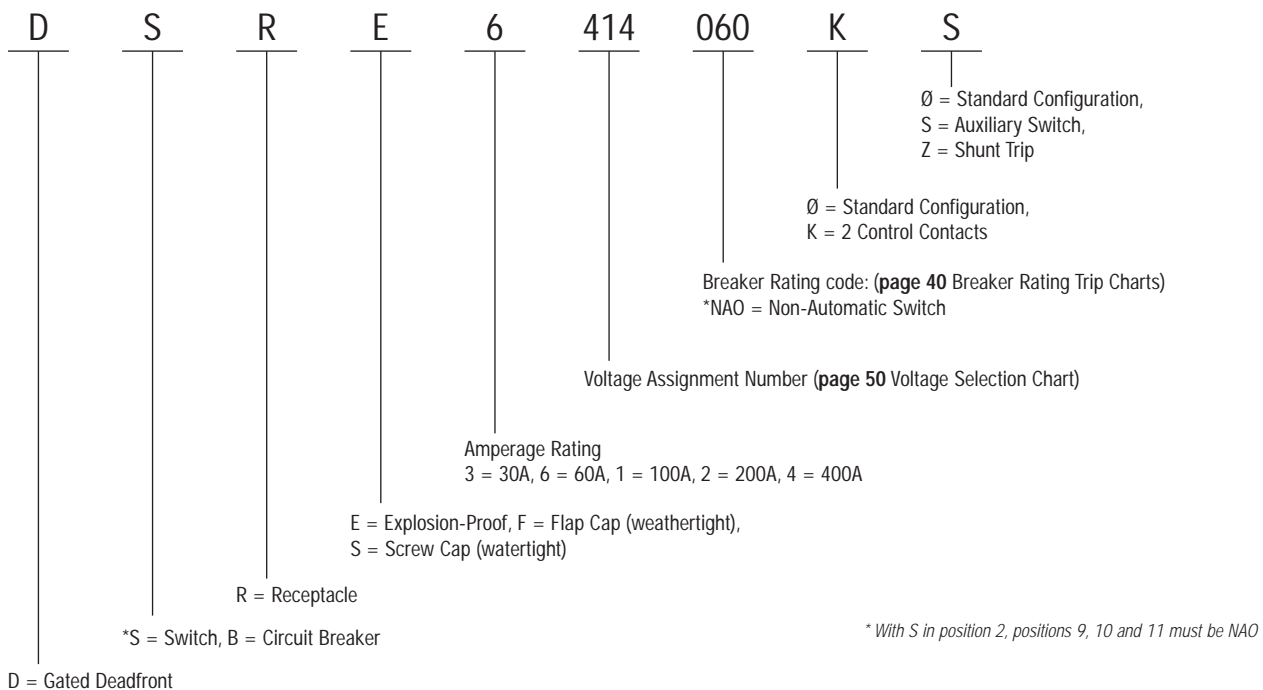
*** Appleton and Powertite are trademarks of Appleton Electric Inc.

30A–400A Plugs, Connectors, Receptacles, Inlets and Interlocked Receptacles

Receptacles, Plugs and Connectors



Interlocks (Standard or Explosion-Proof)



MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 30 Amp

Heavy Industrial/Marine — MaxGard®

30 AMP STANDARD SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS3CC.

Maximum lug wire 8 AWG 7-strand or flexible, cable entrance .187" diameter.

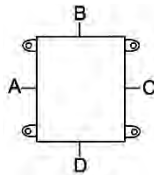
Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment.

For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 1" NPT.



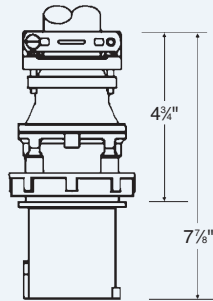
▼ **Control contacts for plug/receptacles:**

Use "K" where noted. Ex: DS3104MP00K

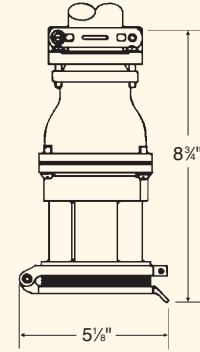
For Adapters, Junction Boxes and Accessories, see pages 44–47.



Male Plug††



Female Connector



Standard Bushing I.D.†

Standard Bushing I.D.†

Device Ratings and Polarizations

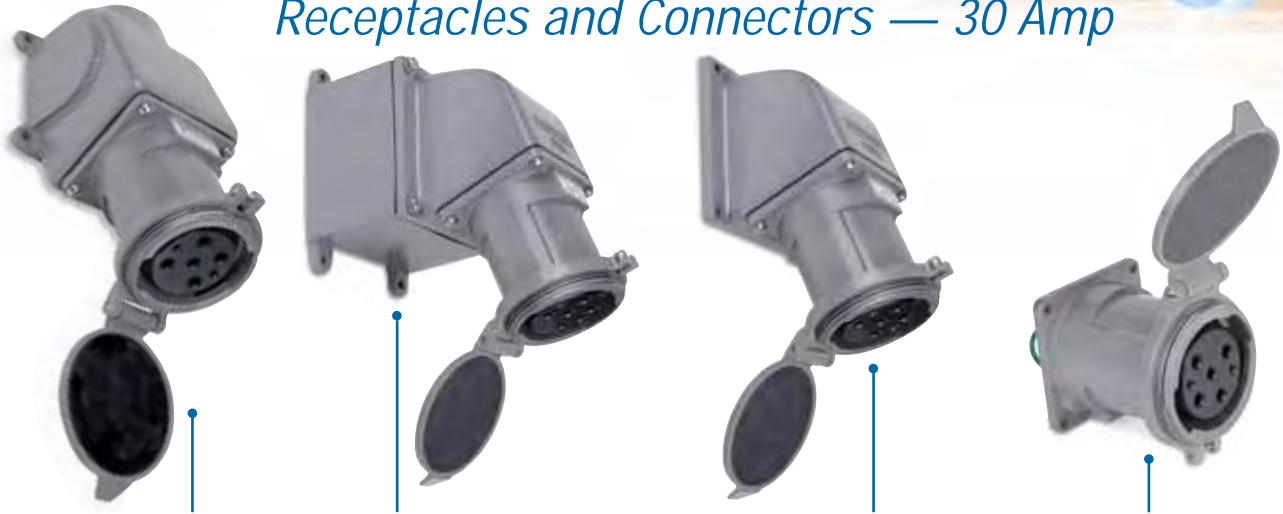
Maximum 600VAC or 250VDC

(For full polarization, see **page 50**)

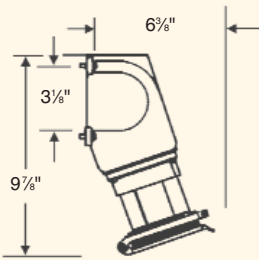
| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
|------|------|---------------------|--------------|-------------|---------|-------------|---------|
| 2 | 3 | | 277 | DS3104MP000 | 7/8" | DF3104FP000 | 7/8" |
| 2 | 3 | | 125 | DS3107MP000 | | DF3107FP000 | |
| 2 | 3 | | 480 | DS3204MP000 | 7/8" | DF3204FP000 | 7/8" |
| 2 | 3 | | 250 | DS3207MP000 | | DF3207FP000 | |
| 2 | 3 | | 600 | DS3214MP000 | | DF3214FP000 | |
| 2 | 3 | | 208 | DS3216MP000 | | DF3216FP000 | |
| 3 | 4 | | 277/480 | DS3304MP000 | 1" | DF3304FP000 | 1" |
| 3 | 4 | | 125/250 | DS3307MP000 | | DF3307FP000 | |
| 3 | 4 | | 120/208 | DS3316MP000 | | DF3316FP000 | |
| 3 | 4 | | 3Ø 480 | DS3404MP000 | 1" | DF3404FP000 | 1" |
| 3 | 4 | | 3Ø 250 | DS3407MP000 | | DF3407FP000 | |
| 3 | 4 | | 3Ø 600 | DS3414MP000 | | DF3414FP000 | |
| 3 | 4 | | 3Ø 208 | DS3416MP000 | | DF3416FP000 | |
| 3 | 4 | | 3Ø 440 | DS3421MP000 | | DF3421FP000 | |
| 4 | 5 | | 3ØY 277/480 | DS3504MP000 | 1 3/16" | DF3504FP000 | 1 3/16" |
| 4 | 5 | | 3ØY 347/600 | DS3514MP000 | | DF3514FP000 | |
| 4 | 5 | | 3ØY 120/208 | DS3516MP000 | | DF3516FP000 | |
| 4 | 5 | | 3ØY 250/440 | DS3521MP000 | | DF3521FP000 | |

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 30 Amp

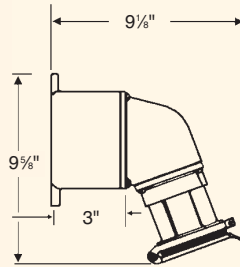
Heavy Industrial/Marine — MaxGard®



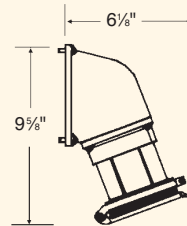
Female Receptacle with Angle Enclosure



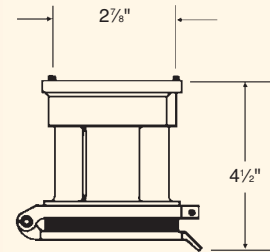
Female Receptacle with Angle Adapter and DJB3 Junction Box**



Female Receptacle with Angle Adapter**



Female Receptacle



CAT. NO.

DF3104FR0E0
DF3107FR0E0

CAT. NO.

DF3104FRAB0
DF3107FRAB0

CAT. NO.

DF3104FRA00
DF3107FRA00

CAT. NO.

DF3104FR000
DF3107FR000

DF3204FR0E0
DF3207FR0E0
DF3214FR0E0
DF3216FR0E0

DF3204FRAB0
DF3207FRAB0
DF3214FRAB0
DF3216FRAB0

DF3204FRA00
DF3207FRA00
DF3214FRA00
DF3216FRA00

DF3204FR000
DF3207FR000
DF3214FR000
DF3216FR000

DF3304FR0E0
DF3307FR0E0
DF3316FR0E0

DF3304FRAB0
DF3307FRAB0
DF3316FRAB0

DF3304FRA00
DF3307FRA00
DF3316FRA00

DF3304FR000
DF3307FR000
DF3316FR000

DF3404FR0E0
DF3407FR0E0
DF3414FR0E0
DF3416FR0E0
DF3421FR0E0

DF3404FRAB0
DF3407FRAB0
DF3414FRAB0
DF3416FRAB0
DF3412FRAB0

DF3404FRA00
DF3407FRA00
DF3414FRA00
DF3416FRA00
DF3421FRA00

DF3404FR000
DF3407FR000
DF3414FR000
DF3416FR000
DF3421FR000

DF3504FR0E0
DF3514FR0E0
DF3516FR0E0
DF3521FR0E0

DF3504FRAB0
DF3514FRAB0
DF3516FRAB0
DF3521FRAB0

DF3504FRA00
DF3514FRA00
DF3516FRA00
DF3521FRA00

DF3504FR000
DF3514FR000
DF3516FR000
DF3521FR000

Russellstoll®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 30 Amp

Heavy Industrial/Marine — MaxGard®

30 AMP

*** Notes to Catalog Numbers**

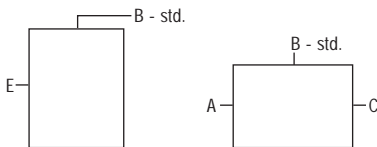
Control Contacts (position 12)
use "K" example: DBRF3104030K0

Shunt Trip Breaker (position 13)
add "Z" to above: DBRF3104030KZ

Breaker Trip Ratings (positions 9, 10, 11)
15 amp use 015 25 amp use 025
20 amp use 020 30 amp use 030

Non-Auto Sw. NAO (repl. "DBRF" with "DSRF")

- Conduit Hubs: NEMA 4X** **Conduit Hubs: XP**
- Std. 1½" NPT-thread outlet at B (or E)
 - 30 amp — Max. 2½"/64mm
 - Std. 1½" -thread outlets provided at A, B or C
 - 30 amp — 1.25"/32mm



†† Non-fused version available. Replace DFRF with DNRF.

Boldface figures are for voltage assignment.

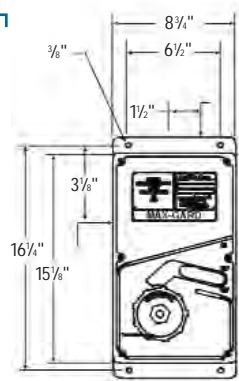
For different ratings, see page 50.

▼ Control contacts "K" designation.

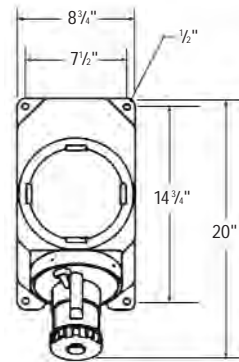
| Device Ratings and Polarizations | |
|---------------------------------------|--|
| Maximum 600VAC or 250VDC | |
| (For full polarization, see page 50.) | |



Interlocked Receptacle with Circuit Breaker NEMA 4X



Explosion-Proof Interlocked Receptacle Class I, Class II

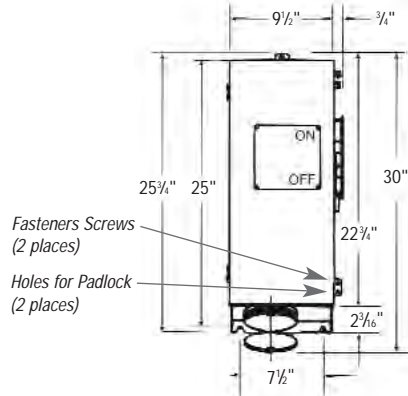


| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | CAT. NO. |
|------|------|---------------------|--------------|---------------|---------------|
| 2 | 3 | | 277 | DBRF310403000 | DBRE310403000 |
| 2 | 3 | | 125 | DBRF310703000 | DBRE310703000 |
| 2 | 3 | | 480 | DBRF320403000 | DBRE320403000 |
| 2 | 3 | | 250 | DBRF320703000 | DBRE320703000 |
| 2 | 3 | | 600 | DBRF321403000 | DBRE321403000 |
| 2 | 3 | | 208 | DBRF321603000 | DBRE321603000 |
| 3 | 4 | | 277/480 | DBRF330403000 | DBRE330403000 |
| 3 | 4 | | 125/250 | DBRF330703000 | DBRE330703000 |
| 3 | 4 | | 120/208 | DBRF331603000 | DBRE331603000 |
| 3 | 4 | | 3Ø 480 | DBRF340403000 | DBRE340403000 |
| 3 | 4 | | 3Ø 250 | DBRF340703000 | DBRE340703000 |
| 3 | 4 | | 3Ø 600 | DBRF341403000 | DBRE341403000 |
| 3 | 4 | | 3Ø 208 | DBRF341603000 | DBRE341603000 |
| 3 | 4 | | 3Ø 440 | DBRF342103000 | DBRE342103000 |
| 4 | 5 | | 3ØY 277/480 | DBRF350403000 | DBRE350403000 |
| 4 | 5 | | 3ØY 347/600 | DBRF351403000 | DBRE351403000 |
| 4 | 5 | | 3ØY 120/208 | DBRF351603000 | DBRE351603000 |
| 4 | 5 | | 3ØY 250/440 | DBRF352103000 | DBRE352103000 |

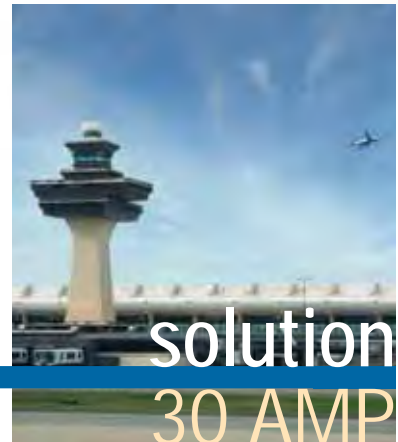
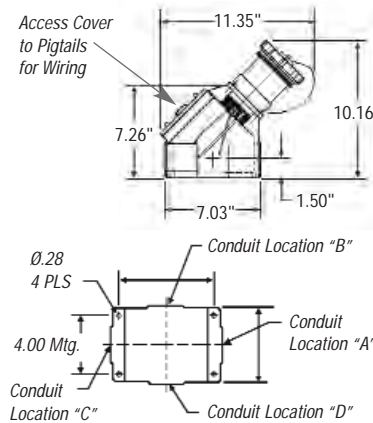
MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 30 Amp

Male Plug††

Fused†† Disconnect Interlocked Receptacle NEMA 12/3R



Explosion-Proof Non-Interlocked Receptacle



Application:

Dulles International Airport
"People Mover."

"People Movers" are used at Dulles for shuttling passengers from check-in to mid-field terminals to board their flight. These vehicles require air conditioning and heater unit power when docked at either location for maintenance and overhaul.

Installation:

Vehicle-mounted 30 amp male inlet with mating connector and two control contacts.

MaxGard® receptacles, plugs and connectors were specified for their safety, construction durability needed to withstand frequent reconnections. The single-rated factory polarization also ensured built-in protection against unsafe hookups. The control contacts offer monitoring capabilities for the vehicle while being overhauled. Deep insulating chambers confine and snuff out arcing when removing devices under load. Maintenance costs are minimal due to self-cleaning pin and sleeve contact design, rear-loaded interior wiring access and quick pressure-screw type wiring terminals.

Heavy Industrial/Marine — MaxGard®

| CAT. NO. | CAT. NO. |
|-----------|------------|
| DFRF31040 | DSE3104FR0 |
| DFRF31070 | DSE3107FR0 |
| DFRF32040 | DSE3204FR0 |
| DFRF32070 | DSE3207FR0 |
| DFRF32140 | DSE3214FR0 |
| DFRF32160 | DSE3216FR0 |
| DFRF33040 | DSE3304FR0 |
| DFRF33070 | DSE3307FR0 |
| DFRF33160 | DSE3316FR0 |
| DFRF34040 | DSE3404FR0 |
| DFRF34070 | DSE3407FR0 |
| DFRF34140 | DSE3414FR0 |
| DFRF34160 | DSE3416FR0 |
| DFRF34210 | DSE3421FR0 |
| DFRF35040 | DSE3504FR0 |
| DFRF35140 | DSE3514FR0 |
| DFRF35160 | DSE3516FR0 |
| DFRF35210 | DSE3521FR0 |

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 30 Amp

Heavy Industrial/Marine — MaxGard®

30 AMP REVERSE SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS3CC.

Maximum lug wire 4 AWG 7-strand or flexible, cable entrance .187" diameter.

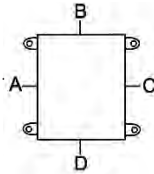
Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment.

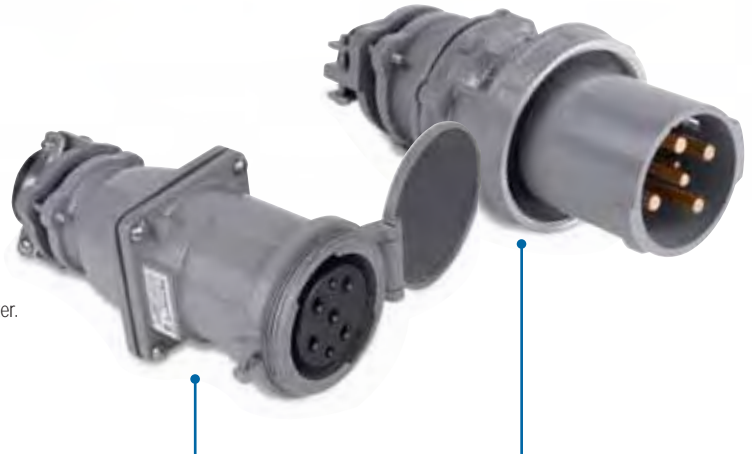
For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 1" NPT.

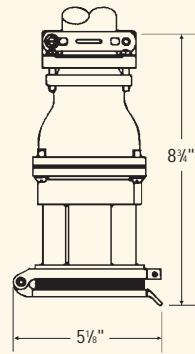


▼ **Control contacts for plug/receptacles: Use "K" where noted.**
Ex: DS3104MR00K

For Adapters, Junction Boxes and Accessories, see pages 44–47.

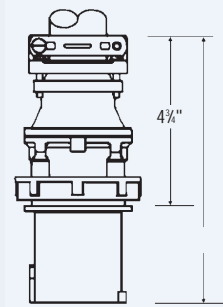


Female Connector



Standard Bushing I.D.†

Male Plug††



Standard Bushing I.D.†

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

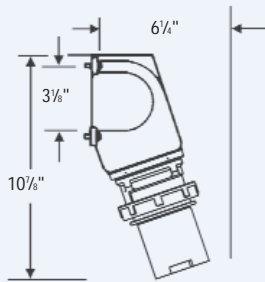
(For full polarization, see **page 50**)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
|------|------|---------------------|--------------|--------------------|--------|--------------------|--------|
| 2 | 3 | | 277 | DF3104FP000 | 7/8" | DS3104MP000 | 7/8" |
| 2 | 3 | | 125 | DF3107FP000 | | DS3107MP000 | |
| 2 | 3 | | 480 | DF3204FP000 | 7/8" | DS3204MP000 | 7/8" |
| 2 | 3 | | 250 | DF3207FP000 | | DS3207MP000 | |
| 2 | 3 | | 600 | DF3214FP000 | | DS3214MP000 | |
| 2 | 3 | | 208 | DF3216FP000 | | DS3216MP000 | |
| 3 | 4 | | 277/480 | DF3304FP000 | 1" | DS3304MP000 | 1" |
| 3 | 4 | | 125/250 | DF3307FP000 | | DS3307MP000 | |
| 3 | 4 | | 120/208 | DF3316FP000 | | DS3316MP000 | |
| 3 | 4 | | 3Ø 480 | DF3404FP000 | 1" | DS3404MP000 | 1" |
| 3 | 4 | | 3Ø 250 | DF3407FP000 | | DS3407MP000 | |
| 3 | 4 | | 3Ø 600 | DF3414FP000 | | DS3414MP000 | |
| 3 | 4 | | 3Ø 208 | DF3416FP000 | | DS3416MP000 | |
| 3 | 4 | | 3Ø 440 | DF3421FP000 | | DS3421MP000 | |
| 3 | 4 | | | | | | |
| 4 | 5 | | 3ØY 277/480 | DF3504FP000 | 1 3/8" | DS3504MP000 | 1 3/8" |
| 4 | 5 | | 3ØY 347/600 | DF3514FP000 | | DS3514MP000 | |
| 4 | 5 | | 3ØY 120/208 | DF3516FP000 | | DS3516MP000 | |
| 4 | 5 | | 3ØY 250/440 | DF3521FP000 | | DS3521MP000 | |
| 4 | 5 | | | | | | |

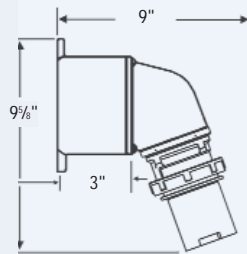
MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 30 Amp



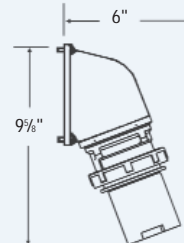
Male Inlet with Angle Enclosure



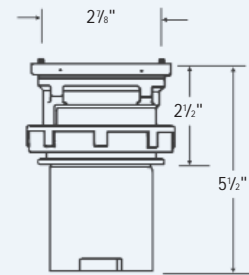
Male Inlet with Angle Adapter and DJB3 Junction Box**



Male Inlet with Angle Adapter**



Male Inlet**



CAT. NO.

DS3104MR0E0
DS3107MR0E0

CAT. NO.

DS3104MRAB0
DS3107MRAB0

CAT. NO.

DS3104MRA00
DS3107MRA00

CAT. NO.

DS3104MR000
DS3107MR000

DS3204MR0E0
DS3207MR0E0
DS3214MR0E0
DS3216MR0E0

DS3204MRAB0
DS3207MRAB0
DS3214MRAB0
DS3216MRAB0

DS3204MRA00
DS3207MRA00
DS3214MRA00
DS3216MRA00

DS3204MR000
DS3207MR000
DS3214MR000
DS3216MR000

DS3304MR0E0
DS3307MR0E0
DS3316MR0E0

DS3304MRAB0
DS3307MRAB0
DS3316MRAB0

DS3304MRA00
DS3307MRA00
DS3316MRA00

DS3304MR000
DS3307MR000
DS3316MR000

DS3404MR0E0
DS3407MR0E0
DS3414MR0E0
DS3416MR0E0
DS3421MR0E0

DS3404MRAB0
DS3407MRAB0
DS3414MRAB0
DS3416MRAB0
DS3421MRAB0

DS3404MRA00
DS3407MRA00
DS3414MRA00
DS3416MRA00
DS3421MRA00

DS3404MR000
DS3407MR000
DS3414MR000
DS3416MR000
DS3421MR000

DS3504MR0E0
DS3514MR0E0
DS3516MR0E0
DS3521MR0E0

DS3504MRAB0
DS3514MRAB0
DS3516MRAB0
DS3521MRAB0

DS3504MRA00
DS3514MRA00
DS3516MRA00
DS3521MRA00

DS3504MR000
DS3514MR000
DS3516MR000
DS3521MR000

Heavy Industrial/Marine — MaxGard®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 60 Amp

Heavy Industrial/Marine — MaxGard®

60 AMP STANDARD SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS6CC.

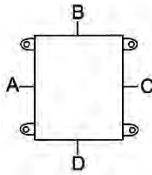
Maximum lug wire 4 AWG 7-strand or flexible, cable entrance .302" diameter.

Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment. For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 1½" NPT.



▼ **Control contacts for plug/receptacles:**
Use "K" where noted. Ex: DS6104MP00K

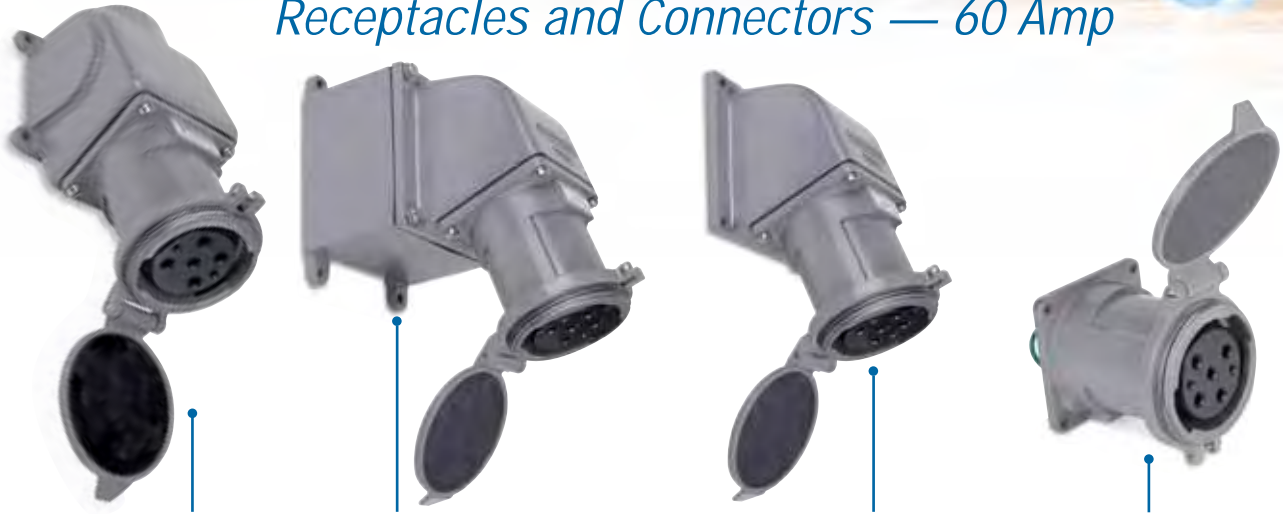
For Adapters, Junction Boxes and Accessories, see pages 44–47.



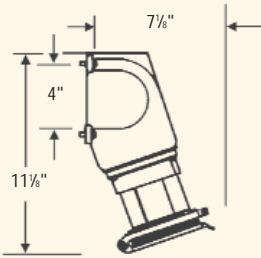
| Device Ratings and Polarizations | | | | Male Plug†† | | Female Connector | | |
|--|------|---------------------|--------------|------------------------|--------|------------------------|--------|-------------|
| Maximum 600VAC or 250VDC (For full polarization, see page 50) | | | | Standard Bushing I.D.† | | Standard Bushing I.D.† | | |
| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | | |
| 2 | 3 | | 277 | DS6104MP000 | 1 3/8" | DF6104FP000 | 1 3/8" | |
| | | | | DS6107MP000 | | | | DF6107FP000 |
| 2 | 3 | | 480 | DS6204MP000 | 1 3/8" | DF6204FP000 | 1 3/8" | |
| | | | | DS6207MP000 | | | | DF6207FP000 |
| | | | | DS6214MP000 | | | | DF6214FP000 |
| | | | | DS6216MP000 | | | | DF6216FP000 |
| 3 | 4 | | 277/480 | DS6304MP000 | 1 5/8" | DF6304FP000 | 1 5/8" | |
| | | | | DS6307MP000 | | | | DF6307FP000 |
| | | | | DS6316MP000 | | | | DF6316FP000 |
| 3 | 4 | | 3Ø 480 | DS6404MP000 | 1 5/8" | DF6404FP000 | 1 5/8" | |
| | | | | DS6407MP000 | | | | DF6407FP000 |
| | | | | DS6414MP000 | | | | DF6414FP000 |
| | | | | DS6416MP000 | | | | DF6416FP000 |
| | | | | DS6421MP000 | | | | DF6421FP000 |
| | | | | DS6421MP000 | | | | DF6421FP000 |
| 4 | 5 | | 3ØY 277/480 | DS6504MP000 | 1 1/2" | DF6504FP000 | 1 1/2" | |
| | | | | DS6514MP000 | | | | DF6514FP000 |
| | | | | DS6516MP000 | | | | DF6516FP000 |
| | | | | DS6521MP000 | | | | DF6521FP000 |

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 60 Amp

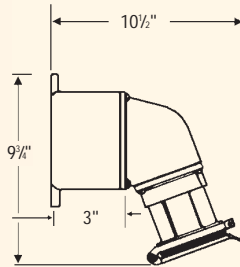
Heavy Industrial/Marine — MaxGard®



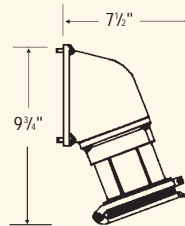
Female Receptacle with Angle Enclosure



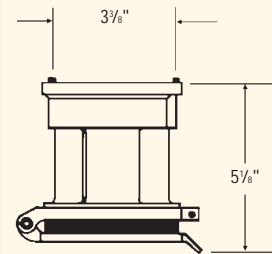
Female Receptacle with Angle Adapter and DJB3 Junction Box**



Female Receptacle with Angle Adapter**



Female Receptacle



CAT. NO.

DF6104FR0E0
DF6107FR0E0

CAT. NO.

DF6104FRAB0
DF6107FRAB0

CAT. NO.

DF6104FRA00
DF6107FRA00

CAT. NO.

DF6104FR000
DF6107FR000

DF6204FR0E0
DF6207FR0E0
DF6214FR0E0
DF6216FR0E0

DF6204FRAB0
DF6207FRAB0
DF6214FRAB0
DF6216FRAB0

DF6204FRA00
DF6207FRA00
DF6214FRA00
DF6216FRA00

DF6204FR000
DF6207FR000
DF6214FR000
DF6216FR000

DF6304FR0E0
DF6307FR0E0
DF6316FR0E0

DF6304FRAB0
DF6307FRAB0
DF6316FRAB0

DF6304FRA00
DF6307FRA00
DF6316FRA00

DF6304FR000
DF6307FR000
DF6316FR000

DF6404FR0E0
DF6407FR0E0
DF6414FR0E0
DF6416FR0E0
DF6421FR0E0

DF6404FRAB0
DF6407FRAB0
DF6414FRAB0
DF6416FRAB0
DF6412FRAB0

DF6404FRA00
DF6407FRA00
DF6414FRA00
DF6416FRA00
DF6421FRA00

DF6404FR000
DF6407FR000
DF6414FR000
DF6416FR000
DF6421FR000

DF6504FR0E0
DF6514FR0E0
DF6516FR0E0
DF6521FR0E0

DF6504FRAB0
DF6514FRAB0
DF6516FRAB0
DF6521FRAB0

DF6504FRA00
DF6514FRA00
DF6516FRA00
DF6521FRA00

DF6504FR000
DF6514FR000
DF6516FR000
DF6521FR000

Russellstoll®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 60 Amp

Heavy Industrial/Marine — MaxGard®

60 AMP

* Notes to Catalog Numbers

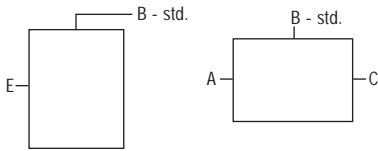
Control Contacts (position 12)
use "K" example: DBRF6104030K0

Shunt Trip Breaker (position 13)
add "Z" to above: DBRF6104030KZ

Breaker Trip Ratings (positions 9, 10, 11)
30 amp use 030 60 amp use 060
50 amp use 050

Non-Auto Sw. NAO (repl. "DBRF" with "DSRF")

- Conduit Hubs: NEMA 4X** **Conduit Hubs: XP**
- Std. 2" NPT-thread outlet at B (or E)
 - 60 amp — Max. 2 1/2" / 64mm
 - Std. 1 1/2" -thread outlets provided at A, B or C
 - 60 amp — 1.50" / 38mm



†† Non-fused version available. Replace DFRF with DNRF.

Boldface figures are for voltage assignment.
For different ratings, see page 50.

▼ Control contacts "K" designation.

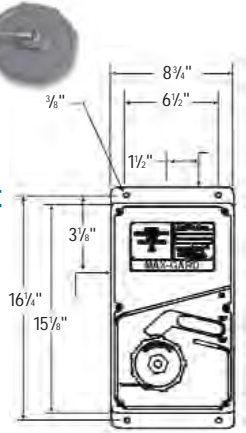
Device Ratings and Polarizations

Maximum 600VAC or 250VDC
(For full polarization, see page 50)

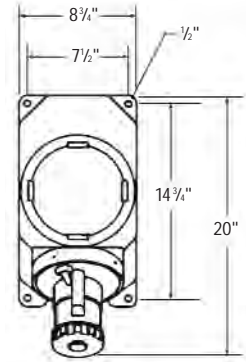
| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | CAT. NO. |
|------|------|---------------------|--------------|---------------|---------------|
| | | | | * | * |
| 2 | 3 | | 277 | DBRF610403000 | DBRE610403000 |
| 2 | 3 | | 125 | DBRF610703000 | DBRE610703000 |
| 2 | 3 | | 480 | DBRF620403000 | DBRE620403000 |
| 2 | 3 | | 250 | DBRF620703000 | DBRE620703000 |
| 2 | 3 | | 600 | DBRF621403000 | DBRE621403000 |
| 2 | 3 | | 208 | DBRF621603000 | DBRE621603000 |
| 3 | 4 | | 277/480 | DBRF630403000 | DBRE630403000 |
| 3 | 4 | | 125/250 | DBRF630703000 | DBRE630703000 |
| 3 | 4 | | 120/208 | DBRF631603000 | DBRE631603000 |
| 3 | 4 | | 3Ø 480 | DBRF640403000 | DBRE640403000 |
| 3 | 4 | | 3Ø 250 | DBRF640703000 | DBRE640703000 |
| 3 | 4 | | 3Ø 600 | DBRF641403000 | DBRE641403000 |
| 3 | 4 | | 3Ø 208 | DBRF641603000 | DBRE641603000 |
| 3 | 4 | | 3Ø 440 | DBRF642103000 | DBRE642103000 |
| 4 | 5 | | 3ØY 277/480 | DBRF650403000 | DBRE650403000 |
| 4 | 5 | | 3ØY 347/600 | DBRF651403000 | DBRE651403000 |
| 4 | 5 | | 3ØY 120/208 | DBRF651603000 | DBRE651603000 |
| 4 | 5 | | 3ØY 250/440 | DBRF652103000 | DBRE652103000 |



Interlocked Receptacle with Circuit Breaker NEMA 4X



Explosion-Proof Interlocked Receptacle Class I, Class II

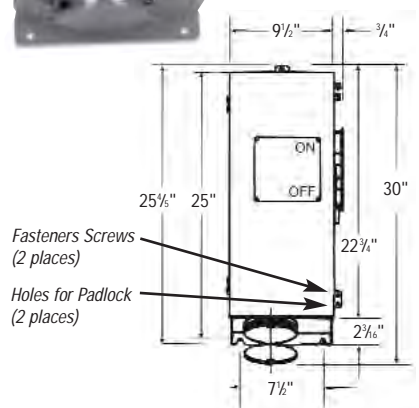


Russellstoll®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 60 Amp



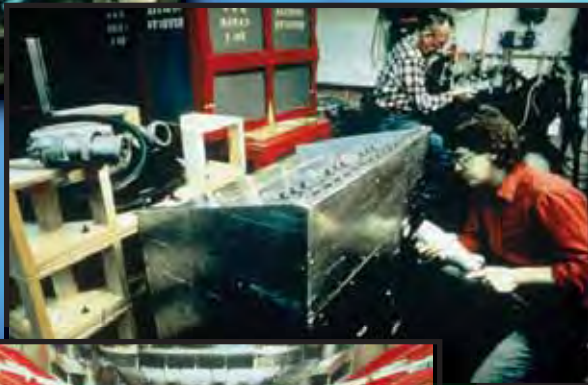
Fused††
Disconnect
Interlocked
Receptacle
NEMA 12/3R



Convention Centers and Arenas

Power for Tradeshow Exhibits
and Concerts

solution
60 AMP



Heavy Industrial/Marine — MaxGard®

CAT. NO.

DFRF61040
DFRF61070

DFRF62040
DFRF62070
DFRF62140
DFRF62160

DFRF63040
DFRF63070
DFRF63160

DFRF64040
DFRF64070
DFRF64140
DFRF64160
DFRF64210

DFRF65040
DFRF65140
DFRF65160
DFRF65210

United States
Tel: 901.252.8000
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Thomas & Betts

www.tnb.com

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 60 Amp

Heavy Industrial/Marine — MaxGard®

60 AMP REVERSE SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS6CC.

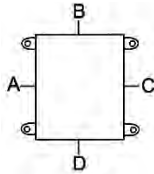
Maximum lug wire 4 AWG 7-strand or flexible, cable entrance .302" diameter.

Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

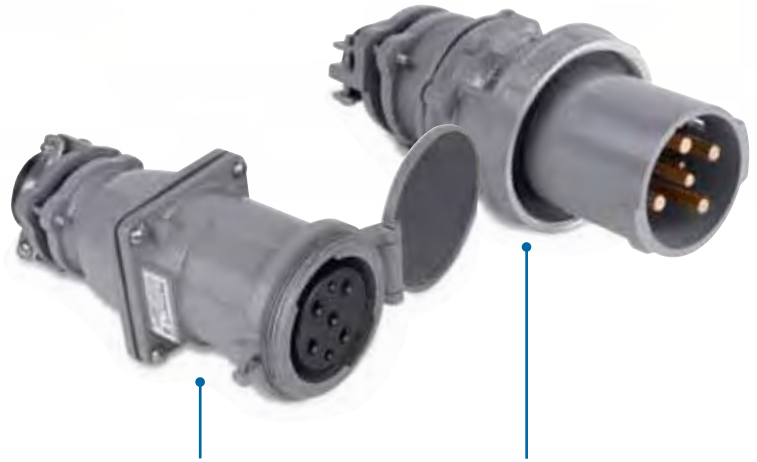
Boldface figures are for voltage assignment. For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 1½" NPT.

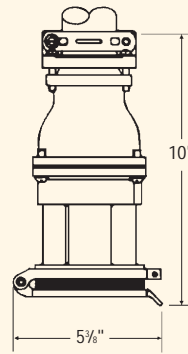


▼ Control contacts for plug/receptacles: Use "K" where noted. Ex: DS3104MR00K

For Adapters, Junction Boxes and Accessories, see pages 44–47.

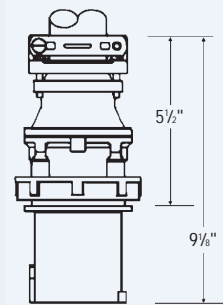


Female Connector



Standard Bushing I.D.†

Male Plug††



Standard Bushing I.D.†

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

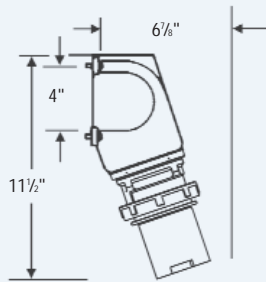
(For full polarization, see **page 50**)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
|------|------|---------------------|--------------|--------------------|--------------------|--------------------|---------|
| 2 | 3 | | 277 | DF6104FP000 | 1 3/16" | DS6104MP000 | 1 3/16" |
| 2 | 3 | | 125 | DF6107FP000 | | DS6107MP000 | |
| 2 | 3 | | 480 | DF6204FP000 | 1 3/16" | DS6204MP000 | 1 3/16" |
| 2 | 3 | | 250 | DF6207FP000 | | DS6207MP000 | |
| 2 | 3 | | 600 | DF6214FP000 | | DS6214MP000 | |
| 2 | 3 | | 208 | DF6216FP000 | | DS6216MP000 | |
| 3 | 4 | | 277/480 | DF6304FP000 | 1 5/16" | DS6304MP000 | 1 5/16" |
| 3 | 4 | | 125/250 | DF6307FP000 | | DS6307MP000 | |
| 3 | 4 | | 120/208 | DF6316FP000 | | DS6316MP000 | |
| 3 | 4 | | 3Ø 480 | DF6404FP000 | 1 5/16" | DS6404MP000 | 1 5/16" |
| 3 | 4 | | 3Ø 250 | DF6407FP000 | | DS6407MP000 | |
| 3 | 4 | | 3Ø 600 | DF6414FP000 | | DS6414MP000 | |
| 3 | 4 | | 3Ø 208 | DF6416FP000 | | DS6416MP000 | |
| 3 | 4 | | 3Ø 440 | DF6421FP000 | | DS6421MP000 | |
| 4 | 5 | | 3ØY 277/480 | DF6504FP000 | | 1 1/2" | |
| 4 | 5 | | 3ØY 347/600 | DF6514FP000 | DS6514MP000 | | |
| 4 | 5 | | 3ØY 120/208 | DF6516FP000 | DS6516MP000 | | |
| 4 | 5 | | 3ØY 250/440 | DF6521FP000 | DS6521MP000 | | |
| 4 | 5 | | | | | | |

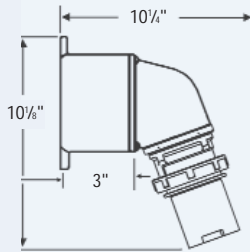
MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 60 Amp



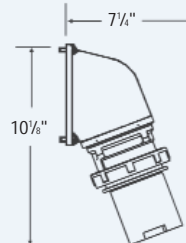
Male Inlet with Angle Enclosure



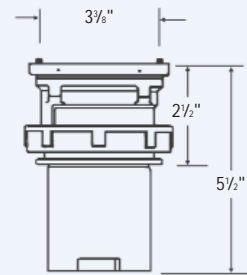
Male Inlet with Angle Adapter and DJB3 Junction Box**



Male Inlet with Angle Adapter**



Male Inlet††



CAT. NO.

DS6104MR0E0
DS6107MR0E0

CAT. NO.

DS6104MRAB0
DS6107MRAB0

CAT. NO.

DS6104MRA00
DS6107MRA00

CAT. NO.

DS6104MR000
DS6107MR000

DS6204MR0E0
DS6207MR0E0
DS6214MR0E0
DS6216MR0E0

DS6204MRAB0
DS6207MRAB0
DS6214MRAB0
DS6216MRAB0

DS6204MRA00
DS6207MRA00
DS6214MRA00
DS6216MRA00

DS6204MR000
DS6207MR000
DS6214MR000
DS6216MR000

DS6304MR0E0
DS6307MR0E0
DS6316MR0E0

DS6304MRAB0
DS6307MRAB0
DS6316MRAB0

DS6304MRA00
DS6307MRA00
DS6316MRA00

DS6304MR000
DS6307MR000
DS6316MR000

DS6404MR0E0
DS6407MR0E0
DS6414MR0E0
DS6416MR0E0
DS6421MR0E0

DS6404MRAB0
DS6407MRAB0
DS6414MRAB0
DS6416MRAB0
DS6421MRAB0

DS6404MRA00
DS6407MRA00
DS6414MRA00
DS6416MRA00
DS6421MRA00

DS6404MR000
DS6407MR000
DS6414MR000
DS6416MR000
DS6421MR000

DS6504MR0E0
DS6514MR0E0
DS6516MR0E0
DS6521MR0E0

DS6504MRAB0
DS6514MRAB0
DS6516MRAB0
DS6521MRAB0

DS6504MRA00
DS6514MRA00
DS6516MRA00
DS6521MRA00

DS6504MR000
DS6514MR000
DS6516MR000
DS6521MR000

Heavy Industrial/Marine — MaxGard®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 100 Amp

Heavy Industrial/Marine — MaxGard®

100 AMP STANDARD SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS1CC.

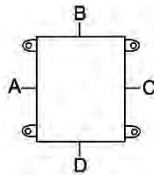
Maximum lug wire 0 AWG 19-strand or 1 AWG flexible, cable entrance .386" diameter.

Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment. For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 2" NPT.



▼ **Control contacts for plug/receptacles:**
Use "K" where noted. Ex: DS1104MP00K

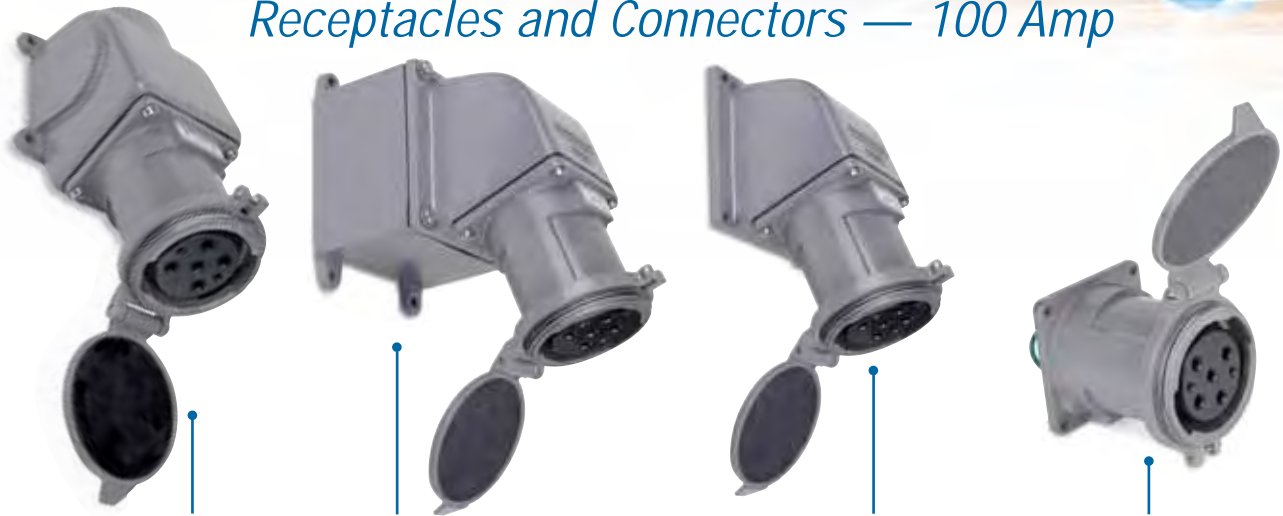
For Adapters, Junction Boxes and Accessories, see pages 44–47.



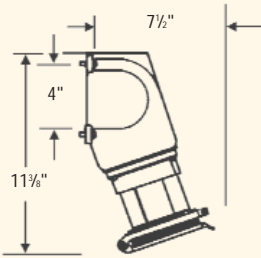
| Device Ratings and Polarizations | | | | Male Plug†† | | Female Connector | |
|--|------|---------------------|--------------|------------------------|----------|------------------------|----------|
| Maximum 600VAC or 250VDC (For full polarization, see page 50) | | | | Standard Bushing I.D.† | | Standard Bushing I.D.† | |
| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
| 2 | 3 | | 277 | DS1104MP000 | 1 11/16" | DF1104FP000 | 1 11/16" |
| 2 | 3 | | 125 | DS1107MP000 | | DF1107FP000 | |
| 2 | 3 | | 480 | DS1204MP000 | 1 11/16" | DF1204FP000 | 1 11/16" |
| 2 | 3 | | 250 | DS1207MP000 | | DF1207FP000 | |
| 2 | 3 | | 600 | DS1214MP000 | | DF1214FP000 | |
| 2 | 3 | | 208 | DS1216MP000 | | DF1216FP000 | |
| 3 | 4 | | 277/480 | DS1304MP000 | 1 13/16" | DF1304FP000 | 1 13/16" |
| 3 | 4 | | 125/250 | DS1307MP000 | | DF1307FP000 | |
| 3 | 4 | | 120/208 | DS1316MP000 | | DF1316FP000 | |
| 3 | 4 | | 3Ø 480 | DS1404MP000 | 1 13/16" | DF1404FP000 | 1 13/16" |
| 3 | 4 | | 3Ø 250 | DS1407MP000 | | DF1407FP000 | |
| 3 | 4 | | 3Ø 600 | DS1414MP000 | | DF1414FP000 | |
| 3 | 4 | | 3Ø 208 | DS1416MP000 | | DF1416FP000 | |
| 3 | 4 | | 3Ø 440 | DS1421MP000 | | DF1421FP000 | |
| 4 | 5 | | 3ØY 277/480 | DS1504MP000 | 2" | DF1504FP000 | 2" |
| 4 | 5 | | 3ØY 347/600 | DS1514MP000 | | DF1514FP000 | |
| 4 | 5 | | 3ØY 118/208 | DS1516MP000 | | DF1516FP000 | |
| 4 | 5 | | 3ØY 250/440 | DS1521MP000 | | DF1521FP000 | |

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 100 Amp

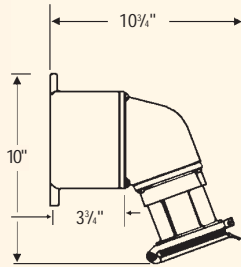
Heavy Industrial/Marine — MaxGard®



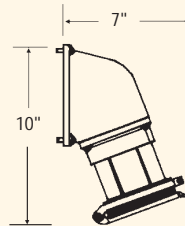
Female Receptacle with Angle Enclosure



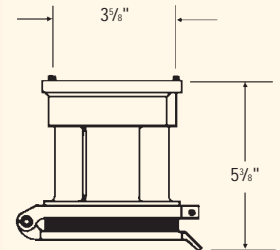
Female Receptacle with Angle Adapter and DJB3 Junction Box**



Female Receptacle with Angle Adapter**



Female Receptacle



CAT. NO.

DF1104FR0E0
DF1107FR0E0

CAT. NO.

DF1104FRAB0
DF1107FRAB0

CAT. NO.

DF1104FRA00
DF1107FRA00

CAT. NO.

DF1104FR000
DF1107FR000

DF1204FR0E0
DF1207FR0E0
DF1214FR0E0
DF1216FR0E0

DF1204FRAB0
DF1207FRAB0
DF1214FRAB0
DF1216FRAB0

DF1204FRA00
DF1207FRA00
DF1214FRA00
DF1216FRA00

DF1204FR000
DF1207FR000
DF1214FR000
DF1216FR000

DF1304FR0E0
DF1307FR0E0
DF1316FR0E0

DF1304FRAB0
DF1307FRAB0
DF1316FRAB0

DF1304FRA00
DF1307FRA00
DF1316FRA00

DF1304FR000
DF1307FR000
DF1316FR000

DF1404FR0E0
DF1407FR0E0
DF1414FR0E0
DF1416FR0E0
DF1421FR0E0

DF1404FRAB0
DF1407FRAB0
DF1414FRAB0
DF1416FRAB0
DF1412FRAB0

DF1404FRA00
DF1407FRA00
DF1414FRA00
DF1416FRA00
DF1421FRA00

DF1404FR000
DF1407FR000
DF1414FR000
DF1416FR000
DF1421FR000

DF1504FR0E0
DF1514FR0E0
DF1516FR0E0
DF1521FR0E0

DF1504FRAB0
DF1514FRAB0
DF1516FRAB0
DF1521FRAB0

DF1504FRA00
DF1514FRA00
DF1516FRA00
DF1521FRA00

DF1504FR000
DF1514FR000
DF1516FR000
DF1521FR000

Russellstoll®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 100 Amp

Heavy Industrial/Marine — MaxGard®

100 AMP

*** Notes to Catalog Numbers**

Control Contacts (position 12)
use "K" example: DBRF1104030K0

Shunt Trip Breaker (position 13)
add "Z" to above: DBRF1104030KZ

Breaker Trip Ratings (positions 9, 10, 11)
70 amp use 070 100 amp use 100
90 amp use 090

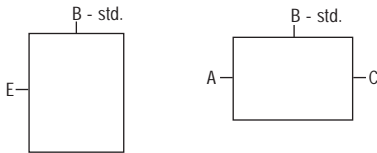
Non-Auto Sw. NAO (repl. "DBRF" with "DSRF")

Conduit Hubs: NEMA 4X

- Std. 2" NPT-thread outlet at B (or E)
- 100 amp — Max. 2½"/64mm

Conduit Hubs: XP

- Std. 1½" -thread outlets provided at A, B or C
- 100 amp — 2.00"/51mm



†† Non-fused version available. Replace DFRF with DNRF.

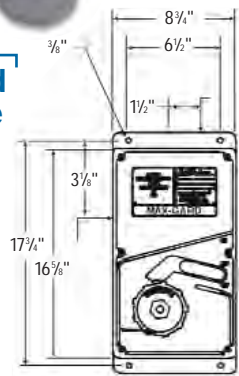
Boldface figures are for voltage assignment. For different ratings, see **page 50**.

Device Ratings and Polarizations
Maximum 600VAC or 250VDC
(For full polarization, see **page 50**)

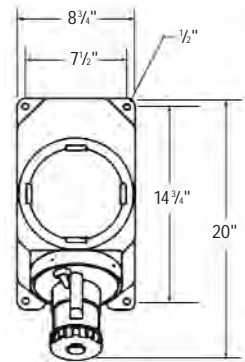
| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | CAT. NO. |
|------|------|---------------------|--------------|---------------|---------------|
| 2 | 3 | | 277 | DBRF110403000 | DBRE110403000 |
| 2 | 3 | | 125 | DBRF110703000 | DBRE110703000 |
| 2 | 3 | | 480 | DBRF120403000 | DBRE120403000 |
| 2 | 3 | | 250 | DBRF120703000 | DBRE120703000 |
| 2 | 3 | | 600 | DBRF121403000 | DBRE121403000 |
| 2 | 3 | | 208 | DBRF121603000 | DBRE121603000 |
| 3 | 4 | | 277/480 | DBRF130403000 | DBRE130403000 |
| 3 | 4 | | 125/250 | DBRF130703000 | DBRE130703000 |
| 3 | 4 | | 120/208 | DBRF131603000 | DBRE131603000 |
| 3 | 4 | | 3Ø 480 | DBRF140403000 | DBRE140403000 |
| 3 | 4 | | 3Ø 250 | DBRF140703000 | DBRE140703000 |
| 3 | 4 | | 3Ø 600 | DBRF141403000 | DBRE141403000 |
| 3 | 4 | | 3Ø 208 | DBRF141603000 | DBRE141603000 |
| 3 | 4 | | 3Ø 440 | DBRF142103000 | DBRE141203000 |
| 4 | 5 | | 3ØY 277/480 | DBRF150403000 | DBRE150403000 |
| 4 | 5 | | 3ØY 347/600 | DBRF151403000 | DBRE151403000 |
| 4 | 5 | | 3ØY 120/208 | DBRF151603000 | DBRE151603000 |
| 4 | 5 | | 3ØY 250/440 | DBRF152103000 | DBRE152103000 |



Interlocked Receptacle with Circuit Breaker NEMA 4X



Explosion-Proof Interlocked Receptacle Class I, Class II

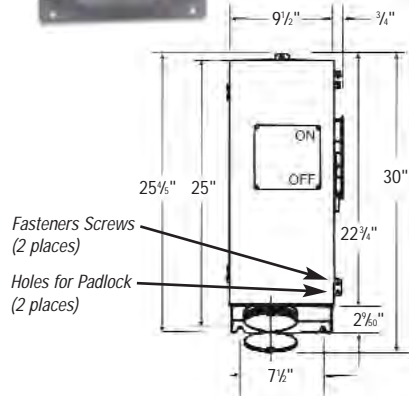


MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 100 Amp

Heavy Industrial/Marine — MaxGard®



Fused††
Disconnect
Interlocked
Receptacle
NEMA
12/3R



CAT. NO.

DFRF1104
DFRF1107

DFRF1204
DFRF1207
DFRF1214
DFRF1216

DFRF1304
DFRF1307
DFRF1316

DFRF1404
DFRF1407
DFRF1414
DFRF1416
DFRF1421

DFRF1504
DFRF1514
DFRF1516
DFRF1521

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 100 Amp

Heavy Industrial/Marine — MaxGard®

100 AMP REVERSE SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS1CC.

Maximum lug wire 0 AWG 19-strand or 1 AWG flexible, cable entrance .386" diameter.

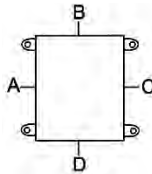
Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment.

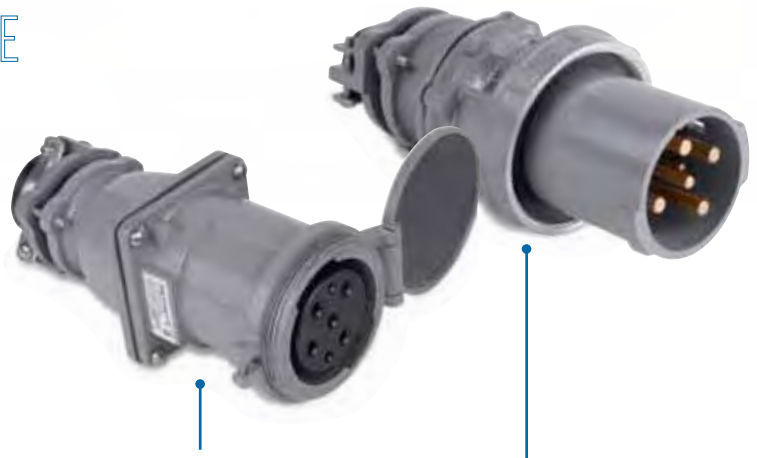
For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 2" NPT.

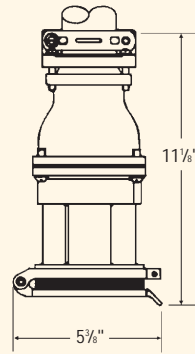


▼ **Control contacts for plug/receptacles:**
Use "K" where noted. Ex: DS1104MR00K

For Adapters, Junction Boxes and Accessories, see pages 44–47.

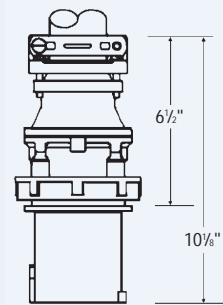


Female Connector



Standard Bushing I.D.†

Male Plug††



Standard Bushing I.D.†

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

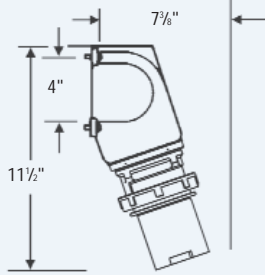
(For full polarization, see **page 50**)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
|------|------|---------------------|--------------|--------------------|----------|--------------------|----------|
| 2 | 3 | | 277 | DF1104FP000 | 1 11/16" | DS1104MP000 | 1 11/16" |
| 2 | 3 | | 125 | DF1107FP000 | | DS1107MP000 | |
| 2 | 3 | | 480 | DF1204FP000 | 1 11/16" | DS1204MP000 | 1 11/16" |
| 2 | 3 | | 250 | DF1207FP000 | | DS1207MP000 | |
| 2 | 3 | | 600 | DF1214FP000 | | DS1214MP000 | |
| 2 | 3 | | 208 | DF1216FP000 | | DS1216MP000 | |
| 3 | 4 | | 277/480 | DF1304FP000 | 1 13/16" | DS1304MP000 | 1 13/16" |
| 3 | 4 | | 125/250 | DF1307FP000 | | DS1307MP000 | |
| 3 | 4 | | 120/208 | DF1316FP000 | | DS1316MP000 | |
| 3 | 4 | | 3Ø 480 | DF1404FP000 | 1 13/16" | DS1404MP000 | 1 13/16" |
| 3 | 4 | | 3Ø 250 | DF1407FP000 | | DS1407MP000 | |
| 3 | 4 | | 3Ø 600 | DF1414FP000 | | DS1414MP000 | |
| 3 | 4 | | 3Ø 208 | DF1416FP000 | | DS1416MP000 | |
| 3 | 4 | | 3Ø 440 | DF1421FP000 | | DS1421MP000 | |
| 3 | 4 | | | | | | |
| 4 | 5 | | 3ØY 277/480 | DF1504FP000 | 2" | DS1504MP000 | 2" |
| 4 | 5 | | 3ØY 347/600 | DF1514FP000 | | DS1514MP000 | |
| 4 | 5 | | 3ØY 120/208 | DF1516FP000 | | DS1516MP000 | |
| 4 | 5 | | 3ØY 250/440 | DF1521FP000 | | DS1521MP000 | |
| 4 | 5 | | | | | | |

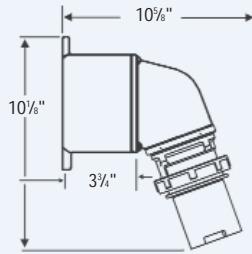
MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 100 Amp



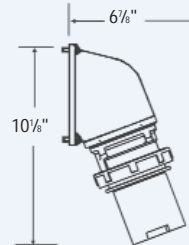
Male Inlet with Angle Enclosure



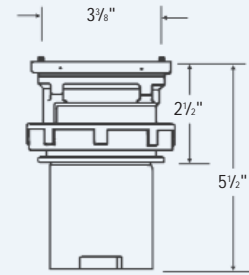
Male Inlet with Angle Adapter and DJB3 Junction Box**



Male Inlet with Angle Adapter**



Male Inlet††



Heavy Industrial/Marine — MaxGard®

| | CAT. NO. | CAT. NO. | CAT. NO. | CAT. NO. |
|--|---|---|---|---|
| | DS1104MR0E0 DS1107MR0E0 | DS1104MRAB0 DS1107MRAB0 | DS1104MRA00 DS1107MRA00 | DS1104MR000 DS1107MR000 |
| | DS1204MR0E0 DS1207MR0E0 DS1214MR0E0 DS1216MR0E0 | DS1204MRAB0 DS1207MRAB0 DS1214MRAB0 DS1216MRAB0 | DS1204MRA00 DS1207MRA00 DS1214MRA00 DS1216MRA00 | DS1204MR000 DS1207MR000 DS1214MR000 DS1216MR000 |
| | DS1304MR0E0 DS1307MR0E0 DS1316MR0E0 | DS1304MRAB0 DS1307MRAB0 DS1316MRAB0 | DS1304MRA00 DS1307MRA00 DS1316MRA00 | DS1304MR000 DS1307MR000 DS1316MR000 |
| | DS1404MR0E0 DS1407MR0E0 DS1414MR0E0 DS1416MR0E0 DS1421MR0E0 | DS1404MRAB0 DS1407MRAB0 DS1414MRAB0 DS1416MRAB0 DS1421MRAB0 | DS1404MRA00 DS1407MRA00 DS1414MRA00 DS1416MRA00 DS1421MRA00 | DS1404MR000 DS1407MR000 DS1414MR000 DS1416MR000 DS1421MR000 |
| | DS1504MR0E0 DS1514MR0E0 DS1516MR0E0 DS1521MR0E0 | DS1504MRAB0 DS1514MRAB0 DS1516MRAB0 DS1521MRAB0 | DS1504MRA00 DS1514MRA00 DS1516MRA00 DS1521MRA00 | DS1504MR000 DS1514MR000 DS1516MR000 DS1521MR000 |

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 200 Amp

Heavy Industrial/Marine — MaxGard®

200 AMP STANDARD SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS2CC.

Maximum lug wire 4/0 AWG 19-strand or flexible, cable entrance .625" diameter.

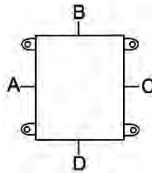
Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment.

For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 3" NPT.



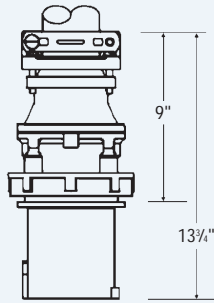
▼ **Control contacts for plug/receptacles:**

Use "K" where noted. Ex: DS2104MP00K

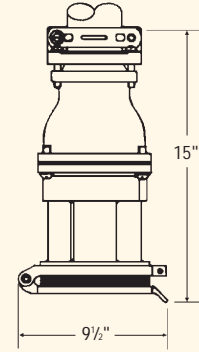
For Adapters, Junction Boxes and Accessories, see pages 44–47.



Male Plug††



Female Connector



Device Ratings and Polarizations

Maximum 600VAC or 250VDC

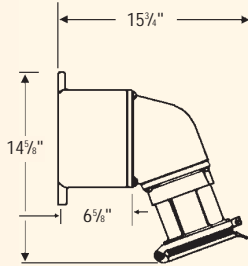
(For full polarization, see **page 50**)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | Standard Bushing I.D.† | CAT. NO. | Standard Bushing I.D.† |
|------|------|---------------------|--------------|--------------------|------------------------|--------------------|------------------------|
| 2 | 3 | | 277 | DS2104MP000 | 2 1/8" | DF2104FP000 | 2 1/8" |
| | | | 125 | DS2107MP000 | | DF2107FP000 | |
| 2 | 3 | | 480 | DS2204MP000 | 2 1/8" | DF2204FP000 | 2 1/8" |
| | | | 250 | DS2207MP000 | | DF2207FP000 | |
| | | | 600 | DS2214MP000 | | DF2214FP000 | |
| | | | 208 | DS2216MP000 | | DF2216FP000 | |
| 3 | 4 | | 277/480 | DS2304MP000 | 2 1/4" | DF2304FP000 | 2 1/4" |
| | | | 125/250 | DS2307MP000 | | DF2307FP000 | |
| | | | 120/208 | DS2316MP000 | | DF2316FP000 | |
| 3 | 4 | | 3Ø 480 | DS2404MP000 | 2 1/4" | DF2404FP000 | 2 1/4" |
| | | | 3Ø 250 | DS2407MP000 | | DF2407FP000 | |
| | | | 3Ø 600 | DS2414MP000 | | DF2414FP000 | |
| | | | 3Ø 208 | DS2416MP000 | | DF2416FP000 | |
| | | | 3Ø 440 | DS2421MP000 | | DF2421FP000 | |
| 4 | 5 | | 3ØY 277/480 | DS2504MP000 | 2 1/2" | DF2504FP000 | 2 1/2" |
| | | | 3ØY 347/600 | DS2514MP000 | | DF2514FP000 | |
| | | | 3ØY 118/208 | DS2516MP000 | | DF2516FP000 | |
| | | | 3ØY 250/440 | DS2521MP000 | | DF2521FP000 | |

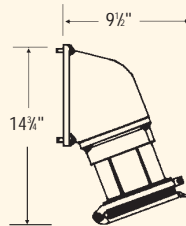
MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 200 Amp



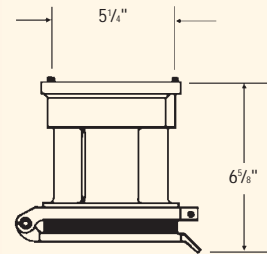
Female Receptacle with Angle Adapter and DJB3 Junction Box**



Female Receptacle with Angle Adapter**



Female Receptacle



Heavy Industrial/Marine — MaxGard®

| CAT. NO. | CAT. NO. | CAT. NO. |
|-------------|-------------|-------------|
| DF2104FRAB0 | DF2104FRA00 | DF2104FR000 |
| DF2107FRAB0 | DF2107FRA00 | DF2107FR000 |
| DF2204FRAB0 | DF2204FRA00 | DF2204FR000 |
| DF2207FRAB0 | DF2207FRA00 | DF2207FR000 |
| DF2214FRAB0 | DF2214FRA00 | DF2214FR000 |
| DF2216FRAB0 | DF2216FRA00 | DF2216FR000 |
| DF2304FRAB0 | DF2304FRA00 | DF2304FR000 |
| DF2307FRAB0 | DF2307FRA00 | DF2307FR000 |
| DF2316FRAB0 | DF2316FRA00 | DF2316FR000 |
| DF2404FRAB0 | DF2404FRA00 | DF2404FR000 |
| DF2407FRAB0 | DF2407FRA00 | DF2407FR000 |
| DF2414FRAB0 | DF2414FRA00 | DF2414FR000 |
| DF2416FRAB0 | DF2416FRA00 | DF2416FR000 |
| DF2412FRAB0 | DF2421FRA00 | DF2421FR000 |
| DF2504FRAB0 | DF2504FRA00 | DF2504FR000 |
| DF2514FRAB0 | DF2514FRA00 | DF2514FR000 |
| DF2516FRAB0 | DF2516FRA00 | DF2516FR000 |
| DF2521FRAB0 | DF2521FRA00 | DF2521FR000 |

Russellstoll®

MaxGuard® Load-Breaking Plugs, Receptacles and Connectors — 200 Amp

200 AMP

*** Notes to Catalog Numbers**

Control Contacts (position 12)
use "K" example: DBRF2104200K0

Shunt Trip Breaker (position 13)
add "Z" to above: DBRF2104200KZ

Breaker Trip Ratings (positions 9, 10, 11)

150 amp use 150

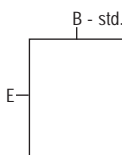
175 amp use 175

200 amp use 200

Non-Auto Sw. NAO (repl. "DBRF" with "DSRF")

Conduit Hubs: NEMA 4X

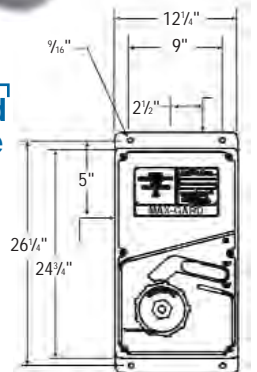
- Std. 2" NPT-thread outlet at B (or E)
- 200 amp — Max. 3 1/8 mm



Boldface figures are for voltage assignment.
For different ratings, see **page 50**.



Interlocked Receptacle with Circuit Breaker NEMA 4X



Device Ratings and Polarizations
Maximum 600VAC or 250VDC
(For full polarization see **page 50**)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. |
|------|------|---------------------|--------------|---------------|
| 2 | 3 | | 277 | DBRF210403000 |
| 2 | 3 | | 125 | DBRF210703000 |
| 2 | 3 | | 480 | DBRF220403000 |
| 2 | 3 | | 250 | DBRF220703000 |
| 2 | 3 | | 600 | DBRF221403000 |
| 2 | 3 | | 208 | DBRF221603000 |
| 3 | 4 | | 277/480 | DBRF230403000 |
| 3 | 4 | | 125/250 | DBRF230703000 |
| 3 | 4 | | 120/208 | DBRF231603000 |
| 3 | 4 | | 3Ø 480 | DBRF240403000 |
| 3 | 4 | | 3Ø 250 | DBRF240703000 |
| 3 | 4 | | 3Ø 600 | DBRF241403000 |
| 3 | 4 | | 3Ø 208 | DBRF241603000 |
| 3 | 4 | | 3Ø 440 | DBRF242103000 |
| 4 | 5 | | 3ØY 277/480 | DBRF250403000 |
| 4 | 5 | | 3ØY 347/600 | DBRF251403000 |
| 4 | 5 | | 3ØY 120/208 | DBRF251603000 |
| 4 | 5 | | 3ØY 250/440 | DBRF252103000 |

Russellstoll[®]

*MaxGard[®] Load-Breaking Plugs,
Receptacles and Connectors — 200 Amp*

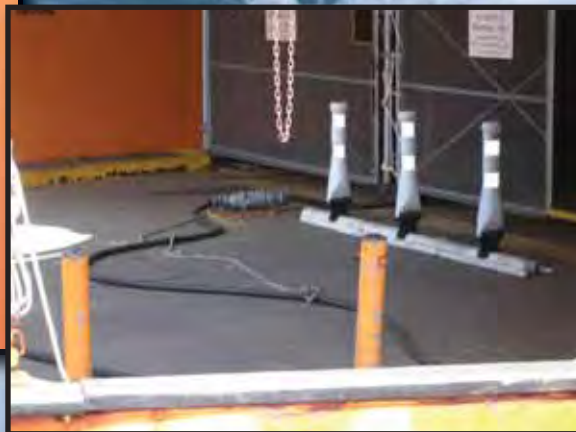


Staten Island Ferry

solution
200 AMP

Heavy Industrial/Marine — MaxGard[®]

200A MaxGard inlets with disconnects



200A MaxGard connected on ferry deck



30A and 200A
MaxGard Interlocks



200A MaxGard interlocks in parallel



200A MaxGard inlets with disconnects

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

Thomas & Betts

www.tnb.com

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 200 Amp

Heavy Industrial/Marine — MaxGard®

200 AMP REVERSE SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS2CC.

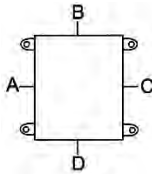
Maximum lug wire 4/0 AWG 19-strand or flexible, cable entrance .625" diameter.

Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment. For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 3" NPT.

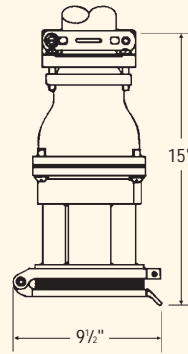


▼ **Control contacts for plug/receptacles:**
Use "K" where noted. Ex: DS2104MR00K

For Adapters, Junction Boxes and Accessories, see pages 44–47.

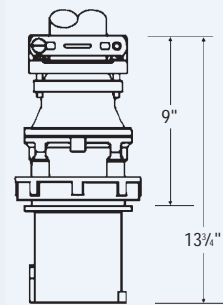


Female Connector



Standard Bushing I.D.†

Male Plug††



Standard Bushing I.D.†

Device Ratings and Polarizations

Maximum 600VAC or 250VDC
(For full polarization, see **page 50**)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
|------|------|---------------------|--------------|--------------------|--------------------|--------------------|--------|
| 2 | 3 | | 277 | DF2104FP000 | 2 1/8" | DS2104MP000 | 2 1/8" |
| 2 | 3 | | 125 | DF2107FP000 | | DS2107MP000 | |
| 2 | 3 | | 480 | DF2204FP000 | 2 1/8" | DS2204MP000 | 2 1/8" |
| 2 | 3 | | 250 | DF2207FP000 | | DS2207MP000 | |
| 2 | 3 | | 600 | DF2214FP000 | | DS2214MP000 | |
| 2 | 3 | | 208 | DF2216FP000 | | DS2216MP000 | |
| 3 | 4 | | 277/480 | DF2304FP000 | 2 1/4" | DS2304MP000 | 2 1/4" |
| 3 | 4 | | 125/250 | DF2307FP000 | | DS2307MP000 | |
| 3 | 4 | | 120/208 | DF2316FP000 | | DS2316MP000 | |
| 3 | 4 | | 3Ø 480 | DF2404FP000 | 2 1/4" | DS2404MP000 | 2 1/4" |
| 3 | 4 | | 3Ø 250 | DF2407FP000 | | DS2407MP000 | |
| 3 | 4 | | 3Ø 600 | DF2414FP000 | | DS2414MP000 | |
| 3 | 4 | | 3Ø 208 | DF2416FP000 | | DS2416MP000 | |
| 3 | 4 | | 3Ø 440 | DF2421FP000 | | DS2421MP000 | |
| 4 | 5 | | 3ØY 277/480 | DF2504FP000 | | 2 1/2" | |
| 4 | 5 | | 3ØY 347/600 | DF2514FP000 | DS2514MP000 | | |
| 4 | 5 | | 3ØY 120/208 | DF2516FP000 | DS2516MP000 | | |
| 4 | 5 | | 3ØY 250/440 | DF2521FP000 | DS2521MP000 | | |
| 4 | 5 | | | | | | |

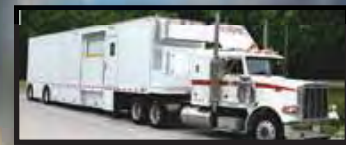
MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 200 Amp

Heavy Industrial/Marine — MaxGard®



| Male Inlet with Angle Adapter** and DJB3 Junction Box | Male Inlet with Angle Adapter** | Male Inlet** |
|---|---|---|
| | | |
| CAT. NO. | CAT. NO. | CAT. NO. |
| DS2104MRAB0 DS2107MRAB0 | DS2104MRA00 DS2107MRA00 | DS2104MR000 DS2107MR000 |
| DS2204MRAB0 DS2207MRAB0 DS2214MRAB0 DS2216MRAB0 | DS2204MRA00 DS2207MRA00 DS2214MRA00 DS2216MRA00 | DS2204MR000 DS2207MR000 DS2214MR000 DS2216MR000 |
| DS2304MRAB0 DS2307MRAB0 DS2316MRAB0 | DS2304MRA00 DS2307MRA00 DS2316MRA00 | DS2304MR000 DS2307MR000 DS2316MR000 |
| DS2404MRAB0 DS2407MRAB0 DS2414MRAB0 DS2416MRAB0 DS2412MRAB0 | DS2404MRA00 DS2407MRA00 DS2414MRA00 DS2416MRA00 DS2421MRA00 | DS2404MR000 DS2407MR000 DS2414MR000 DS2416MR000 DS2421MR000 |
| DS2504MRAB0 DS2514MRAB0 DS2516MRAB0 DS2521MRAB0 | DS2504MRA00 DS2514MRA00 DS2516MRA00 DS2521MRA00 | DS2504MR000 DS2514MR000 DS2516MR000 DS2521MR000 |

MMI Trailer



solution 200 AMP

Application:

Electrical hook-up of mobile medical imaging (MMI) trailers
Mobile medical units provide trailer-transportable blood banks, dental clinics, magnetic resonance imaging (MRI), X-ray and other diagnostic equipment to many hospitals and clinics throughout the country on a regular leased basis. Safe outdoor usage connections are required for up to 200 amp power supplies at each facility. Major specialized custom trailer manufacturers rely on the MaxGard® 200 amp interface.

Installation:

Site-mounted 200 amp receptacles with trailer-mounted plugs and connectors
When a mobile medical unit trailer is at the desired location, a heavy-duty MaxGard® 200 amp cable assembly connects the trailer with a corresponding receptacle or connector at each site, usually mounted on an outside wall. A primary safety feature is the receptacle's gated dead-front construction that ensures no exterior access to live receptacle contacts. With so many different hands involved on a daily basis, the MaxGard epoxy powder-coat finish and rugged waterproof construction provides hospital-safe long service life.

Russellstoll®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 400 Amp

400 AMP STANDARD SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS4CC.

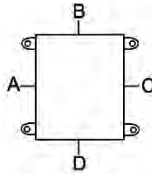
Maximum lug wire 500 kcmil 37-strand or flexible, cable entrance .937" diameter.

Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment. For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 4" NPT.



▼ **Control contacts for plug/receptacles:**
Use "K" where noted. Ex: DS4104MP00K

For Adapters, Junction Boxes and Accessories, see pages 44–47.



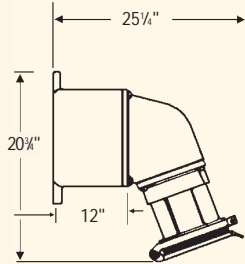
| Device Ratings and Polarizations | | | | Male Plug†† | | Female Connector | |
|---|------|---------------------|--------------|------------------------|-------------|------------------------|--------|
| Maximum 600VAC or 250VDC (For full polarization see page 50) | | | | Standard Bushing I.D.† | | Standard Bushing I.D.† | |
| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
| 2 | 3 | | 277 | DS4104MP000 | 2 3/4" | DF4104FP000 | 2 3/4" |
| 2 | 3 | | 125 | DS4107MP000 | | DF4107FP000 | |
| 2 | 3 | | 480 | DS4204MP000 | 2 3/4" | DF4204FP000 | 2 3/4" |
| 2 | 3 | | 250 | DS4207MP000 | | DF4207FP000 | |
| 2 | 3 | | 600 | DS4214MP000 | | DF4214FP000 | |
| 2 | 3 | | 208 | DS4216MP000 | | DF4216FP000 | |
| 3 | 4 | | 277/480 | DS4304MP000 | 3" | DF4304FP000 | 3" |
| 3 | 4 | | 125/250 | DS4307MP000 | | DF4307FP000 | |
| 3 | 4 | | 120/208 | DS4316MP000 | | DF4316FP000 | |
| 3 | 4 | | 3Ø 480 | DS4404MP000 | 3" | DF4404FP000 | 3" |
| 3 | 4 | | 3Ø 250 | DS4407MP000 | | DF4407FP000 | |
| 3 | 4 | | 3Ø 600 | DS4414MP000 | | DF4414FP000 | |
| 3 | 4 | | 3Ø 208 | DS4416MP000 | | DF4416FP000 | |
| 3 | 4 | | 3Ø 440 | DS4421MP000 | | DF4421FP000 | |
| 4 | 5 | | 3ØY 277/480 | DS4504MP000 | | 3 3/4" | |
| 4 | 5 | | 3ØY 347/600 | DS4514MP000 | DF4514FP000 | | |
| 4 | 5 | | 3ØY 118/208 | DS4516MP000 | DF4516FP000 | | |
| 4 | 5 | | 3ØY 250/440 | DS4521MP000 | DF4521FP000 | | |
| 4 | 5 | | | | | | |

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 400 Amp

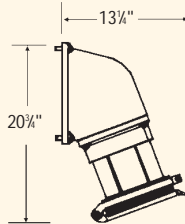
Heavy Industrial/ Marine — MaxGard®



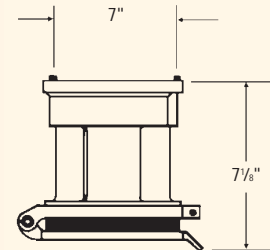
Female Receptacle with Angle Adapter and DJB3 Junction Box**



Female Receptacle with Angle Adapter**



Female Receptacle



| CAT. NO. | CAT. NO. | CAT. NO. |
|-------------|-------------|-------------|
| DF4104FRAB0 | DF4104FRA00 | DF4104FR000 |
| DF4107FRAB0 | DF4107FRA00 | DF4107FR000 |
| DF4204FRAB0 | DF4204FRA00 | DF4204FR000 |
| DF4207FRAB0 | DF4207FRA00 | DF4207FR000 |
| DF4214FRAB0 | DF4214FRA00 | DF4214FR000 |
| DF4216FRAB0 | DF4216FRA00 | DF4216FR000 |
| DF4304FRAB0 | DF4304FRA00 | DF4304FR000 |
| DF4307FRAB0 | DF4307FRA00 | DF4307FR000 |
| DF4316FRAB0 | DF4316FRA00 | DF4316FR000 |
| DF4404FRAB0 | DF4404FRA00 | DF4404FR000 |
| DF4407FRAB0 | DF4407FRA00 | DF4407FR000 |
| DF4414FRAB0 | DF4414FRA00 | DF4414FR000 |
| DF4416FRAB0 | DF4416FRA00 | DF4416FR000 |
| DF4412FRAB0 | DF4421FRA00 | DF4421FR000 |
| DF4504FRAB0 | DF4504FRA00 | DF4504FR000 |
| DF4514FRAB0 | DF4514FRA00 | DF4514FR000 |
| DF4516FRAB0 | DF4516FRA00 | DF4516FR000 |
| DF4521FRAB0 | DF4521FRA00 | DF4521FR000 |

Russellstoll®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 400 Amp

Heavy Industrial/Marine — MaxGard®

400 AMP

*** Notes to Catalog Numbers**

Control Contacts (position 12)
use "K" example: DBRF4104200K0

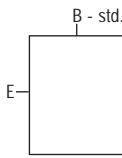
Shunt Trip Breaker (position 13)
add "Z" to above: DBRF4104200KZ

Breaker Trip Ratings (positions 9, 10, 11)
250 amp use 250 350 amp use 350
300 amp use 300 400 amp use 400

Non-Auto Sw. NAO (repl. "DBRF" with "DSRF")

Conduit Hubs: NEMA 4X

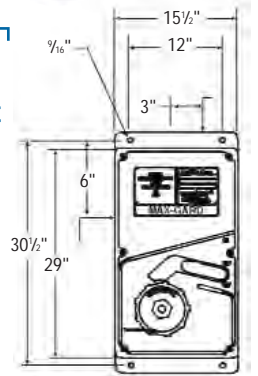
- Std. 4" NPT-thread outlet at B (or E)
- 400 amp — Max. 4" (102mm)



Boldface figures are for voltage assignment.
For different ratings, see page 50.



Interlocked Receptacle with Circuit Breaker NEMA 4X



Device Ratings and Polarizations
Maximum 600VAC or 250VDC
(For full polarization, see page 50)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. |
|------|------|---------------------|--------------|---------------|
| 2 | 3 | | 277 | DBRF410403000 |
| 2 | 3 | | 125 | DBRF410703000 |
| 2 | 3 | | 480 | DBRF420403000 |
| 2 | 3 | | 250 | DBRF420703000 |
| 2 | 3 | | 600 | DBRF421403000 |
| 2 | 3 | | 208 | DBRF421603000 |
| 3 | 4 | | 277/480 | DBRF430403000 |
| 3 | 4 | | 125/250 | DBRF430703000 |
| 3 | 4 | | 120/208 | DBRF431603000 |
| 3 | 4 | | 3Ø 480 | DBRF440403000 |
| 3 | 4 | | 3Ø 250 | DBRF440703000 |
| 3 | 4 | | 3Ø 600 | DBRF441403000 |
| 3 | 4 | | 3Ø 208 | DBRF441603000 |
| 3 | 4 | | 3Ø 440 | DBRF442103000 |
| 4 | 5 | | 3ØY 277/480 | DBRF450403000 |
| 4 | 5 | | 3ØY 347/600 | DBRF451403000 |
| 4 | 5 | | 3ØY 120/208 | DBRF451603000 |
| 4 | 5 | | 3ØY 250/440 | DBRF452103000 |



Russellstoll®

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 400 Amp

Shore-to-ship power

solution 400 AMP

Heavy Industrial/Marine — MaxGard®



Application:

*Shore power to marine vessels —
sightseeing boats*

When docked, marine vessels need shore power when their engines aren't running. Dockside designs need to be as safe as possible during heavy use, rough treatment and adverse weather conditions. High amperage-rated systems are installed using parallel power delivery with cross-network protection.

Installation:

*400 amp male inlets and power connectors
with control contacts*

Watertight devices are necessary for dockside installations. MaxGard® connections go further with O-rings on both pins and interiors for environmental separation and true waterproof performance. The male inlet center ground pin feature and keyed entry design align easily, make ground first and break last, while quarter-turn insertion delayed-action removal and locking screw collars provide accidental pull-out protection. Upon connector insertion, two auxiliary control contacts complete a contactor circuit, which powers the line through a make-last-and-break-first configuration. Contactors are installed separately in an on-shore sheltered power distribution panel.

This can be wired for each contactor or for multiple connections; if one plug is removed, power is cut off.

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

Thomas & Betts

www.tnb.com

MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 400 Amp

Heavy Industrial/Marine — MaxGard®

400 AMP REVERSE SERVICE

** If receptacle is desired with a Straight Adapter instead of standard Angle Adapter, substitute "S" for the "A" in the catalog number of the Receptacle with Angle Adapter or Adapter and Box.

† Standard cable bushings shown; see **page 44** for other sizes available at no extra cost if specified on order.

†† Always furnished with screw collar. We recommend cup cap with male plug; order catalog number DS4CC.

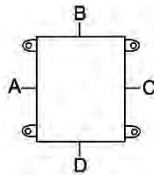
Maximum lug wire 500 kcmil 37-strand or flexible, cable entrance .937" diameter.

Receptacles furnished with flap cap also have screw thread to accept male collar on plug.

Catalog numbers shown are for flap cap receptacles; change "DF" to "DS" for ordering screw cap.

Boldface figures are for voltage assignment. For different ratings, see **page 50**.

Outlet furnished at location "B" unless otherwise specified. 4" NPT.

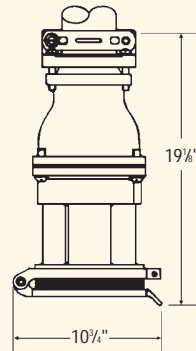


▼ Control contacts for plug/receptacles:
Use "K" where noted. Ex: DS4104MR00K

For Adapters, Junction Boxes and Accessories, see pages 44–47.

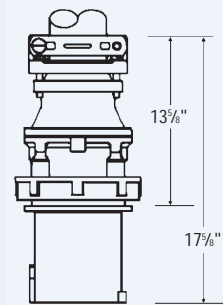


Female Connector



Standard Bushing I.D.†

Male Plug††



Standard Bushing I.D.†

Device Ratings and Polarizations

Maximum 600VAC or 250VDC

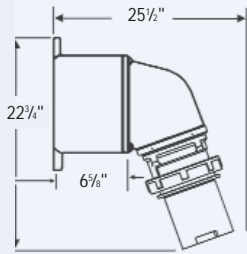
(For full polarization, see **page 50**)

| POLE | WIRE | CONDUCTOR PLACEMENT | VOLTAGE 60HZ | CAT. NO. | | CAT. NO. | |
|------|------|---------------------|--------------|--------------------|--------|--------------------|--------|
| 2 | 3 | | 277 | DF4104FP000 | 2 3/4" | DS4104MP000 | 2 3/4" |
| | | | 125 | DF4107FP000 | | DS4107MP000 | |
| 2 | 3 | | 480 | DF4204FP000 | 2 3/4" | DS4204MP000 | 2 3/4" |
| | | | 250 | DF4207FP000 | | DS4207MP000 | |
| | | | 600 | DF4214FP000 | | DS4214MP000 | |
| | | | 208 | DF4216FP000 | | DS4216MP000 | |
| 3 | 4 | | 277/480 | DF4304FP000 | 3" | DS4304MP000 | 3" |
| | | | 125/250 | DF4307FP000 | | DS4307MP000 | |
| | | | 120/208 | DF4316FP000 | | DS4316MP000 | |
| 3 | 4 | | 3Ø 480 | DF4404FP000 | 3" | DS4404MP000 | 3" |
| | | | 3Ø 250 | DF4407FP000 | | DS4407MP000 | |
| | | | 3Ø 600 | DF4414FP000 | | DS4414MP000 | |
| | | | 3Ø 208 | DF4416FP000 | | DS4416MP000 | |
| | | | 3Ø 440 | DF4421FP000 | | DS4421MP000 | |
| | | | 3Ø 440 | DF4421FP000 | | DS4421MP000 | |
| 4 | 5 | | 3ØY 277/480 | DF4504FP000 | 3 3/4" | DS4504MP000 | 3 3/4" |
| | | | 3ØY 347/600 | DF4514FP000 | | DS4514MP000 | |
| | | | 3ØY 120/208 | DF4516FP000 | | DS4516MP000 | |
| | | | 3ØY 250/440 | DF4521FP000 | | DS4521MP000 | |

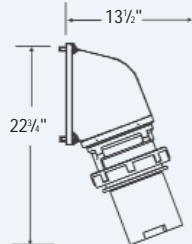
MaxGard® Load-Breaking Plugs, Receptacles and Connectors — 400 Amp



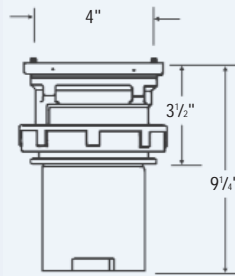
Male Inlet with Angle Adapter and DJB3 Junction Box**



Male Inlet with Angle Adapter**



Male Inlet††



CAT. NO.

DS4104MRAB0
DS4107MRAB0

CAT. NO.

DS4104MRA00
DS4107MRA00

CAT. NO.

DS4104MR000
DS4107MR000

DS4204MRAB0
DS4207MRAB0
DS4214MRAB0
DS4216MRAB0

DS4204MRA00
DS4207MRA00
DS4214MRA00
DS4216MRA00

DS4204MR000
DS4207MR000
DS4214MR000
DS4216MR000

DS4304MRAB0
DS4307MRAB0
DS4316MRAB0

DS4304MRA00
DS4307MRA00
DS4316MRA00

DS4304MR000
DS4307MR000
DS4316MR000

DS4404MRAB0
DS4407MRAB0
DS4414MRAB0
DS4416MRAB0
DS4412MRAB0

DS4404MRA00
DS4407MRA00
DS4414MRA00
DS4416MRA00
DS4421MRA00

DS4404MR000
DS4407MR000
DS4414MR000
DS4416MR000
DS4421MR000

DS4504MRAB0
DS4514MRAB0
DS4516MRAB0
DS4521MRAB0

DS4504MRA00
DS4514MRA00
DS4516MRA00
DS4521MRA00

DS4504MR000
DS4514MR000
DS4516MR000
DS4521MR000

Heavy Industrial/Marine — MaxGard®

Russellstoll®

MaxGard® — Accessories

Cable Bushings

For MaxGard Plugs and Connectors

To order non-standard bushing, add cable bushing number to end of catalog number. This is furnished at no additional cost at time of order.

Ex: DF2504FP000/DF2032.

Shaded areas show Cable Bushings provided with strain relief neck; larger bushings are collar style.



Size No. 3 and 6



Size No. 10, 20 and 40

| HOLE DIAMETER FOR CABLE | SIZE 3 30 AMP | SIZE 6 60 AMP | SIZE 10 100 AMP | SIZE 20 200 AMP | SIZE 40 400 AMP |
|-------------------------|------------------|------------------|--------------------|--------------------|--------------------|
| .625" | JG63 | | | | |
| .750" | JG64 | JG104 | | | |
| .875" | JG65 STD. 2P3W | JG105 | | | |
| 1.000" | JG66 STD. 2P3W | JG106 | DF1020 | DF2020 | |
| 1.188" | JG67 STD. 3P4W | JG107 STD. 2P3W | DF1022 | DF2022 | |
| 1.313" | | JG108 STD. 3P4W | DF1024 | DF2024 | |
| 1.375" | JG69 | | | | |
| 1.500" | JG610 | JG1010 STD. 4P5W | DF1026 | DF2026 | |
| 1.625" | | | | | |
| 1.688" | | JG1011 | DF1027 STD. 2P3W | DF2027 | |
| 1.813" | | | DF1029 STD. 3P4W | DF2029 | |
| 1.875" | | JG1013 | DF1030 | DF2032 STD. 2P3W | |
| 2.000" | | | DF1032 STD. 4P5W | DF2033 | |
| 2.125" | | | | DF2034 STD. 3P4W | |
| 2.250" | | | | DF2036 STD. 4P5W | |
| 2.500" | | | | DF2040 | |
| 2.625" | | | | | DF4042 |
| 2.750" | | | | | DF4044 |
| 3.000" | | | | | DF4048 STD. 3P4W |
| 3.250" | | | | | DF4054 STD. 4P5W |

Standard Cable Bushings

NOTE: When ordering, select bushing size slightly larger than your cable O.D. for best fit.

Material — Neoprene

Identification letter inside hole



Adapters for Conduit and Fittings

Adapters are tapped NPT standard pipe thread to accommodate rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit.



JPA Conduit Adapters

For Plug or Connector Sizes

| 30 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 60 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 100 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 200 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 400 AMP CAT. NO. | TAPPED HOLE SIZE NPT |
|--------------------|-------------------------|--------------------|-------------------------|---------------------|-------------------------|---------------------|-------------------------|---------------------|-------------------------|
| JPA62 | ¾" | JPA104 | 1¼" | DFA14 | 1¼" | DFA25 | 1½" | DFA46 | 2" |
| JPA63 | 1" | JPA105 | 1½" | DFA15 | 1½" | DFA26 | 2" | DFA47 | 2½" |
| JPA64 | 1¼" | JPA 106 | 2" | DFA16 | 2" | DFA27 | 2½" | DFA48 | 3" |
| JPA65 | 1½" | — | — | — | — | — | — | — | — |

NOTE:



Material — cast aluminum, corrosion-resistant copper-free alloy, electrostatic epoxy coated. Furnished complete with gasket and screws.

To specify standard plugs or connectors equipped with one of the above adapters, add the catalog number of the adapter selected to the catalog number of the plug or connector. Complete list price is the list price of the device plus list price of the adapter.

Ex.: Cat. No. DS3107MP000 with adapter tapped 1" would be Cat. No. DS3107MP000/JPA63.

Replacement Flap Covers and Screw Covers

For Connectors, Receptacles and Interlocks

| DESCRIPTION | AMPERAGE | CAT. NO. |
|--|----------|----------|
|  Flap Cover Assembly (Weathertight) | 30 | DFC3 |
| | 60 | DFC6 |
| | 100 | DFC10 |
| | 200 | DFC20 |
| | 400 | DFC40 |
|  Screw Cap and STS — Lanyard Assembly (Watertight) | 30 | DSC3 |
| | 60 | DSC6 |
| | 100 | DSC10 |
| | 200 | DSC20 |
| | 400 | DSC40 |

For Receptacles

| DESCRIPTION | 30 AMP CAT. NO. | 60 AMP CAT. NO. | 100 AMP CAT. NO. | 200 AMP CAT. NO. | 400 AMP CAT. NO. |
|--|--------------------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|
|  <p>Cup Caps For watertight plugs/inlets. Cup caps are used where portable equipment is on a standby basis and plugs are not in use. To effectively protect insulation and contacts from excessive moisture, dirt, dust and corrosion. Material — Cast aluminum, corrosion-resistant copper-free alloy, electrostatic epoxy coated with steel braid cable attached.</p> | DS3CC | DS6CC | DS1CC | DS2CC | DS4CC |
|  <p>Adapter Flush Frames — Single Gang Provide suitable means for mounting box covers of junction box receptacles flush in a wall.</p> | JFA6 | JFA10 | JFA10 | JFA20 | CONSULT FACTORY |
|  <p>Adapters for Conduit Box Receptacles Adapters to fit existing boxes and for special mounting requirements can also be furnished. Consult your Thomas & Betts representative.</p> <p>20° Vertical Angle Adapter 30° Vertical Angle Adapter 45° Vertical Angle Adapter Straight Adapter</p> | JAA6-AB6 — JAA6-45 JRA6-AB6 | JAA10 — JAA10-45 JRA10 | DAA10 — — DRA10 | DAA20 — — DRA20 | — DAA40 — DRA40 |
|  <p>Junction Box — Single Gang</p> | JB6-1 | JB10-B150 | JB10-B200 | DJB20 | DJB40 |
|  <p>Angle Enclosure</p> | JE6 | JE10 | JE10M | — | — |
|  <p>MACK Adapter Plates Enables mounting of MaxGard receptacles to competitive existing back boxes. This involves removing the existing non-hazardous location receptacle from back box, inserting adapter plate and installing MaxGard receptacle. Adapter plates are available for competitor's boxes including Hubbel, Killark, Appleton and Crouse-Hinds.</p> | DCCA3 | DCCA6 | DCCA10 | DCCA20 | — |
|  <p>Russellstoll Adapter Plates Adapt MaxGard receptacles to existing J-Line™, Angle Type and Heavy-Service Ever-Lok® back boxes.</p> | DRCA3 | DRCA6 | DRCA10 | — | N/A |



Replacement Interiors

For Receptacles, Connectors, Plugs and Male Inlets



| RATING | VOLTAGE POLARIZATION | CORRESPONDING MALE INTERIOR ASSEMBLY | | CORRESPONDING FEMALE INTERIOR ASSEMBLY | | |
|--------|-------------------------|---|---------------|---|-----------------|----------|
| | | PLUG/INLET | MALE INTERIOR | CONNECTOR/RECEPTACLE | FEMALE INTERIOR | |
| 30A | 2P3W | 125VAC | DS3107MP000 | DFPU3107 | DF3107FP000 | DFRU3107 |
| | 2P3W | 250VAC | DS3207MP000 | DFPU3207 | DF3207FP000 | DFRU3207 |
| | 3P4W | 125/250VAC | DS3307MP000 | DFPU3307 | DF3307FP000 | DFRU3307 |
| | 3P4W | 3-ph 480VAC | DS3404MP000 | DFPU3404 | DF3404FP000 | DFRU3404 |
| | 4P5W | 277/480VAC | DS3504MP000 | DFPU3504 | DF3504FP000 | DFRU3504 |
| 60A | 2P3W | 250VAC | DS6207MP000 | DFPU6207 | DF6207FP000 | DFRU6207 |
| | 3P4W | 125/250VAC | DS6307MP000 | DFPU6307 | DF6307FP000 | DFRU6307 |
| | 3P4W | 3-ph 480VAC | DS6404MP000 | DFPU6404 | DF6404FP000 | DFRU6404 |
| | 4P5W | 277/480VAC | DS6504MP000 | DFPU6504 | DF6504FP000 | DFRU6504 |
| 100A | 2P3W | 250VAC | DS1207MP000 | DFPU1207 | DF1207FP000 | DFRU1207 |
| | 3P4W | 125/250VAC | DS1307MP000 | DFPU1307 | DF1307FP000 | DFRU1307 |
| | 3P4W | 3-ph 480VAC | DS1404MP000 | DFPU1404 | DF1404FP000 | DFRU1404 |
| | 4P5W | 277/480VAC | DS1504MP000 | DFPU1504 | DF1504FP000 | DFRU1504 |
| 200A | 3P4W | 277/480VAC | DS2304MP000 | DFPU2304 | DF2304FP000 | DFRU2304 |
| | 3P4W | 3-ph 480VAC | DS2404MP000 | DFPU2404 | DF2404FP000 | DFRU2404 |
| | 4P5W | 277/480VAC | DS2504MP000 | DFPU2504 | DF2504FP000 | DFRU2504 |
| 400A | 3P4W | 277/480VAC | DS4304MP000 | DFPU4304 | DF4304FP000 | DFRU4304 |
| | 3P4W | 3-ph 480VAC | DS4404MP000 | DFPU4404 | DF4404FP000 | DFRU4404 |
| | 4P5W | 277/480VAC | DS4504MP000 | DFPU4504 | DF4504FP000 | DFRU4504 |

NOTE: For other interiors not shown, use same polarization index as plug, connector, etc. Ex: DS6416MP000 plug uses DFPU6416 interior.

For Interlocked NEMA 12/3R Receptacles

| DESCRIPTION | 30 AMP CAT. NO. | 60 AMP CAT. NO. | 100 AMP CAT. NO. | 200 AMP CAT. NO. | 400 AMP CAT. NO. |
|---|--------------------|--------------------|---------------------|---------------------|---------------------|
| Fused Disconnect Interlocked Receptacle with Safety Switch 30–100A | | | | | |
| 1 NO — 1 NC CONTACT | F34757 | F34757 | F34757 | N/A | N/A |
| 2 NO — 2 NC CONTACT | F34758 | F34756B | N/A | N/A | N/A |
| Copper Body Lugs — 6 lugs per kit | F34756A | F34756B | F34756C | N/A | N/A |
| Type R Fuse Clips — 3 per kit | F34755A | F34755B | F34755C | N/A | N/A |
| Neutral Block | F34754A | F34754B | F34754B | N/A | N/A |

Pin and Sleeve Plugs, Receptacles and Systems

1.0 Scope

- 1.1 This document covers multi-contact pin and sleeve, industrial grade, arc-quenching, circuit interrupting-rated electrical plugs, motor plugs, connectors, receptacles, mechanically interlocked receptacles and assorted accessories. Usable in dry, damp, wet, marine and/or hazardous locations for electrical power circuits. Devices are to be rated 30, 60, 100, 200 and/or 400 amperes at 600VAC, 50–400Hz and 250VDC maximum. Devices are also rated for continuous use in temperatures from -40° C to +130° C. These devices must provide internal environmental seals for marine and extreme wet applications and can be electrically interlocked.
- 1.2 The devices described shall be Thomas & Betts/Russellstoll MaxGard® catalog numbers as specified.

2.0 Product Classifications (Features)

- 2.1 **Gated Deadfront** — All receptacles and connectors must have a rotating disk on the face of the interior, which provides live contact isolation and environmental separation.
- 2.2 **Delayed Action Arc Containment** — All devices upon disconnect under load shall have provision so the arc is contained and extinguished within the insulation cavity, making it impossible to withdraw a live plug.
- 2.3 **Flap Cover or Screw Cover Option** — Flap cover option must provide weathertight capability by utilizing a spring actuated self-closing flap. Watertight capability shall be obtained by using a gasketed screw cap.
- 2.4 **Polarization** — All devices shall be factory polarized for amperage, voltage, frequency and phase; thus providing a single voltage rating, single interface system.
- 2.5 **Grounding** — The grounding of the device shall be accomplished through a separate center ground (earth) make-first and break-last pole on all devices for complete system grounding.
- 2.6 **Pole Capabilities** — All devices shall accommodate up to four power pins plus a separate center ground pin and they shall be integral with the connector bodies (5 pins total).
- 2.7 **Interior Type** — Interiors must be male (pin type) or female (sleeve type). Pins and sleeves shall also be self-aligning and self-wiping/self-cleaning.
- 2.8 **Control Contacts** — All devices must have an option for two control contacts, which shall be make-last and break-first for use in electrical interlocks and/or control circuits. See table below.
- 2.9 **Conductor Terminals** — Pin and sleeve connections shall employ solderless pressure type screw terminals and be sized to accept stranded or solid copper conductors in AWG sizes (max. O.D.s as noted). The screw terminals shall also have socket heads to ensure proper torquing of wires.
- 2.10 **Environmental Seals** — Each device must have an environmental seal or O-ring around all interiors and around each pin and sleeve to prevent water and contaminants from entering the wiring compartment. This provides waterproof capability, even when not mated.
- 2.11 **Hazardous Location** — All standard plugs 30, 60 and 100 amp shall be UL and CSA listed for hazardous location Class I Division 1, Groups C and D; Class II Division 1, Groups F and G. A hazardous location circuit breaker-protected interlock shall also be applicable to the same environments and possess all the same product features as outlined above. Enclosures shall meet NEMA 8 hazardous outdoor-duty classifications and shall meet shipboard use above deck in accordance with the Department of Transportation (USCG "Green Water").
- 2.12 **Lockout Devices** — Plug connection lockout is achieved by a padlock through plug sleeve housing hole provided for this purpose. On Hazardous Location/Explosion Proof Interlock Receptacles, lockout shall additionally be achieved by separate lockout accessory available from the factory. On standard Interlocks, lockout accessory/construction is available from the factory.

Rating for Pilot/Control Contacts

Contact Rating Code Designation A-600, Table 119.1 — UL 508 Heavy Pilot Duty Load (720 VA/600VAC) Maximum

| THERMAL CONTINUOUS CURRENT AMPS | 120V | | MAXIMUM CURRENT AMPERE | | | | 600V | | MAX VOLT AMPERE | |
|---------------------------------|------|-------|------------------------|-------|------|-------|------|-------|-----------------|-------|
| | | | 240V | | 480V | | | | | |
| | Make | Break | Make | Break | Make | Break | Make | Break | Make | Break |
| 10 (#12 AWG) | 60 | 6 | 30 | 3 | 15 | 1.5 | 12 | 1.2 | 7200 | 720 |

3.0 Materials Requirements

- 3.1 **Housings** — Plug, motor plug, receptacles, connectors and interlock housings, associated covers and caps, screw collars, and clamp holders shall be made of copper-free cast aluminum (max. .004% copper).
- 3.2 **Finish** — All external surfaces except those that provide means of grounding shall be epoxy powder coated to resist corrosion.
- 3.3 **Hardware** — All hardware, external and springs, shall be stainless steel. Cable clamps shall be stainless steel or epoxy powder coated, copper-free cast aluminum.
- 3.4 **Insulators** — All device body insulators shall be molded from glass-reinforced high strength thermoset polyester, minimum of UL94V0 flammability rated.
- 3.5 **Contacts** — Contacts base material shall be made of a conductive copper alloy, (brass CDA485) to prevent dezincification. Accessory material of the contacts shall be made of a compatible corrosion resistant material.
- 3.6 **Environmental Seals** — Environmental gaskets and O-rings shall be made of Neoprene material.

4.0 Design and Construction Requirements

- 4.1 **Circuit Interrupting Rating** — All devices 30, 60, 100 and 200 amperes shall be tested to be interrupted at 150% of rated current. Additionally, all devices shall be designed and tested to interrupt 100% of rated current.
- 4.2 **Wiring** — All devices shall be wired from the rear requiring no disassembly of the pins and/or sleeves from the insulated body.
- 5.0 **Applicable Documents (Compliances)**
- 5.1 **Underwriters Laboratories (UL)** — The devices specified herein shall be listed in applicable sections of UL Standards 1010, 231, 1682 and 1686, File Nos. E2630, E57324, E68085, E123752.
- 5.2 **Canadian Standard Association (CSA)** — The devices specified shall be listed in the applicable sections of CSA C22.2-182.1, File Number LR14096.
- 5.3 **International Electro-Technical Commission (IEC)** — The 30, 60 and 100 ampere devices specified shall have been tested and comply with IEC 309-1.
- 5.4 **Federal Department of Transportation** — Refrigerated National Shipboard location devices shall meet and comply with Federal Register volume 47, number 68, subpart 111.79.
- 5.5 **Standards** — The devices specified shall comply with Military Standards MIL-STD-105 and 1344; ASTM Standards D570 and D2565; NEMA Standard PR4-1983; and OSHA regulations when installed in accordance with the National Electrical Code (NEC®).

5.6 NEMA 250 Enclosures Standard

- NEMA 1** — General Purpose for indoor use; guards against contact with equipment.
- NEMA 3R** — Outdoor use primarily to protect against rain, sleet, wind-blown dust and damage from external ice formation.
- NEMA 4** — Indoor or outdoor use to protect against windblown dust and rain; splashing and hose-directed water.
- NEMA 4X** — Watertight, dust-tight corrosion-resistant for indoor or outdoor applications.
- NEMA 6** — Watertight, casual/temporary immersion.
- NEMA 7** — Class I (Hazardous) for indoor use in Class I areas, per NEC.
- NEMA 8** — Class I (Hazardous) for indoor use in Class I, oil-immersed equipment.
- NEMA 9** — Class II (Hazardous) for indoor use in Class II areas, per NEC.
- NEMA 12** — Industrial use, dust-tight for indoor use to protect against dust, falling dirt and dripping non-corrosive liquids.

Single Polarization/Multiple Service* Assigned Voltages and Wiring Systems

| N-R1-G | | R1-S2-G | | N-R1-S2-G | | R1-S2-T3-G | | N-R1-S2-T3-G | | 2P+G(DC) | | |
|-----------------------------|------------|-----------------------------|------------|-----------------------------|----------------|-----------------------------|---------------|-----------------------------|-------------------|-----------------------------|---------|----|
| VOLTAGE ASSIGN. NO. VOLTAGE | | VOLTAGE ASSIGN. NO. VOLTAGE | | VOLTAGE ASSIGN. NO. VOLTAGE | | VOLTAGE ASSIGN. NO. VOLTAGE | | VOLTAGE ASSIGN. NO. VOLTAGE | | VOLTAGE ASSIGN. NO. VOLTAGE | | |
| 101 | 220V-50Hz | 201 | 380V-50Hz | 301 | 220/380V-50Hz | 401 | 380V-50Hz | 501 | 220/380V-50Hz | 613 | 250 VDC | 01 |
| 103 | 127V-50Hz | 203 | 220V-50Hz | 303 | 220/127V-50Hz | 403 | 220V-50Hz | 503 | 220/127V-50Hz | | 03 | |
| 104 | 277V-60Hz | 204 | 480V-60Hz | 304 | 277/480V-60Hz | 404 | 3Ø 480V-60Hz | 504 | 3ØY 277/480V-60Hz | | 04 | |
| 105 | 250V-50Hz | 205 | 440V-50Hz | 305 | 250/440V-50Hz | 405 | 3Ø 440V-50Hz | 505 | 3Ø 250/440V-50Hz | | 05 | |
| 107 | 125V-60Hz | 207 | 250V-60Hz | 307 | 125/250V-60Hz | 407 | 3Ø 250V-60Hz | 507 | 3ØY 125/250V-60Hz | | 07 | |
| 108 | 220V-60Hz | 208 | 380V-60Hz | 308 | 220/380V-60Hz | 408 | 3Ø 380V-60Hz | 508 | 3Ø 220/380V-60Hz | | 08 | |
| 109 | 100V-60Hz | 209 | 220V-60Hz | 309 | 100/220V-60Hz | 409 | 3Ø 220V-60Hz | 509 | 3Ø 100/220V-60Hz | | 09 | |
| 111 | 115V-400Hz | 211 | 220V-400Hz | 311 | 220/115V-400Hz | 411 | 220V-400Hz | 511 | 220/115V-400Hz | | 11 | |
| 114 | 347V-60Hz | 214 | 600V-60Hz | 314 | 347/600V-60Hz | 414 | 3Ø 600V-60Hz | 514 | 3ØY 347/600V-60Hz | | 14 | |
| 115 | 100V-50Hz | 215 | 220V-50Hz | 315 | 100/220V-50Hz | 415 | 3Ø 220V-50Hz | 515 | 3Ø 100/220V-50Hz | | 15 | |
| 116 | 120V-60Hz | 216 | 208V-60Hz | 316 | 120/208V-60Hz | 416 | 3Ø 208V-60Hz | 516 | 3ØY 120/208V-60Hz | 16 | | |
| 117 | 120V-400Hz | 217 | 208V-400Hz | 317 | 120/208V-400Hz | 417 | 3Ø 208V-400Hz | 517 | 3Ø 120/208V-400Hz | 17 | | |
| — | — | — | — | — | — | — | 208V | — | — | 18 | | |
| — | — | 221 | 440V-60Hz | 321 | 250/440V-60Hz | 421 | 3Ø 440V-60Hz | 521 | 3ØY 250/440V-60Hz | 20 | | |
| — | — | — | — | — | — | — | 250V | Reserved | — | 21 | | |
| — | — | — | — | — | — | — | 480V | Reserved | — | 22 | | |
| — | — | — | — | — | — | — | 600V | Reserved | — | 23 | | |
| — | — | — | — | — | — | — | — | — | — | 24 | | |

MaxGard receptacles and plugs may be furnished in any of the above voltage and phasing systems.

To order any device in a voltage and phasing not shown in the preceding catalog pages, substitute the Voltage Assignment Number in the **above** chart for that portion of the listed catalog number appearing in **boldface** type.

Example: 200 Amp Weathertight Receptacle with Flap Cover, Angle Adapter and Junction Box for 3Ø 480 volt (3-pole and ground) is DF2404FRAB0.

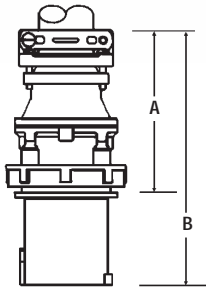
To change to 3Ø 208 volt, the catalog number becomes DF2416FRAB0.

NOTE: All devices may be furnished with two control contacts. Add "K" to the end of the catalog number, in place of last position Ø.

*** Dual-Voltage or Multiple-Service Applications** (for any given polarization number) — Example: A factory installation may consist of all receptacles specified and wired at polarization "507." This is a 3ph.Y-125/250V-60Hz supply. However, all circuit requirements "below" (507) can also be met; for instance a "207" plug will draw phasing for 250V-60Hz operation of equipment as well, while another ".507" receptacle supplies power for a 3-phase motor installation. See chart **above**.

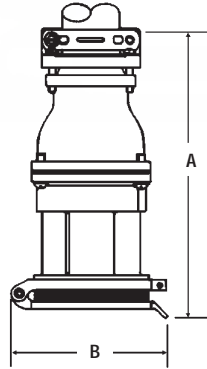
For non-interrupting polarizations at 45, 90, 150, 300, 600A ratings, consult Technical Services.

Male Plug



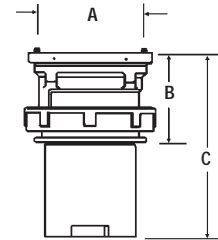
| Amp | A | B |
|-----|----------------------------------|----------------------------------|
| 30 | 4 ¹ / ₄ " | 7 ⁷ / ₈ " |
| 60 | 5 ¹ / ₂ " | 9 ¹ / ₈ " |
| 100 | 6 ¹ / ₂ " | 10 ¹ / ₈ " |
| 200 | 9" | 13 ³ / ₄ " |
| 400 | 12 ⁷ / ₈ " | 17 ⁷ / ₈ " |

Connector



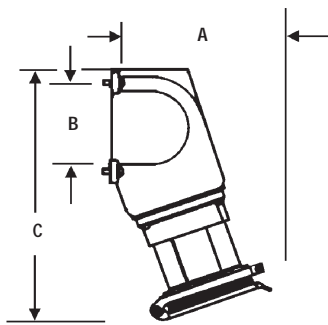
| Amp | A | B |
|-----|----------------------------------|----------------------------------|
| 30 | 8 ³ / ₄ " | 5 ⁵ / ₈ " |
| 60 | 10" | 5 ³ / ₈ " |
| 100 | 11 ¹ / ₈ " | 5 ³ / ₈ " |
| 200 | 15" | 9 ¹ / ₂ " |
| 400 | 19 ⁷ / ₈ " | 10 ¹ / ₄ " |

Male Inlet



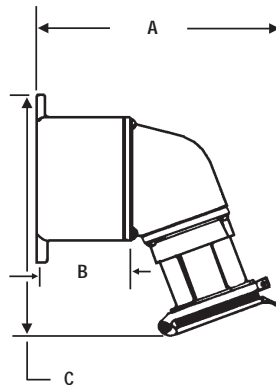
| Amp | A | B | C |
|-----|---------------------------------|---------------------------------|---------------------------------|
| 30 | 2 ⁷ / ₈ " | 2 ¹ / ₂ " | 5 ¹ / ₂ " |
| 60 | 3 ³ / ₈ " | 2 ¹ / ₂ " | 5 ¹ / ₂ " |
| 100 | 3 ³ / ₈ " | 2 ¹ / ₂ " | 5 ¹ / ₂ " |
| 200 | 5 ¹ / ₄ " | 3 ¹ / ₂ " | 9 ¹ / ₄ " |
| 400 | 3 ⁵ / ₈ " | 4 ⁷ / ₈ " | 9 ¹ / ₄ " |

Receptacle with Angle Enclosure



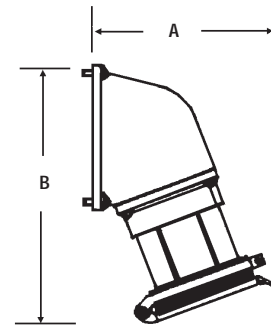
| Amp | A | B | C |
|-----|---------------------------------|---------------------------------|----------------------------------|
| 30 | 6 ⁵ / ₈ " | 3 ³ / ₈ " | 9 ⁷ / ₈ " |
| 60 | 7 ⁷ / ₈ " | 4" | 11 ¹ / ₈ " |
| 100 | 7 ¹ / ₂ " | 4" | 11 ¹ / ₈ " |
| 200 | — | — | — |
| 400 | — | — | — |

Receptacle with Angle Adapter and DJB Junction Box



| Amp | A | B | C |
|-----|----------------------------------|---------------------------------|----------------------------------|
| 30 | 9 ⁵ / ₈ " | 3" | 9 ⁵ / ₈ " |
| 60 | 10 ¹ / ₂ " | 3" | 9 ³ / ₄ " |
| 100 | 10 ³ / ₄ " | 3 ³ / ₄ " | 10" |
| 200 | 15 ³ / ₄ " | 6 ⁵ / ₈ " | 14 ⁵ / ₈ " |
| 400 | 25 ¹ / ₄ " | 12" | 20 ³ / ₄ " |

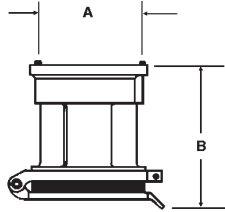
Receptacle with Angle Adapter



| Amp | A | B |
|-----|----------------------------------|----------------------------------|
| 30 | 6 ⁵ / ₈ " | 9 ⁵ / ₈ " |
| 60 | 7 ¹ / ₂ " | 9 ³ / ₄ " |
| 100 | 7" | 10" |
| 200 | 9 ¹ / ₂ " | 14 ³ / ₄ " |
| 400 | 13 ³ / ₄ " | 20 ³ / ₄ " |

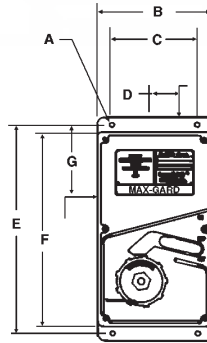
(Flap covers shown — screw covers available. On all, screw covers have nominal effect on outside dimensions.)

Receptacle Only



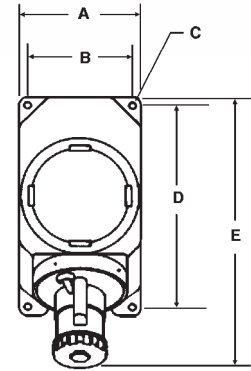
| Amp | A | B |
|-----|--------|--------|
| 30 | 2 7/8" | 4 1/2" |
| 60 | 3 3/8" | 5 1/8" |
| 100 | 3 3/8" | 5 3/8" |
| 200 | 5 1/4" | 6 3/8" |
| 400 | 7" | 7 1/8" |

Interlocked Receptacle with Circuit Breaker NEMA 4X



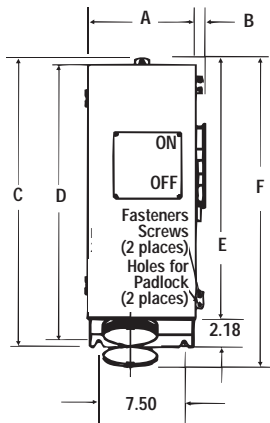
| Amp | A | B | C | D | E | F | G |
|-----|-------|---------|--------|--------|---------|---------|--------|
| 30 | 3/8" | 8 3/4" | 6 1/2" | 1 1/2" | 16 1/4" | 15 3/8" | 3 1/8" |
| 60 | 3/8" | 8 3/4" | 6 1/2" | 1 1/2" | 16 1/4" | 15 3/8" | 3 1/8" |
| 100 | 3/8" | 8 3/4" | 6 1/2" | 1 1/2" | 17 3/4" | 16 3/8" | 3 3/8" |
| 200 | 7/16" | 12 1/4" | 9" | 2 1/2" | 26 1/4" | 24 3/4" | 5" |
| 400 | 7/16" | 15 1/2" | 12" | 3" | 30 1/2" | 29" | 6" |

Explosion-Proof, Circuit-Breaker Interlocked Receptacle



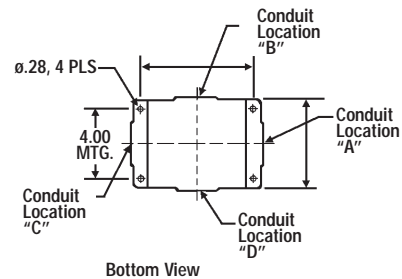
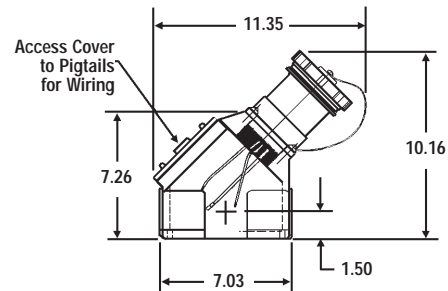
| Amp | A | B | C | D | E |
|-----|--------|--------|------|---------|-----|
| 30 | 8 3/4" | 7 1/2" | 1/2" | 14 3/4" | 20" |
| 60 | 8 3/4" | 7 1/2" | 1/2" | 14 3/4" | 20" |
| 100 | 8 3/4" | 7 1/2" | 1/2" | 14 3/4" | 20" |
| 200 | N/A | N/A | N/A | N/A | N/A |
| 400 | N/A | N/A | N/A | N/A | N/A |

Fused Disconnect Interlocked Receptacle NEMA 3R/12



| Amp | A | B | C | D | E | F |
|-----|--------|------|---------|-----|---------|-----|
| 30 | 9 1/2" | 3/4" | 25 3/4" | 25" | 22 3/4" | 30" |
| 60 | 9 1/2" | 3/4" | 25 3/4" | 25" | 22 3/4" | 30" |
| 100 | 9 1/2" | 3/4" | 25 3/4" | 25" | 22 3/4" | 30" |
| 200 | N/A | N/A | N/A | N/A | N/A | N/A |
| 400 | N/A | N/A | N/A | N/A | N/A | N/A |

Explosion-Proof, Non-Interlocked Receptacle



Russellstoll®

MaxGard® Circuit Breakers



Circuit Breakers for NEMA 4X Interlocked Receptacles

High Interrupt breakers may be furnished at additional cost.

Heavy Industrial/Marine — MaxGard®

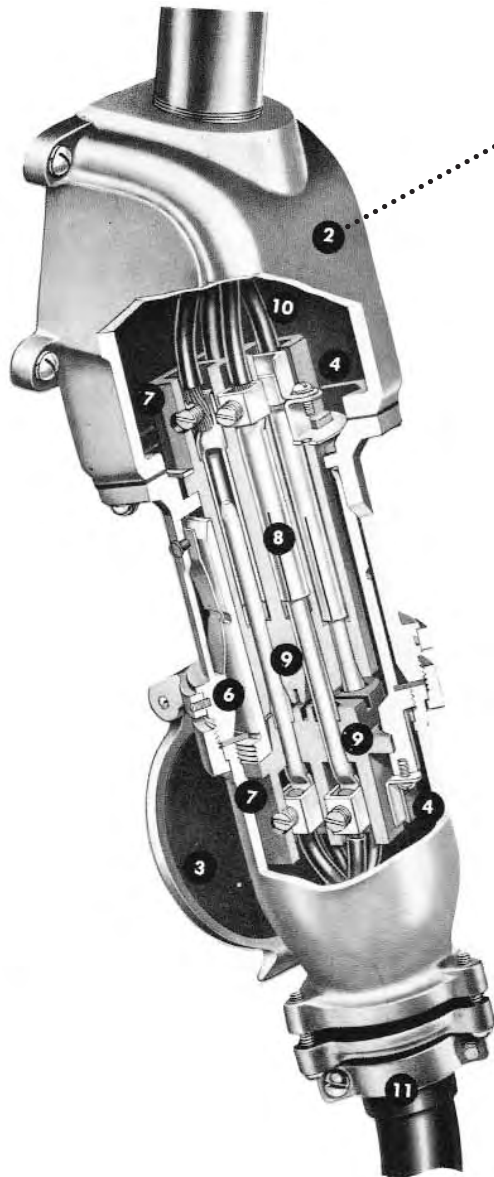
| INTERLOCK | STANDARD CIRCUIT BREAKERS | | HIGH INTERRUPT CIRCUIT BREAKERS (OPTIONAL) | |
|-----------------------|---------------------------|---------------------------|--|---------------------------|
| | MAX. VOLTS | AMPERES | MAX. VOLTS | AMPERES |
| 30, 60 and 100 Amp | 240 AC | 20,000 Asym., 18,000 Sym. | 240 AC | 75,000 Asym., 65,000 Sym. |
| | 277 AC | 15,000 Asym., 14,000 Sym. | 277 AC | 30,000 Asym., 25,000 Sym. |
| | 480 AC | 15,000 Asym., 14,000 Sym. | 600 AC | 20,000 Asym., 18,000 Sym. |
| | 600 AC | 15,000 Asym., 14,000 Sym. | 600 AC | 20,000 Asym., 18,000 Sym. |
| | 250 DC | 10,000 Amperes | 250 DC | 10,000 Amperes |
| 200 Amp | 240 AC | 75,000 Asym., 65,000 | N/A | |
| | 480 AC | 30,000 Asym., 25,000 Sym. | | |
| | 600 AC | 20,000 Asym., 18,000 Sym. | | |
| | 250 DC | 10,000 Amperes | | |
| 400 Amp | 240 AC | 50,000 Asym., 42,000 Sym. | 240 AC | 75,000 Asym., 65,000 Sym. |
| | 277 AC | 35,000 Asym., 30,000 Sym. | 480 AC | 40,000 Asym., 35,000 Sym. |
| | 480 AC | 25,000 Asym., 22,000 Sym. | 600 AC | 30,000 Asym., 25,000 Sym. |
| | 250 DC | 10,000 Amperes | 250 DC | 20,000 Amperes |

J-Line
4P4W Max.
30 through 200A

Tough service in metal for many industrial applications, the J-Line offers a value alternative to MaxGard® in 3P4W, 30–200 Amp applications with less severe needs. Unique among competitors, the J-Line uses a reversible contract carrier for maximum flexibility in many portable service applications.

Design Features

Russellstoll® J-Line Load-Breaking Plugs, Connectors and Receptacles



1. Circuit-interrupting rated safety
2. Cast aluminum, corrosion-resistant copper-free alloy housings and enclosures provide light weight and maximum corrosion resistance, along with electrostatic epoxy powder coat finish
3. Quick conversion between weathertight flap cover and watertight screw cap assemblies. Basic receptacle housing accommodates both covers and is the basic component of all complete units. All watertight configured plugs may be used interchangeably
4. Two grounding arrangements (Style No. 1 and Style No. 2)
5. Four complete J-Lines 30, 60, 100 and 200 amps; 600 VAC/250VDC (plus 150A/270A specials)
6. Flap cover can be rotated and locked in any convenient position
7. Pressure-type solderless wiring terminals
8. Silver-plated contacts
9. One-piece interior assemblies interchangeable from regular to reverse service in the field with a screwdriver
10. Wiring space ample for maximum requirements
11. Cable clamps adjustable for maximum range of cable size. Oil-resistant Neoprene strain-relief bushing compresses around cable tightly, prevents entry of dust and moisture
12. Polarization provides positive non-interchangeability for different electrical systems
13. Reversed contacts flexibility: male–female reversed installation within any housing

Polarization

Devices offer standard and custom polarization for total operator safety so that plugs will fit only into receptacles or connectors having the same electrical/specification characteristics.

Visual means of aligning units for a specific, positive polarization are provided:

- Button inside of receptacle housing mates to groove on plug shroud
- Smaller primary guides also assist positive part-part mating
- External I.D. of 1 of 8 polarization indexes visible
- Different polarizations assigned to voltages can't mate — a safer system!



Conversion to Weathertight and Watertight Types



*Weathertight J-Line
with flap cover assembly*



*Watertight J-Line
with screw cap*

Substitution of either the flap cover assembly or the screw cap assembly on the housing of the basic receptacle permits quick and easy conversion between the weathertight and watertight types. Only a small screwdriver is needed to change in the field.

The basic receptacle housing is constructed with a threaded end to accommodate a screw cap or the collar nut of a watertight plug. A special groove above the threads accommodates the flap cover assembly. The flap cover assembly may be rotated around this grooved shell and the set-screw locked in any convenient position.

The watertight plug, with its collar screwed firmly to the basic receptacle shell, forms a completely watertight connection on either type of receptacle assembly.

These conversion features also permit the use of flap cover or screw cap on connector housings.

30–200/270 Amp (30–200A Load Breaking), Maximum 600VAC/250VDC
Load-Breaking Receptacles, Plugs, Connectors and Inlets

Reversed Contacts Service

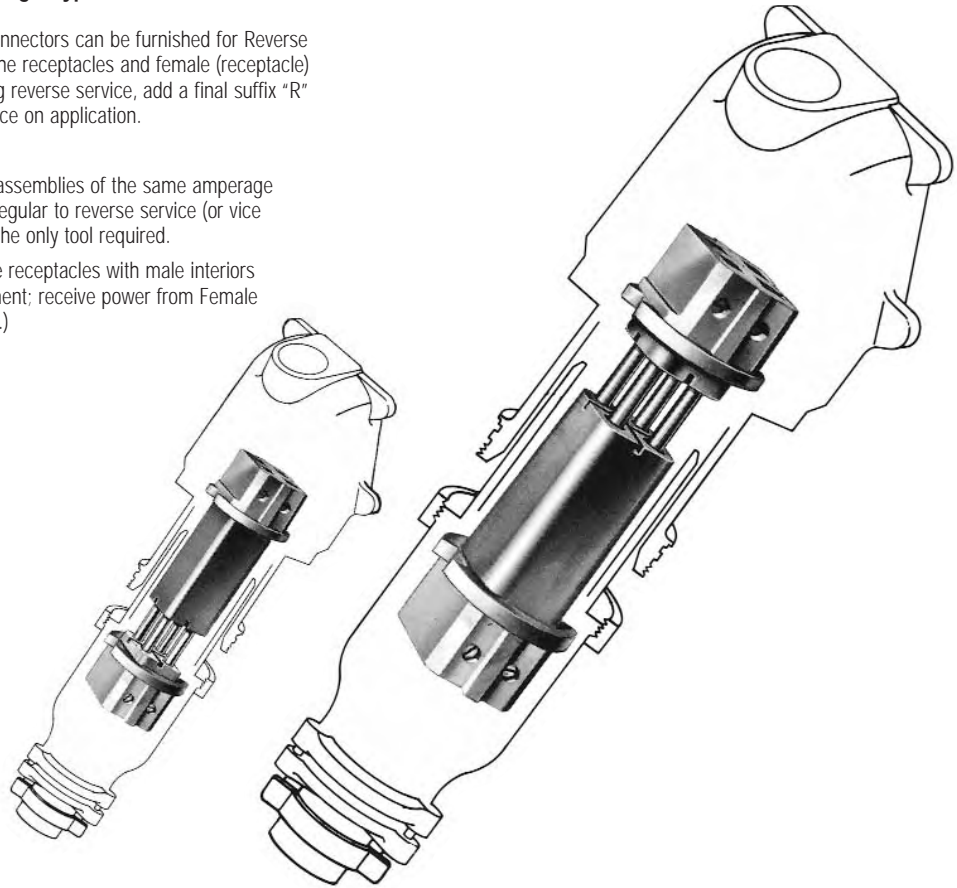
For all Weathertight and Watertight types

All J-Line plugs, receptacles and connectors can be furnished for Reverse Service — male (plug) interiors in the receptacles and female (receptacle) interiors in the plugs. When ordering reverse service, add a final suffix "R" to the complete catalog number. Price on application.

Example: JRFA334HR

J-Line receptacle and plug interior assemblies of the same amperage may be quickly interchanged from regular to reverse service (or vice versa) in the field. A screwdriver is the only tool required.

Example: Panel-mounted low-profile receptacles with male interiors act as male inlets in remote equipment; receive power from Female Plugs. (Cup cap also recommended.)



Regular Service

Interior assemblies placed in normal, standard positions — female interior assembly is positioned in the receptacle housing and the male interior assembly is positioned in the plug housing.

Reverse Service

Note the complete interior assemblies have now been interchanged so that the male (plug) interior assembly is positioned in the receptacle housing and the female (receptacle) interior assembly is positioned in the plug housing.

J-Line™ Interconnection Systems Overview

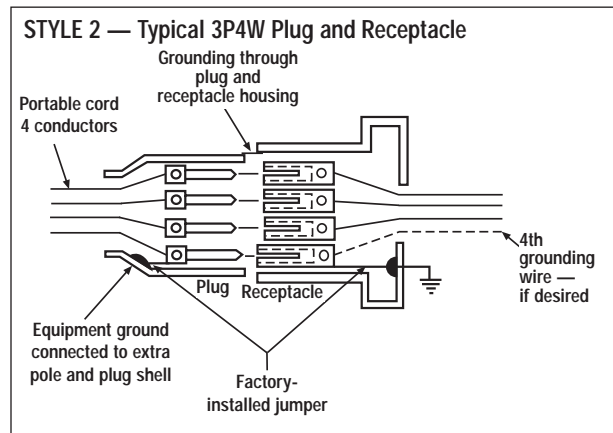
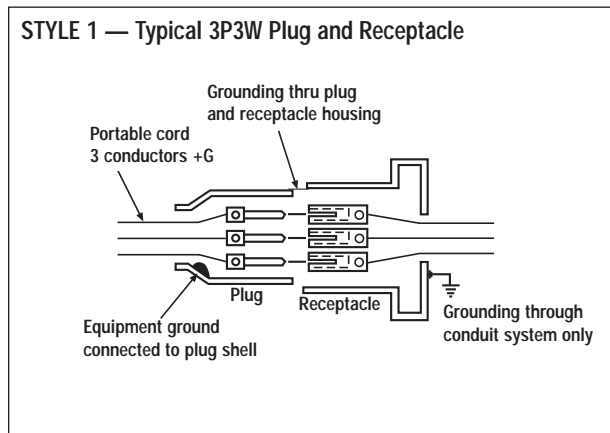
30–200/270 Amp (30–200A Load-Breaking), Maximum 600VAC/250VDC
Load-Breaking Receptacles, Plugs, Connectors and Inlets

Grounding Data

Effective grounding of portable electrical equipment is necessary to protect operators from electric shock. The National Electrical Code® requires that in most cases, exposed non-current-carrying metal parts of portable equipment shall be grounded if operated at more than 150 volts to ground. Grounding must be used in other than residential occupancies when used in damp or wet locations, or by persons standing on the ground or on metal floors or working inside of metal tanks or boilers, except where supplied through an insulating transformer with ungrounded secondary of not over 50 volts. **Plugs and receptacles provide for grounding of portable equipment in either of two ways:**

Corrosive Locations

The National Electrical Code requires that under conditions favorable to corrosion, the grounding conductor for enclosures and equipment be of copper or other corrosion-resistant material. In alternating current systems, this necessitates running another conductor back to the common grounding electrode. This may be run through the conduit containing the circuit conductors. At the receptacle, this grounding conductor should be connected to the extra (grounding) pole by the pressure connector provided for that purpose. Where such an extra grounding conductor is required, Style 2 receptacles should be used.



STYLE 1

4P4W (or 3P3W) through Metal Housings of Plug and Receptacle

In this system shown **above**, the equipment grounding conductor in the flexible cable is electrically connected directly to the plug or cable connector housing by a suitable terminal. The receptacle is grounded by being part of a grounded conduit system.

When inserted, the plug housing makes contact with the grounded receptacle or connector housing by means of the receptacle ground spring before the current-carrying contacts engage. On withdrawal, it remains in contact until after the current-carrying contacts disengage.

STYLE 2

3P4W (or 2P3W) through a Separate Grounding Pole in Plug and Receptacle

In this system shown **above**, the equipment grounding conductor in the flexible cable is electrically connected to the equipment grounding pole in the plug or cable connector interior. The grounding pole of the receptacle interior is electrically connected by a spring-strap jumper to the receptacle housing, which itself is grounded by being part of the ground spring of the receptacle or connector housing as described in Style 1.

The grounding contact in a type 2 receptacle is longer than the current-carrying contacts so that the ground connection makes first and breaks last.

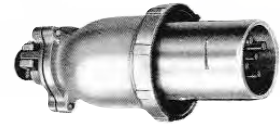
30–270 Amp (30, 60, 100 and 200 Amp Load-Breaking, 150 and 270 Amp Special Service),
Maximum 600VAC/250VDC Receptacles, Plugs, Connectors and Inlets

For any J-Line catalog numbers not shown here, check **page 60** for "Series" information.
For special polarizations (suffixes), contact Technical Services.

Max. 600VAC/250VDC

| Current Rating | Weathertight/Watertight | Configuration | |
|------------------------|--|--------------------------------|--|
| 30 Amp | Weathertight (Spring Hinged Flap Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS323H ▢ ▽ JPS333F JPS334H JPS344F |
| | Watertight (Screw Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS323H JPS333F JPS334H JPS344F |
| 60 Amp | Weathertight (Spring Hinged Flap Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS623H JPS633F JPS634H JPS644F |
| | Watertight (Screw Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS623H JPS633F JPS634H JPS644F |
| 100 Amp (150 Amp)** | Weathertight (Spring Hinged Flap Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS1023H JPS1033F JPS1034H JPS1044F |
| | Watertight (Screw Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS1023H JPS1033F JPS1034H JPS1044F |
| 200 Amp (270 Amp)** | Weathertight (Spring Hinged Flap Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS2023H JPS2033F JPS2034H JPS2044F |
| | Watertight (Screw Cover) | 2P3W 3P3W* 3P4W 4P4W* | JPS2023H JPS2033F JPS2034H JPS2044F |

Plugs



(All plugs come with watertight screw collar)

* Housing Ground Only (Style 1 Grounding), see **page 57**.

+ Shown with 20° angle adapter. Can be furnished with 45° angle at same price.
When ordering, add suffix -45 to catalog number.

** Special rated devices (not shown). Consult Customer Service for details.

NOTE: To order Reverse Service, add a final suffix "R" to catalog number.
Example: JRFA334HR — a receptacle housing with male interior.

▢ Polarization index (std. shown); consult Technical Services for more information.





◆ Flap Cover "F" noted. Screw Cover "S" also available.

▽ For Reversed Contacts, use "R" suffix to any catalog number.

Std. Cable Bushing

| Current Rating | Bushing I.D. | Max. AWG Size |
|----------------|--------------|------------------------------|
| 30 | 7/8" | #6 7-strand or #8 flexible |
| 60 | 1 1/16" | #4 7-strand or flexible |
| 100 | 1 1/2" | #10 19-strand or #1 flexible |
| 200 | 2" | #4/0 19-strand or flexible |

(See **page 64** for other bushings.)

| Connectors | | Receptacles | |
|---|--|--|---|
|  |  Panel Mount |  Basic Receptacle |  Standard Series* |
| ◆ □ ▼ JCF323H _ JCF333F JCF334H JCF344F | ◆ □ ▼ JRF323H _ JRF333F JRF334H JRF344F | ◆ □ ▼ JRF323H _ JRF333F JRF334H JRF344F | ◆ □ ▼ JRFA323H _ JRFA333F JRFA334H JRFA344F |
| JCS323H JCS333F JCS334H JCS344F | JRSX323H JRSX333F JRSX334H JRSX344F | JRS323H JRS333F JRS334H JRS344F | JRSA323H JRSA333F JRSA334H JRSA344F |
| JCF623H JCF633F JCF634H JCF644F | JRF623H JRF633F JRF634H JRF644F | JRF623H JRF633F JRF634H JRF644F | JRFA623H JRFA633F JRFA634H JRFA644F |
| JCS623H JCS633F JCS634H JCS644F | JRSX623H JRSX633F JRSX634H JRSX644F | JRS623H JRS633F JRS634H JRS644F | JRSA623H JRSA633F JRSA634H JRSA644F |
| JCF1023H JCF1033F JCF1034H JCF1044F | JRF1023H JRF1033F JRF1034H JRF1044F | JRF1023H JRF1033F JRF1034H JRF1044F | JRFA1023H JRFA1033F JRFA1034H JRFA1044F |
| JCS1023H JCS1033F JCS1034H JCS1044F | JRSX1023H JRSX1033F JRSX1034H JRSX1044F | JRS1023H JRS1033F JRS1034H JRS1044F | JRSA1023H JRSA1033F JRSA1034H JRSA1044F |
| JCF2023H JCF2033F JCF2034H JCF2044F | JRF2023H JRF2033F JRF2034H JRF2044F | JRF2023H JRF2033F JRF2034H JRF2044F | JRFA2023H JRFA2033F JRFA2034H JRFA2044F |
| JCS2023H JCS2033F JCS2034H JCS2044F | JRSX2023H JRSX2033F JRSX2034H JRSX2044F | JRS2023H JRS2033F JRS2034H JRS2044F | JRSA2023H JRSA2033F JRSA2034H JRSA2044F |

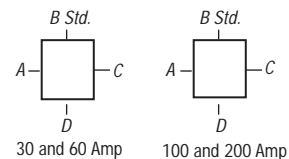
Conduit Size: (Using JPA_ Series Conduit Adapters)

| Current Rating | Std. Size | Max. Size |
|----------------|-----------|-----------|
| 30 | 1" | 1 1/4" |
| 60 | 1 1/2" | 1 1/2" |
| 100 | 2" | 2" |
| 200 | 3" | 3" |

* Smaller NPT openings available on request.

Cable Conduit Adapters, see page 65.


Conduit Entry Location: Standard Series



30–200/270 Amp (30–200A Load Breaking), Maximum 600VAC/250VDC
Load-Breaking Receptacles, Plugs, Connectors and Inlets

Receptacle Mounting Options — J-Line Construction

Progressive Assembly

| Mounting Style | To Order Use: | Current Rating | | | |
|--|---|--|---|---|--|
| | | 30 Amp | 60 Amp | 100/150 Amp | 200/270 Amp |
| Standard Series JRFA/JRSA □  | Receptacle + Vertical or Square Mount Box + Angle Adapter | Basic Receptacle* + JB3-B100 1" Std. Conduit Size + JAA3 (20°) or JAA3-45 (45°) | Basic Receptacle* + JB6-B150 1d" Std. Conduit Size + JAA6-AB6 (20°) or JAA6-45 (45°) | Basic Receptacle* + JB10-B200 2" Std. Conduit Size + JAA10 (20°) or JAA10-45 (45°) | Basic Receptacle* + JB20 3" Std. Conduit Size + JAA20 (20°) or JAA20-45 (45°) |
| Series JRFR/JRSR □ Straight  | Receptacle + Vertical Mount Box + Straight Adapter | Basic Receptacle* + JB3-B100 1" Std. Conduit Size + JRA3 | Basic Receptacle* + JB6-B150 1½" Std. Conduit Size + JRA6-AB6 | Basic Receptacle* + JB10-B200 2" Std. Conduit Size + JRA10 | Basic Receptacle* + JB20 3" Std. Conduit Size + JRA20 |
| Series JRFB/JRSB □  | Receptacle + 30° Angle Adapter | Basic Receptacle* + JAAB3 | Basic Receptacle* + JAAB6 | Basic Receptacle* + JAAB10 | Basic Receptacle* + JAAB20 |
| Series JRFE/JRSE □  | Receptacle + Angle Enclosure | Basic Receptacle* + JE3 1" Std. Conduit Size | Basic Receptacle* + JE6 1½" Std. Conduit Size | Basic Receptacle* + JE10 2" Std. Conduit Size | N/A |
| Series JRFH/JRSH □ Horizontal  | Receptacle + Horizontal Mount Box + Angle Adapter | Basic Receptacle* + JB3-B100 1" Std. Conduit Size + JHA3 (20°) | N/A | N/A | N/A |

* Select appropriate receptacle by rating, configuration and voltage on page 59.

□ NOTE: JRXX 3rd letter denotes Flap (F) or Screw (S) Cover.

Ex: JRSA — Screw Cover

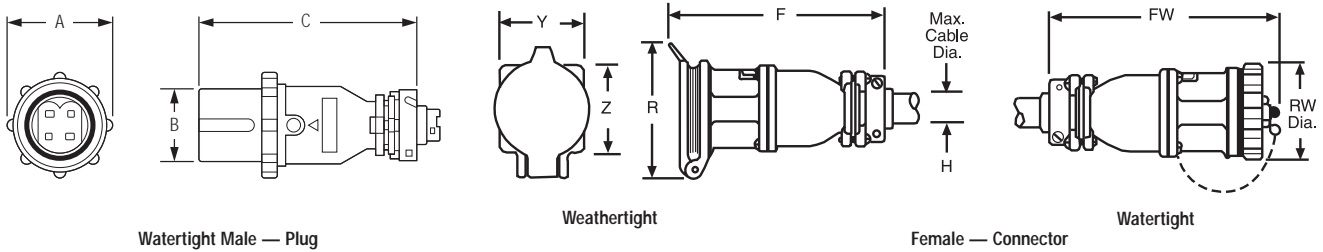
JRFA — Flap Cover

JRF — Flap Cover, Basic Receptacle

JRS — Screw Cover, Basic Receptacle

30–200/270 Amp (30–200A Load Breaking), Maximum 600VAC/250VDC
Load-Breaking Receptacles, Plugs, Connectors and Inlets

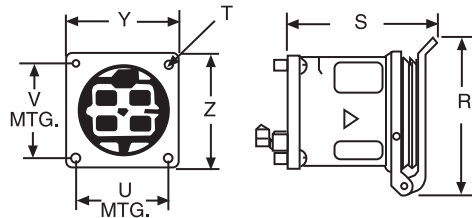
Plugs and Connectors



Dimensions for 2-, 3- or 4-Wire Weathertight and Watertight Units

| AMP | WEATHERTIGHT | | WATERTIGHT | | WEATHERTIGHT | | WATERTIGHT | | Y | Z | H |
|---------|---------------------------------|-----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---|
| | A | B | C | F | FW | R | RW | | | | |
| 30 | 3" | 2 ⁷ / ₈ " | 7" | 8 ⁷ / ₈ " | 8 ⁷ / ₈ " | 4 ¹ / ₄ " | 3" | 2 ³ / ₄ " | 2 ³ / ₄ " | 1 | |
| 60 | 3 ³ / ₄ " | 2 ⁵ / ₈ " | 8 ⁷ / ₈ " | 10 ³ / ₄ " | 10 ³ / ₈ " | 5" | 3 ³ / ₄ " | 3 ¹ / ₂ " | 3 ¹ / ₂ " | 3 ³ / ₈ " | |
| 100/150 | 4 ¹ / ₂ " | 2 ¹¹ / ₁₆ " | 10 ¹ / ₄ " | 10 ¹ / ₂ " | 10 ⁷ / ₈ " | 5 ¹ / ₄ " | 4 ¹ / ₈ " | 4" | 4" | 1 ¹ / ₈ " | |
| 200/270 | 5 ¹ / ₄ " | 3 ⁵ / ₁₆ " | 14 ⁵ / ₈ " | 14 ⁷ / ₈ " | 15 ¹ / ₂ " | 7 ¹ / ₈ " | 5 ³ / ₄ " | 5 ⁵ / ₈ " | 5 ⁵ / ₈ " | 2 ¹ / ₂ " | |

Basic Receptacles



Dimensions for 2-, 3- or 4-Wire Units

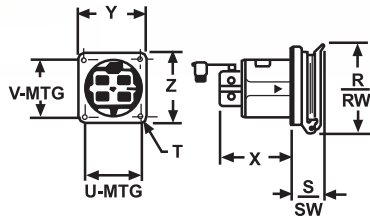
| AMP | WEATHERTIGHT | | WATERTIGHT | | WEATHERTIGHT | | WATERTIGHT | | V | U | T |
|---------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-----------------------------------|---|
| | Z | Y | X | S | SW | R | RW | | | | |
| 30 | 2 ³ / ₄ " | 2 ³ / ₄ " | 1 | 3 ³ / ₈ " | 3 ³ / ₄ " | 4 ¹ / ₄ " | 3" | 2 ¹ / ₄ " | 2 ¹ / ₄ " | 1 ¹ / ₄ " | |
| 60 | 3 ¹ / ₂ " | 3 ¹ / ₂ " | 1 ¹ / ₄ " | 4 ¹ / ₈ " | 4 ¹ / ₄ " | 5" | 3 ³ / ₄ " | 2 ¹ / ₈ " | 2 ¹ / ₈ " | 3 ¹ / ₃₂ " | |
| 100/150 | 4" | 4" | 1 ¹ / ₄ " | 5" | 5 ¹ / ₄ " | 5 ¹ / ₄ " | 4 ¹ / ₈ " | 3 ³ / ₈ " | 3 ³ / ₈ " | 3 ¹ / ₃₂ " | |
| 200/270 | 5 ⁵ / ₈ " | 5 ⁵ / ₈ " | 1 ³ / ₄ " | 6 ¹ / ₈ " | 6 ¹ / ₈ " | 7 ¹ / ₈ " | 5 ³ / ₄ " | 4 ¹ / ₈ " | 4 ¹ / ₈ " | 1 ¹¹ / ₃₂ " | |

Russellstoll[®]

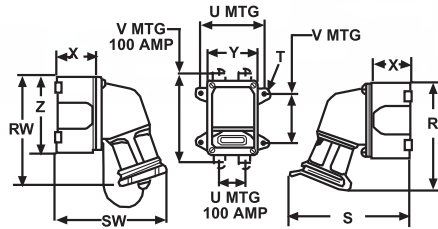
J-Line[™] Dimensions

Heavy Industrial/Marine — J-Line[™]

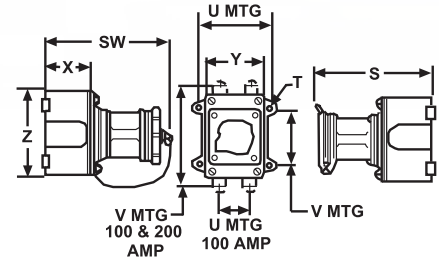
Panel Mount Series



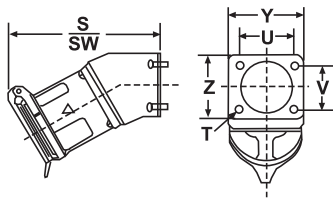
Standard Series JRFA/JRSA



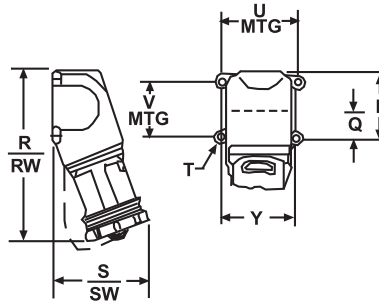
Series JRFR/JRSR



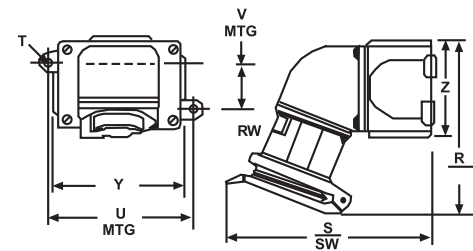
Series JRFB/JRSB



Series JRFE/JRSE



Series JRFH/HRSH



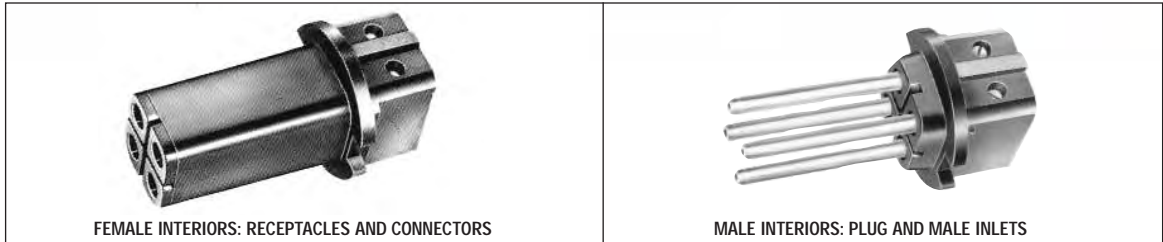
WEATHERTIGHT

| AMP | SERIES | Z | Y | X | S | SW | R | RW | Q | P | V | U | T | PANEL OPENING |
|---------|----------------|---------|---------|---------|---------|---------|-----------|----------|---------|----------|----------|----------|---------|---------------|
| 30 | Panel Mount | 3 1/2" | 3 1/2" | 2 1/16" | 1 3/4" | 2" | 4 1/4" | 3" | — | — | 2 1/8" | 2 1/8" | 1/4" | 2 3/4" |
| | Standard (20°) | 4 1/2" | 3" | 2 1/8" | 7" | 6 1/2" | 6 3/4" | 6 3/4" | — | — | 2 11/16" | 3 11/16" | 1/4" | — |
| | JRFR/JRSR | 4 1/2" | 3" | 2 1/8" | 6 1/8" | 6 1/2" | — | — | — | — | 2 11/16" | 3 11/16" | 1/4" | — |
| | JRFB/JRSB | 3 3/8" | 3 1/8" | — | 5 3/4" | 5 3/4" | — | — | — | — | 2 1/4" | 2 1/4" | 1/4" | 2 1/4" |
| | JRFE/JRSE | — | 3 1/2" | — | 5 1/4" | 4 3/8" | 7 1/8" | 7 1/8" | 1 1/4" | 2 3/8" | — | 4 | 1/4" | — |
| | JRFH/HRSH | 3 3/16" | 4 1/2" | 2 1/8" | 7" | 6 1/2" | 6 5/8" | 6 5/8" | — | — | 2 11/16" | 3 11/16" | 1/4" | — |
| 60 | Panel Mount | 4" | 4" | 3 7/8" | 1 3/4" | 2" | 5" | 3 3/4" | — | — | 3 3/8" | 3 3/8" | 5/32" | 3 1/4" |
| | Standard (20°) | 5 5/8" | 4" | 3" | 9 1/4" | 8 5/8" | 8 5/8" | 9" | — | — | 3 31/16" | 4 13/16" | 1 1/32" | — |
| | JRFR/JRSR | 5 5/8" | 4" | 3" | 8 5/8" | 8 1/2" | — | — | — | — | 3 31/16" | 4 15/16" | 1 1/32" | — |
| | JRFB/JRSB | 3 3/16" | 3 3/8" | — | 7 3/8" | 7 3/8" | — | — | — | — | 2 1/16" | 2 1/16" | 5/32" | 2 1/2" |
| | JRFE/JRSE | — | 4 1/4" | — | 6 1/8" | 5 3/4" | 9 1/4" | 9 1/2" | 1 1/16" | 3 11/16" | 3 1/8" | 4 1/2" | 5/32" | — |
| 100/150 | Panel Mount | 4 1/4" | 4 1/4" | 4 1/16" | 1 3/4" | 2" | 5 1/4" | 4 1/8" | — | — | 3 5/8" | 3 5/8" | 5/32" | 3 1/2" |
| | Standard (20°) | 5 1/2" | 5 1/2" | 3 1/2" | 10 1/2" | 9 5/8" | 9 5/8" | 9 3/4" | — | — | 6 3/4" | 4 1/4" | 1 1/32" | — |
| | JRFR/JRSR | 5 1/2" | 5 1/2" | 3 1/2" | 11 1/4" | 11 1/8" | — | — | — | — | 6 3/4" | 4 1/4" | 1 1/32" | — |
| | JRFB/JRSB | 3 3/16" | 3 3/8" | — | 8 1/4" | 8 1/4" | — | — | — | — | 2 1/16" | 2 5/8" | 5/32" | — |
| 200/270 | Panel Mount | 6" | 6" | 5 7/8" | 2" | 2 1/2" | 7 1/8" | 5 3/4" | — | — | 5 1/4" | 5 1/4" | 1 1/32" | 5 7/8" |
| | Standard (20°) | 8 1/16" | 8 5/16" | 6 1/16" | 15 7/8" | 15 5/8" | 12 11/16" | 12 1/16" | — | — | 9 7/8" | 7 1/8" | 3/8" | — |
| | JRFR/JRSR | 8 1/16" | 8 5/16" | 6 1/16" | 15" | 15 1/2" | — | — | — | — | 9 7/8" | 7 1/8" | 3/8" | — |
| | JRFB/JRSB | 4" | 4" | — | 12 1/4" | 12 1/4" | — | — | — | — | 2 3/4" | 2 3/4" | 1 1/32" | — |

NOTE: U = horizontal mounting hole centers; V = vertical mounting hole centers.

Replacement Interiors

For Receptacles, Connectors, Plugs and Male Inlets



| POLES/WIRES | FEMALE INTERIORS: RECEPTACLES AND CONNECTORS | | | | MALE INTERIORS: PLUG AND MALE INLETS | | | |
|--------------------------|--|----------------------------|-------------------------------|-------------------------------|--------------------------------------|----------------------------|-------------------------------|-------------------------------|
| | 30 AMP | 60 AMP | 100/150 AMP | 200/270 AMP | 30 AMP | 60 AMP | 100/150 AMP | 200/270 AMP |
| + 2P2W 2P3W | JRU322 JRU323 | JRU622 JRU623 | JRU1022 JRU1023 | JRU2022 JRU2023 | JPU322 JPU323 | JPU622 JPU623 | JPU1022 JPU1023 | JPU2022 JPU2023 |
| * 3P3W 3P4W * 4P4W | JRU333 JRU334 JRU344 | JRU633 JRU634 JRU644 | JRU1033 JRU1034 JRU1044 | JRU2033 JRU2034 JRU2044 | JPU333 JPU334 JPU344 | JPU633 JPU634 JPU644 | JPU1033 JPU1034 JPU1044 | JPU2033 JPU2034 JPU2044 |

* Includes equipment grounding lug for attachment to enclosure.

+ For replacement only — includes equipment grounding lug.

Material — Molded composition with silvered copper contacts.

Cup Caps

For Watertight (Series JPS) Plugs — Standard or Reverse Service

| CAT. NO. | AMPERES |
|----------|---------|
| F30717A | 30 |
| F30718A | 60 |
| F30814A | 100 |
| F30815A | 200 |



Cup Caps are used:

* Where portable equipment is on a standby basis and plugs are not in use.

* To effectively protect insulation and contacts from excessive moisture, dirt, dust and corrosion.

Material — Cast aluminum, corrosion-resistant copper-free alloy, electrostatic epoxy coated with steel braid cable attached.

Cable Bushings

For J-Line Plugs and Connectors

Boxed catalog numbers are standard bushing sizes. To order non-standard bushing, specify as follows: example JPS634H/JG65.

Standard Cable Bushings



Size No. 3, 6, 10 and 20

Oversize Cable Bushings



Size No. 3, 6, 10 and 20

| HOLE DIAMETER FOR CABLE | 30 AMP | 60 AMP | 100/150 AMP | 200/270 AMP |
|-------------------------|--------|--------|-------------|-------------|
| .375" | JG31 | | | |
| .500" | JG32 | | | |
| .563" | JG325 | | | |
| .594" | JG32B | | | |
| .625" | JG33 | JG63 | | |
| .750" | JG34 | JG64 | JG104 | |
| .781" | JG341 | | | |
| .875" | JG35 | JG65 | JG105 | |
| .938" | JG355 | | | |
| 1.000" | JG36* | JG66 | JG106 | JG206 |
| 1.125" | JG361* | | | |
| 1.188" | | JG67 | JG107 | JG207 |
| 1.313" | | | JG108 | JG208 |
| 1.375" | | JG69* | | |
| 1.500" | | JG610* | JG1010 | JG2010 |
| 1.688" | | | JG1011 | JG2011 |
| 1.813" | | | | JG2012 |
| 1.875" | | | JG1013* | |
| 2.000" | | | | JG2014 |
| 2.125" | | | | JG2015 |
| 2.500" | | | | JG2016* |

NOTE:

Boxed numbers denote standard bushing size supplied.

When ordering, select bushing size slightly larger than your cable O.D. for best fit.

Material — Neoprene.

Identification letter inside hole.

Adapters for Conduit and Fittings

For use on J-Line Plugs and Connectors

Adapters are tapped NPT standard pipe thread to accommodate rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit.



JPA62 Conduit Adapter
(replaces cable gland assembly)

JPA106 Conduit Adapter

Plug or Connector Sizes

| 30 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 60 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 100/150 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 200/270 AMP CAT. NO. | TAPPED HOLE SIZE NPT |
|--------------------|-------------------------|--------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| JPA31 | 1/2" | JPA62 | 3/4" | JPA104 | 1 1/4" | JPA205 | 1 1/2" |
| JPA32 | 3/4" | JPA63 | 1" | JPA105 | 1 1/2" | JPA206 | 2" |
| JPA33 | 1" | JPA64 | 1 1/4" | JPA106 | 2" | JPA207 | 2 1/2" |

* JPA65 @ 1 1/2" also available.

NOTE:

Material — Cast aluminum, corrosion-resistant copper-free alloy, electrostatic epoxy coated. Furnished complete with gasket and screws.


To specify standard plugs or connectors equipped with one of the above adapters, add the catalog number of the adapter selected to the catalog number of the plug or connector. Complete list price is the list price of the device plus list price of the adapter.

Example: Cat. No. JPS634H with adapter tapped 1" would be Cat. No. JPS634H/JPA63.

Covers

For Connectors and Receptacles



| DESCRIPTION | AMPERAGE | CAT. NO. |
|--|--------------------------------|--------------------------------|
|  <p>Flap Cover Assembly (Weathertight)</p> | 30 60 100/150 200/270 | JFC3 JFC6 JFC10 JFC20 |
|  <p>Screw Cap and Braid Cable Assembly (Watertight)</p> | 30 60 100/150 200/270 | JSC3 JSC6 JSC10 JSC20 |
|  <p>Plug Collar</p> | 30 60 100/150 200/270 | JSN3 JSN6 JSN10 JSN20 |



Washdown and Light Marine Applications: Watertight/Waterproof



DuraGard® Waterproof Connections

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| 60 Amp..... | 78-79 |
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| Safety Interlocks | 82 |
| Dimensions | 83 |
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FS/FD™ Metallic Connections

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| Adapters and Boxes..... | 95 |
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UniGard® Pin & Sleeve IEC Connections

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| International Amperage Ratings | 112 |
| International Amperage Specifications | 113 |
| IP44 Dimensions..... | 114 |
| IEC 309 Safety Interlock | 115-118 |

Defined

- 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

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

Construction and Agricultural

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

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

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

OEMs

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

DuraGard® Waterproof Connections Overview

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 Next Generation: DuraGard® Waterproof Connectors

Severe environments and high-pressure washdown duty applications require durable, waterproof and safe connections. Russellstoll takes design reliability to new heights with Safety Grade™ standards for truly waterproof connectors. Many watertight specifications cover mated connections only. DuraGard connectors are designed to be watertight mated or unmated, thus offering the ultimate waterproof connection. DuraGard connectors are also UL94-V0 flame rated for safety and utilize a durable, efficient pin and sleeve contact design that is voltage polarized to meet NEC® 210-7 and OSHA standards. DuraGard... designed for maximum safety, durability and performance.

DuraGard® Features Make the Performance Difference.



Not just “watertight”; Waterproof for Washdown Duty: DurORing™ Sealing

- Specifically designed for wet environments with our unique DurORing™ sealing system. Unit is watertight mated or unmated
- Eliminates need for costly “weather boots” or “adapters”
- Compact size
- “Lockout Ready” plugs have padlock access hole in front (30A/50A)

Durable, Tough and Flame Safety Rated Housings

- DuraV® housing material specially selected for hot or cold washdown duty
- Flame safe UL94-V0 rated housings
- Superior performance in corrosive environments
- High-visibility yellow housings

Safe and Reliable Power Connections: Pin and Sleeve, Voltage Polarized

- Long life: round, self-cleaning, constant pressure pin and sleeve contacts of solid CDA 360 brass for long, reliable electrical life
- More power, operates cooler: large circular electrical contact area enables more current flow with lower temperature rise
- Ground pin keyed for voltage polarization (O-ring seal)

Easy to Wire

- No twist-off “Locking Plugs”: integral threaded screw collars and compression-type bushings make wiring a snap
- Fast assembly and wiring: “Drop-In” rear-loaded interiors use no assembly screws versus 3–5 or more with other connectors, 30A/50A/60A connectors use unique E-Z Tite™ external gland lock screw, also

Russellstoll®

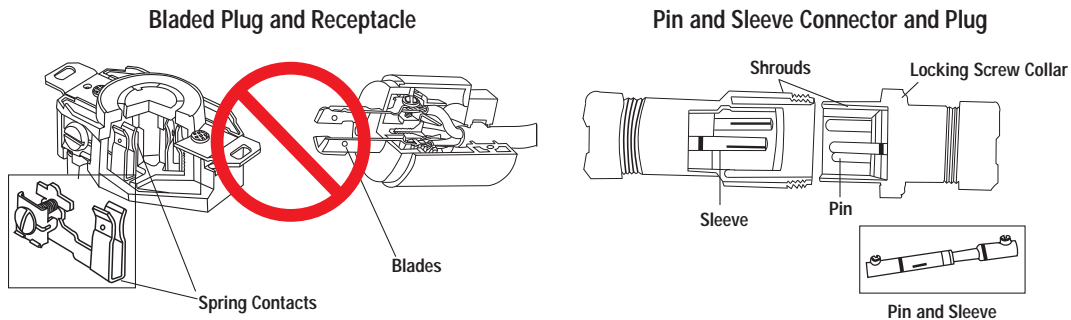
DuraGard® Waterproof Connections Overview

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.**



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 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 Overview

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 Connection

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

(50 Amp Plug and Connector Shown)

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 UL94-V0 Flame Rated Housings:

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

Dry Wiring Compartments:

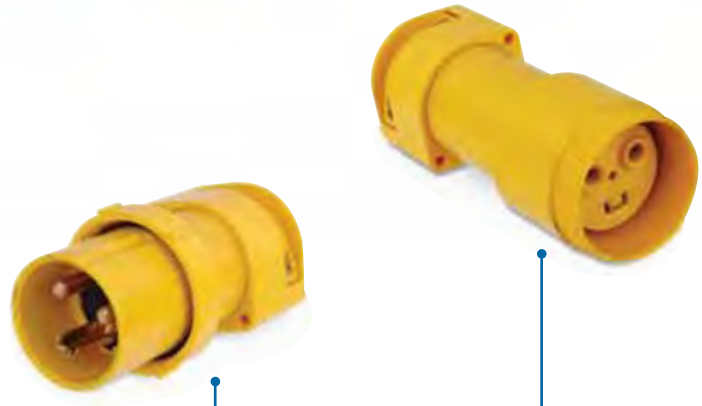
- DurOring™ Sealing System for each pin and sleeve and interior assembly

Russellstoll®

DuraGard® Waterproof Connections — 20 Amp

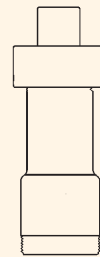
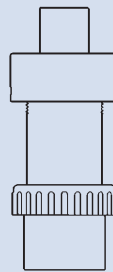
Washdown Industrial/Light Marine — DuraGard®

20 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 | 9P23U1_ | 9C23U1_ |
| 2 | 3 | | 250VAC | 9P23U2 | 9C23U2 |
| 2 | 3 | | 277VAC | 9P23U3 | 9C23U3 |
| 2 | 3 | | 480VAC | 9P23U4 | 9C23U4 |
| 2 | 3 | | 600VAC | 9P23U5 | 9C23U5 |
| 2 | 3 | through 600VAC/250VDC | | 9P23U0 | 9C23U0 |
| 3 | 4 | | 125/250VAC | 9P24U1 | 9C24U1 |
| 3 | 4 | | 3Ø 250VAC | 9P24U2 | 9C24U2 |
| 3 | 4 | | 3Ø 480VAC | 9P24U4 | 9C24U4 |
| 3 | 4 | | 3Ø 600VAC | 9P24U5 | 9C24U5 |
| 3 | 4 | through 600VAC/250VDC | | 9P24U0 | 9C24U0 |

Add suffix — / xxxx for bushing I.D. (page 80) or conduit adapter assembled.

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

* Consult Technical Services.

Thomas & Betts

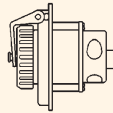
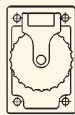
United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690



20 AMP STANDARD SERVICE

Washdown Industrial/Light Marine — DuraGard®

Female Receptacle



| STANDARD BUSHING I.D.: PLUG/CONN.* | CAT. NO. ♦ | |
|---|------------|--|
| Standard 0.625"; or optional size, see page 80 | 9R23U1W | |
| | 9R23U2W | |
| | 9R23U3W | |
| | 9R23U4W | |
| | 9R23U5W | |
| | 9R23U0W | |
| Standard 0.625"; or optional size, see page 80 | 9R24U1W | |
| | 9R24U2W | |
| | 9R24U4W | |
| | 9R24U5W | |
| | 9R24U0W | |

□ Add suffix — / xxxx for bushing I.D. (**page 80**) or conduit adapter assembled.

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

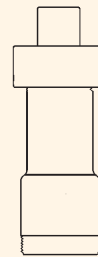
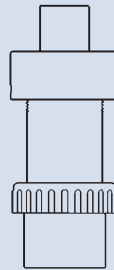
* Consult Technical Services.

30 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 | 9P33U1 | 9C33U1 |
| 2 | 3 | | 250VAC | 9P33U2 | 9C33U2 |
| 2 | 3 | | 277VAC | 9P33U3 | 9C33U3 |
| 2 | 3 | | 480VAC | 9P33U4 | 9C33U4 |
| 2 | 3 | | 600VAC | 9P33U5 | 9C33U5 |
| 2 | 3 | through 600VAC/250VDC | | 9P33U0 | 9C33U0 |
| 3 | 4 | | 125/250VAC | 9P34U1 | 9C34U1 |
| 3 | 4 | | 3Ø 250VAC | 9P34U2 | 9C34U2 |
| 3 | 4 | | 3Ø 480VAC | 9P34U4 | 9C34U4 |
| 3 | 4 | | 3Ø 600VAC | 9P34U5 | 9C34U5 |
| 3 | 4 | through 600VAC/250VDC | | 9P34U0 | 9C34U0 |

Add suffix — / xxxx for bushing I.D. (page 80) or conduit adapter assembled.

◆ *W* suffix indicates watertight receptacle;

F suffix indicates splash-proof spring flap cover included.

* Consult Technical Services.



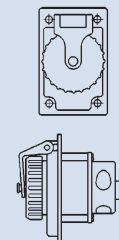
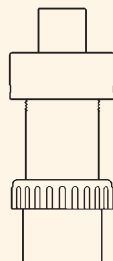
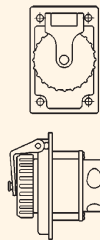
30 AMP REVERSE SERVICE



Female Receptacle

Female Plug

Male Receptacle



Washdown Industrial / Light Marine — DuraGard®

| | STANDARD BUSHING I.D.: PLUG/CONN.* | 30 AMP REVERSE SERVICE | | |
|--|---------------------------------------|------------------------|-------------|-----------------|
| | | Female Receptacle | Female Plug | Male Receptacle |
| | | CAT. NO. ♦ | CAT. NO. □ | CAT. NO. ♦ |
| Standard 0.700"; for optional size, see page 80 | | 9R33U1W | 9F33U1_ | 9B33U1F |
| | | 9R33U2W | 9F33U2 | 9B33U2F |
| | | 9R33U3W | 9F33U3 | 9B33U3F |
| | | 9R33U4W | 9F33U4 | 9B33U4F |
| | | 9R33U5W | 9F33U5 | 9B33U5F |
| | | 9R33U0W | 9F33U0 | 9B33U0F |
| Standard 0.750"; for optional size, see page 80 | | 9R34U1W | 9F34U1 | 9B34U1F |
| | | 9R34U2W | 9F34U2 | 9B34U2F |
| | | 9R34U4W | 9F34U4 | 9B34U4F |
| | | 9R34U5W | 9F34U5 | 9B34U5F |
| | | 9R34U0W | 9F34U0 | 9B34U0F |

□ Add suffix — / xxxx for bushing I.D. (page 80) or conduit adapter assembled.

♦ "W" suffix indicates watertight receptacle;

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

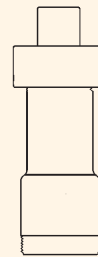
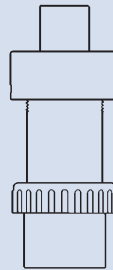
* Consult Technical Services.

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 |
| 2 | 3 | | 250VAC | 9P53U2 | 9C53U2 |
| 2 | 3 | | 277VAC | 9P53U3 | 9C53U3 |
| 2 | 3 | | 480VAC | 9P53U4 | 9C53U4 |
| 2 | 3 | | 600VAC | 9P53U5 | 9C53U5 |
| 2 | 3 | through 600VAC/250VDC | | 9P53U0 | 9C53U0 |
| 3 | 4 | | 125/250VAC | 9P54U1 | 9C54U1 |
| 3 | 4 | | 3Ø 250VAC | 9P54U2 | 9C54U2 |
| 3 | 4 | | 3Ø 480VAC | 9P54U4 | 9C54U4 |
| 3 | 4 | | 3Ø 600VAC | 9P54U5 | 9C54U5 |
| 3 | 4 | through 600VAC/250VDC | | 9P54U0 | 9C54U0 |

Add suffix — / xxxx for bushing I.D. (page 80) or conduit adapter assembled.
 ◆ *W* suffix is watertight; *F* suffix for splash-proof spring flap cover.
 * Consult Technical Services.

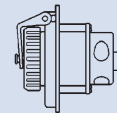
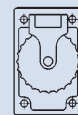
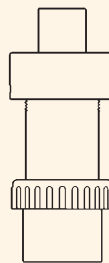
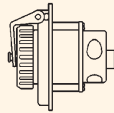
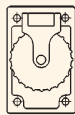
50 AMP REVERSE SERVICE



Female Receptacle

Female Plug

Male Receptacle



Washdown Industrial / Light Marine — DuraGard®

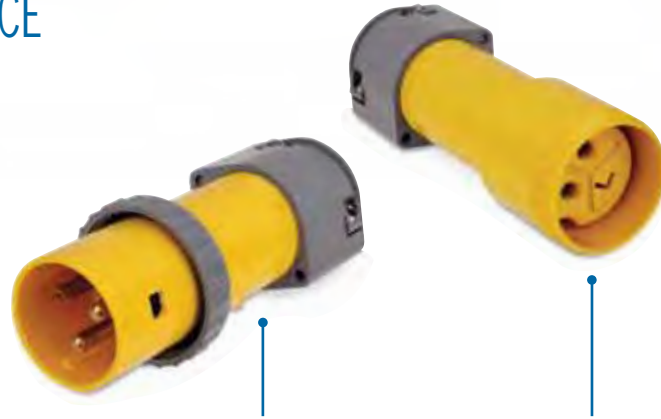
| | STANDARD BUSHING I.D.: PLUG/CONN.* | 50 AMP REVERSE SERVICE | |
|--|---------------------------------------|------------------------|------------|
| | | CAT. NO. ♦ | CAT. NO. □ |
| Standard 0.925"; for optional size, see page 80 | | 9R53U1W | 9F53U1 |
| | | 9R53U2W | 9F53U2 |
| | | 9R53U3W | 9F53U3 |
| | | 9R53U4W | 9F53U4 |
| | | 9R53U5W | 9F53U5 |
| | | 9R53U0W | 9F53U0 |
| Standard 0.925"; For optional size, see page 80 | | 9R54U1W | 9F54U1 |
| | | 9R54U2W | 9F54U2 |
| | | 9R54U4W | 9F54U4 |
| | | 9R54U5W | 9F54U5 |
| | | 9R54U0W | 9F54U0 |
| | | | 9B53U1F |
| | | 9B53U3F | 9B53U4F |
| | | 9B53U5F | 9B53U0F |
| | | 9B54U1F | 9B54U2F |
| | | 9B54U4F | 9B54U5F |
| | | 9B54U0F | |

□ Add suffix — / xxxx for bushing I.D. (page 80) or conduit adapter assembled.

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

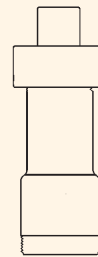
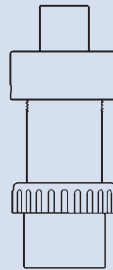
* Consult Technical Services.

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 |
| 2 | 3 | | 250VAC | 9P63U2 | 9C63U2 |
| 3 | 4 | | 125/250VAC | 9P64U1 | 9C64U1 |
| 3 | 4 | | 3Ø 250VAC | 9P64U2 | 9C64U2 |

Add suffix — / xxxx for bushing I.D. (page 80) or conduit adapter assembled.

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

* Consult Technical Services.

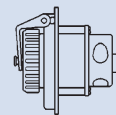
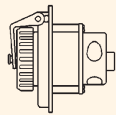
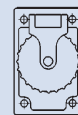
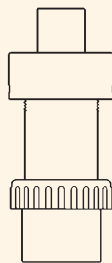
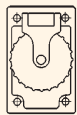
60 AMP REVERSE SERVICE



Female Receptacle

Female Plug

Male Receptacle



STANDARD BUSHING I.D.:
PLUG/CONN.*

CAT. NO. ♦

CAT. NO. □

CAT. NO. ♦

Standard 1.000";
for optional size,
see **page 80**

9R63U1

9F63U1

9B63U1

9R63U2

9F63U2

9B63U2

Standard 1.000";
for optional size,
see **page 80**

9R64U1

9F64U1

9B64U1

9R64U2

9F64U2

9B64U2

□ Add suffix — / xxx for bushing I.D. (**page 80**) or conduit adapter assembled.

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

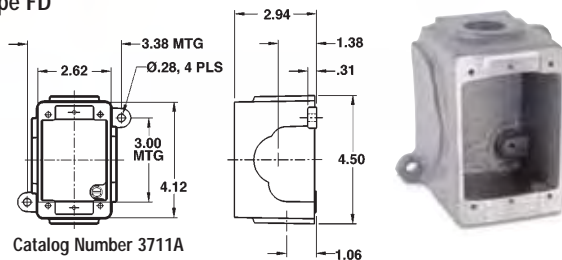
* Consult Technical Services.

Russellstoll®

DuraGard® Accessories

Conduit Boxes (For Surface Mounting)

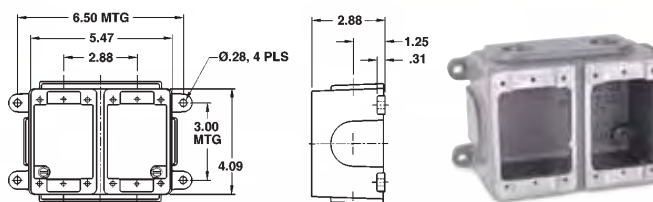
Type FD



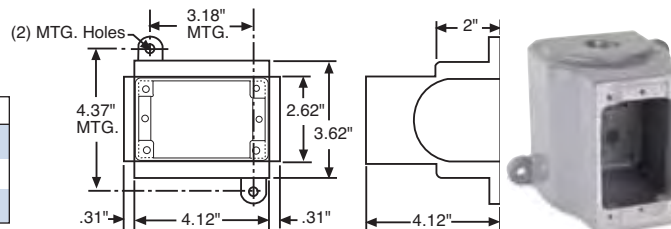
Catalog Number 3711A

| | CAST ALUMINUM | CAST BRASS | USE WITH |
|--------|---------------|------------|----------|
| Single | 3711A | 3731 | 20A |
| Double | 3712A | 3732 | 30A |
| DSFD | 3781A | 3782 | 50A |

NOTE: 1/4" NPT Hole Std. Additional accessories are available. Please consult your Thomas & Betts representative.

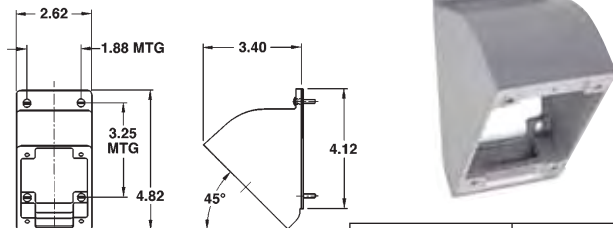


Catalog Number 3712A



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 |

NOTE: _ suffix to plugs/connectors for assembly from factory.

Cable Bushings

20 Amp
Cable Bushing



| MAX. CABLE O.D. (INCHES) | 20 AMP | 30 AND 50 AMP |
|--------------------------|---------|---------------|
| 0.375 | C16984A | — |
| 0.437 | C16984B | — |
| 0.500 | C16984C | — |
| 0.545 | — | 2000-11 |
| 0.562 | C16984D | — |
| 0.606 | B16506 | — |
| 0.620 | — | 2000-03 |
| 0.625 | B16524 | — |
| 0.700 | — | 2000-04 |
| 0.750 | — | 2000-01 |
| 0.800 | — | 2000-06 |
| 0.870 | — | 2000-02 |
| 0.925 | — | 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 bushing code; example: 9P33U1/1000.



Replacement Caps



| | 20 AMP | 30 AMP | 50 AMP | 60 AMP |
|------------------------|--------|---------|---------|---------|
| Screw Cap (Connector) | 9X2PSC | 9X3PSC | 9X5PSC | 9X6PSC |
| Cup Cap (Plug) | — | F26874C | F26874C | F26874C |
| Screw Cap (Receptacle) | — | 7X3RCW | 7X5RCW | 7X6RCW |
| Flap Cap (Receptacle) | — | 7X3RCF | 7X5RCF | 7X6RCF |



Replacement Interiors

| AMPS | VOLTAGE POLARIZATION | CATALOG NUMBERS | |
|-------------|-----------------------|---|---|
| | | MALE INTERIOR ASSEMBLY | FEMALE INTERIOR ASSEMBLY |
| 2P3W 20A | 125VAC |  |  |
| | 250VAC | 9XM23U1 | 9XF23U1 |
| | 277VAC | 9XM23U2 | 9XF23U2 |
| | 480VAC | 9XM23U3 | 9XF23U3 |
| | 600VAC | 9XM23U4 | 9XF23U4 |
| | through 600VAC/250VDC | 9XM23U5 | 9XF23U5 |
| | | 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 | 9XF24U1 |
| | 3Ø 250VAC | 9XM24U2 | 9XF24U2 |
| | 3Ø 480VAC | 9XM24U4 | 9XF24U4 |
| | 3Ø 600VAC | 9XM24U5 | 9XF24U5 |
| | through 600VAC/250VDC | 9XM24U0 | 9XF24U0 |
| | | | |
| 3P4W 30A | 125/250VAC | 9XM34U1 | 9XF34U1 |
| | 3Ø 250VAC | 9XM34U2 | 9XF34U2 |
| | 3Ø 480VAC | 9XM34U4 | 9XF34U4 |
| | 3Ø 600VAC | 9XM34U5 | 9XF34U5 |
| | through 600VAC/250VDC | 9XM34U0 | 9XF34U0 |
| | | | |
| 3P4W 50A | 125/250VAC | 9XM54U1 | 9XF54U1 |
| | 3Ø 250VAC | 9XM54U2 | 9XF54U2 |
| | 3Ø 480VAC | 9XM54U4 | 9XF54U4 |
| | 3Ø 600VAC | 9XM54U5 | 9XF54U5 |
| | through 600VAC/250VDC | 9XM54U0 | 9XF54U0 |
| | | | |
| 2P3W 60A | 125VAC | 9XM63U1 | 9XF63U1 |
| | 250VAC | 9XM63U2 | 9XF63U2 |
| 3P4W 60A | 125/250VAC | 9XM64U1 | 9XF64U1 |
| | 3Ø 250VAC | 9XM64U2 | 9XF64U2 |

Washdown Industrial/Light Marine — DuraGard®

Russellstoll®

DuraGard® Safety Interlocks

Safety Interlocks

Features and Benefits

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

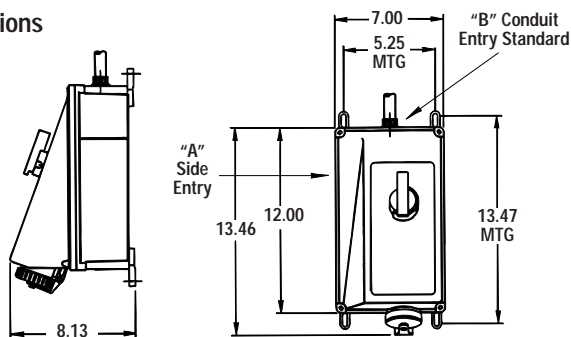
User Friendly — Flexible Mounting:

- 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

Dimensions



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

| AMPS | 3P4W EXAMPLES SHOWN: VOLTAGE POLARIZATION | CAT. NO. | | | | |
|-------------|--|--|--------------------------------|----------------|----------------------|-------------------------|
| | | 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 | 9XL54U1 |
| | 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.

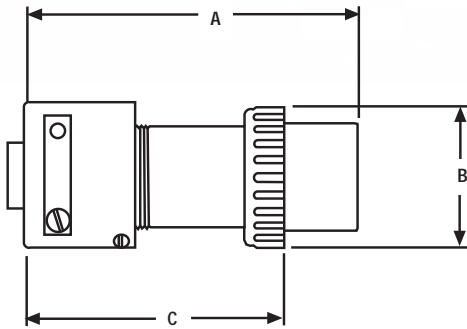
(Minimum limit 85% of O.D. size for sealing.)

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

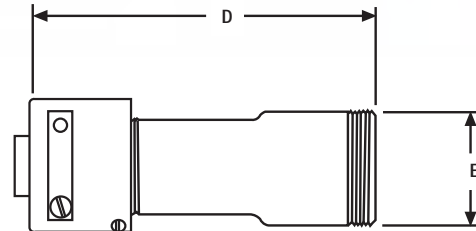


Dimensions

Plugs and Female Plugs (30A/50A only)



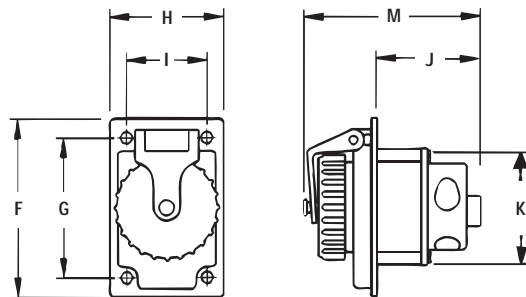
Connectors



| 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 | | |

* NOTE: Dimensions will vary slightly with assembly.

Receptacles and Male Receptacles (Inlets — 30A/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 |
|------|--------|-------|------|------|------|------|------|-------|----------|-------------------|
| 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 | | |

Engineering Specifications — 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 | V0 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 |

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

Engineering Specifications — 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 |

Approvals



Russellstoll®

FS/FD™ Metallic Connections Overview

The FS/FD™ general purpose interconnection system is designed for lower-amperage marine and rough service applications with rugged die cast aluminum housings and epoxy powder coated finishes. Interlocked receptacles add branch circuit protected outlet capability and base receptacles fit existing Russellstoll FS, FD and DSFD single- and multi-gang back boxes. Its versatility and watertight features make it ideal for Washdown Industrial and Light Marine applications.



Safety

- Circuit-interrupting up to 30A, 250VAC (20A, 600VAC)
- Factory polarized interiors permit mating of same voltage/same type devices through configured ground pins and housing features
- Shell grounding by means of ground strap integral with ground contact for assured assembly safety

Durability

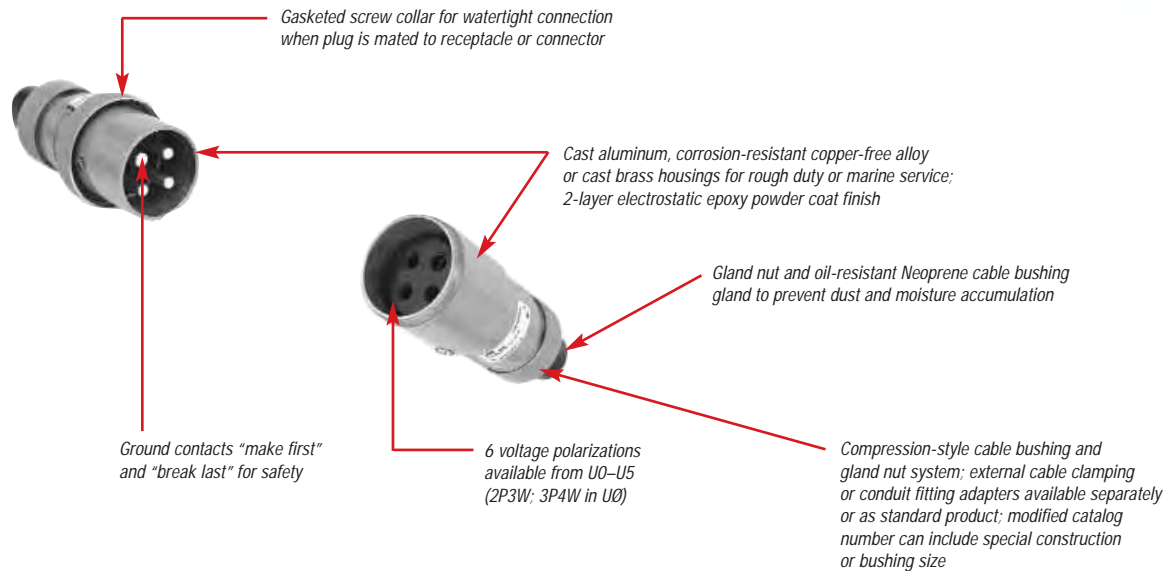
- Constructed of copper-free cast aluminum (brass construction also available)
- Optional conduit adapters, strain reliefs and cable bushings available (modified catalog number construction)
- Non-metallic versions of most metallic plugs and receptacles also available (see DuraGard®, pages 68–85)



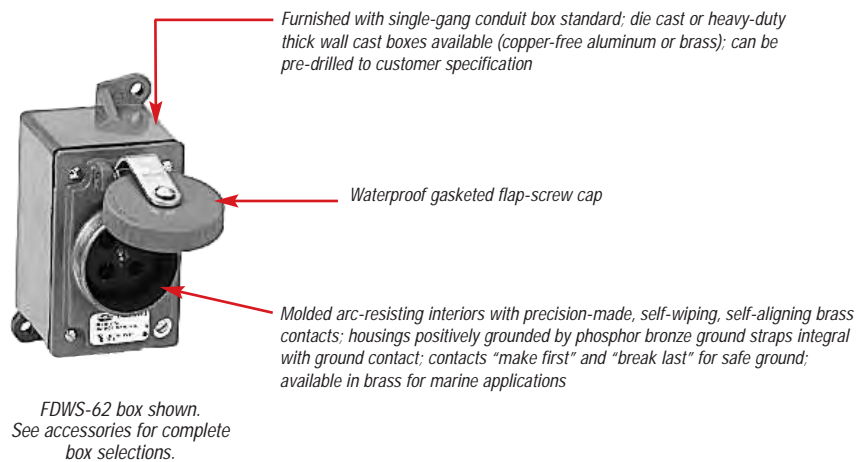
Performance

- Precision-made, self-aligning and self-wiping contacts
- Devices available in watertight and weathertight versions
- Solderless binding screw terminals for convenient wiring (20A, 2P3W devices have set-screw pressure terminals)

Plug and Connector (+ Reverse Service Female Plug)



Receptacle (+ Reverse Service Male Inlet)



Male Plugs



Female Connectors



*Also see the DuraGard® section for Thermoplastic families.

| POLES/ WIRES | AMPERES | VOLTAGE | POLARIZATION (RECEPTACLE) | ALUMINUM | CAST BRASS | ALUMINUM | CAST BRASS |
|-----------------|---------|---------|------------------------------|----------|------------|----------|------------|
| 2P3W | 15A | 125VAC | | 3720U-2 | 3720BU-2 | 3913U-2 | 3913BU-2 |
| | | 177VAC | | 3720U-3 | 3720BU-3 | 3913U-3 | 3913BU-3 |
| | | 480VAC | | 3720U-4 | 3720BU-4 | 3913U-4 | 3913BU-4 |
| | | 600VAC | | 3720U-5 | 3720BU-5 | 3913U-5 | 3913BU-5 |
| | 20A | 250VAC | | 3720 | 3720B | 3913 | 3913B |
| | | 125VAC | | 3720U-1 | 3720BU-1 | 3913U-1 | 3913BU-1 |
| 30A | 250VAC | | 3750 | 3750B | 3933 | 3933B | |
| 3P4W | 10A | 600VAC | | 3730 | 3730B | 3914 | 3914B |
| | 15A | 250VAC | | 3730 | 3730B | 3914 | 3914B |
| | 20A | 600VAC | | 3760 | 3760B | 3934 | 3934B |
| | 30A | 250VAC | | 3760 | 3760B | 3934 | 3934B |

Cable Bushings — Oil-resistant, Neoprene cable bushing is regularly furnished with hole sizes listed above. Other hole sizes are available at no extra cost when specified on order. See **page 92** for available sizes.

Screw caps for connectors can be furnished with retained screw cap at extra cost. For kits order:

- 9X2PSC 20A screw cap
- 9X3PSC 30A screw cap
- F26874C 30A plug cup cap

Standard Cable Bushing Hole Diameter

| PREFIX | HOLE DIA. | PREFIX | HOLE DIA. | PREFIX | HOLE DIA. |
|--------|-----------|--------|-----------|------------|-----------|
| 3720 | — | 3730 | — | 3750, 3760 | — |
| 3913 | 5/16" | 3914 | 11/16" | 3933, 3934 | 3/4" |
| 3789 | — | 3790 | — | 3809, 3810 | — |

For other plug and connector accessories, see **pages 92–95**.

Plugs can be furnished with adapters to accommodate rigid conduit or standard connectors. For armored cable or flexible conduit, see **page 92**.



Female Receptacles



Reverse Service

FEMALE PLUGS



MALE RECEPTACLES



Inlets

| FEMALE RECEPTACLES | | FEMALE PLUGS | | MALE RECEPTACLES | |
|----------------------|------------------------|--------------|------------|---------------------------|--------------------------|
| ALUMINUM WITH BOX ** | CAST BRASS WITH BOX ** | ALUMINUM | CAST BRASS | ALUMINUM WITH BOX FDWS-62 | CAST BRASS WITH BOX 3731 |
| 3743U-2 | 3763U-2 | 3789U-2 | 3789BU-2 | 3776U-2 | 3779U-2 |
| 3743U-3 | 3763U-3 | 3789U-3 | 3789BU-3 | 3776U-3 | 3779U-3 |
| 3743U-4 | 3763U-4 | 3789U-4 | 3789BU-4 | 3776U-4 | 3779U-4 |
| 3743U-5 | 3763U-5 | 3789U-5 | 3789BU-5 | 3776U-5 | 3779U-5 |
| 3743 | 3763 | 3789 | 3789B | 3776 | 3779 |
| 3743U-1 | 3763U-1 | 3789U-1 | 3789BU-1 | 3776U-1 | 3779U-1 |
| 3753 | 3773 | 38091 | 3809B1 | 37962 | 37993 |
| 3744 | 3764 | 3790 | 3790B | 3777 | 3780 |
| 3744 | 3764 | 3790 | 3790B | 3777 | 3780 |
| 3754 | 3774 | 3810 | 3810B | 3797 | 3800 |
| 3754 | 3774 | 3810 | 3810B | 3797 | 3800 |

** Receptacles come with the following boxes:

| MATERIAL | AMPERES | BOX |
|----------|---------------------|--------------------|
| Aluminum | 10, 15 and 20 30 | FSWS-62 FDWS-62 |
| Brass | 10, 15 and 20 30 | 3721 3731 |

NOTE:

1. Also in plastic. Use 3809P or 9F33UO.
2. Also in plastic. Use 3796P — Aluminum back box (use 3797-P for brass).
3. Also in plastic. Use 3799P (Brass J-Box) or 9B33UØF (without J-Box).

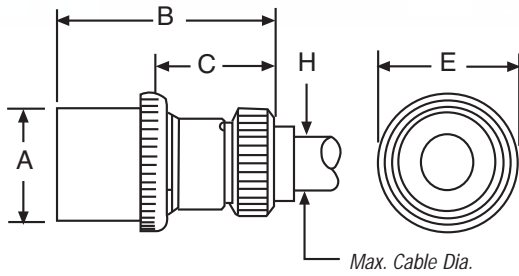
For 20A/30A thermoplastic devices, see DuraGard section.

Mating with DuraGard® line:

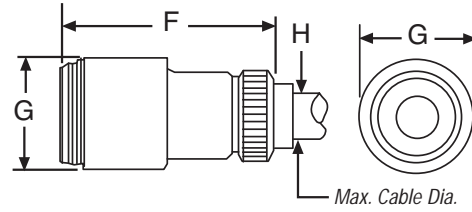
- 20A devices will mate and lock across lines.
- 30A metal male devices cannot mate to DuraGard; 30A female devices can be mixed.

Dimensions

Plugs and Female Plugs



Connectors



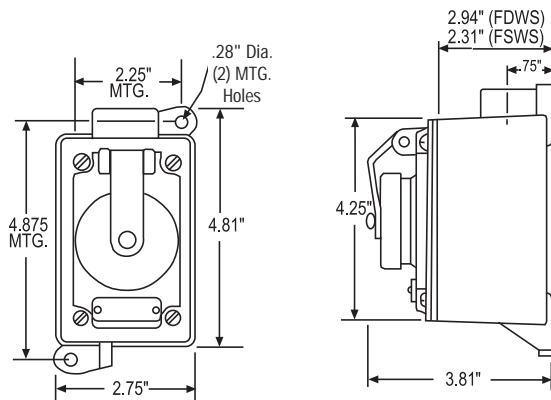
Plug, Female Plug and Connector Dimensions

| AMPS | | A | B | C | E | F | G | H |
|--------|--------|-------|-------|-------|-------|--------|-------|--------|
| 10 Amp | Inches | 1.75 | 3.62 | 2.25 | 2.00 | 4.00 | 1.87 | 0.75 |
| | mm | 45.65 | 92.07 | 57.15 | 50.80 | 101.60 | 47.62 | 19.050 |
| 15 Amp | Inches | 1.75 | 3.62 | 2.25 | 2.00 | 4.00 | 1.87 | 0.75 |
| | mm | 45.65 | 92.07 | 57.15 | 50.80 | 101.60 | 47.62 | 19.050 |
| 20 Amp | Inches | 1.75 | 3.62 | 2.25 | 2.00 | 4.00 | 1.87 | 0.75 |
| | mm | 45.65 | 92.07 | 57.15 | 50.80 | 101.60 | 47.62 | 19.050 |
| 30 Amp | Inches | 1.87 | 3.75 | 2.25 | 2.25 | 4.25 | 2.25 | 1.12 |
| | mm | 47.62 | 95.25 | 57.15 | 57.15 | 107.95 | 57.15 | 28.57 |

Receptacles and Male Receptacles

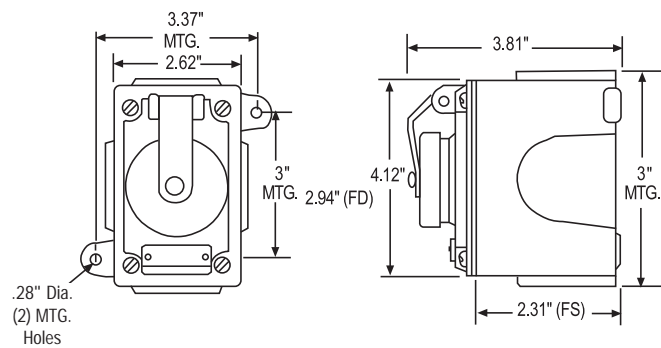
Standard Die Cast Aluminum Back Box

(FSWS/FDWS)



Cast Aluminum/Cast Brass Back Box

(3701-3732 Series)



Performance — Electrical

| | |
|--|---|
| Dielectric Voltage Withstand | 3000 volts |
| Max. Working Voltage | 600 volts RMS (minimum creepage distance 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 |
| Shrouded Contacts | Complies with California Code Title 8, Art. 51, S2510.7(b) for devices exceeding 300VAC |
| Horsepower | Per NEC® 430-151 ratings (non-interrupting) |

Performance — Mechanical

| | |
|--------------------------------|--|
| Impact Resistance | Per UL 1682 Paragraph 34 |
| Cord Accommodation | Round portable service cords per UL standard 62 and CSA C22.2 No. 49.1 |
| Terminal Identification | In accordance with UL 1682 |
| Cable Pull Out Force | In accordance with UL 1682 |
| Product Identification | Identification label and name per UL 1686 |



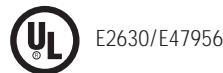
Performance — Environmental

| | |
|-------------------------------|---|
| Moisture Resistance | Per UL 1682 Paragraph 49 Watertight/flap screw cover on receptacle |
| Flammability | V0/5VA 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 |

Material

| | |
|---|------------------------|
| Contact Carrier Interior | Thermoset |
| Housing, Gland Nuts Screw Collar Rings | Cast Aluminum or Brass |
| Contacts: Pins and Sleeves | Brass |
| Hinge Pins (Receptacle) | Stainless Steel |
| Terminals | Brass |
| Terminal Screws, Flap Springs, Assembly Screws, Nuts, Hardware | Stainless Steel |
| Gland Friction Washer | Brass or Aluminum |
| Cable Clamp Bushing | Neoprene |

Approvals



For Plugs and Connectors Combination Gland Nut and Cable Clamp



Provides extra clamping protection in hard service applications. Relieves terminals and rubber gland of all cable strain.

| PLUG OR CONNECTOR SIZE | CAST ALUMINUM CAT. NO. | CAST BRASS CAT. NO. | MAX. CABLE DIA. |
|------------------------|------------------------|---------------------|-----------------|
| EX: 3913 10–20 Amp | 3905 | 3905B | .62" |
| EX: 3934 20/30 Amp | 3906 | 3906B | 1.12" |

NOTE:

Material — cast aluminum, corrosion-resistant copper-free alloy; cast brass, epoxy powder coat finish.

Conduit Adapters



Adapter tapped with NPT thread to accommodate armored and non-metallic cable or flexible conduit.

| PLUG OR CONNECTOR SIZE | CAST ALUMINUM CAT. NO. | CAST BRASS CAT. NO. | TAPPED NPT |
|------------------------|------------------------|---------------------|------------|
| EX: 3913 10–20 Amp | FSA11 | FSA11B | ½" |
| | FSA12 | FSA12B | ¾" |
| EX: 3934 20/30 Amp | FSA21 | FSA21B | ½" |
| | FSA22 | FSA22B | ¾" |
| | FSA23 | FSA23B | 1" |

NOTE: Type FSA furnished complete with gasket.

Cable Bushings

| HOLE DIAMETER FOR CABLE (INCHES) | TYPE 2 10 AMP | TYPE 3 20 AND 30 AMP |
|----------------------------------|---------------|----------------------|
| .313 | SG05 | — |
| .375 | SG1 | JG31 |
| .438 | SG15 | — |
| .500 | SG2 | JG32 |
| .531 | SG2A | — |
| .563 | SG25 | JG325 |
| .594 | SG2B | — |
| .625 | SG3 | JG33 |
| .688 | SG3A | — |
| .750 | SG4 | JG34 |
| .875 | — | JG35 |
| 1.000 | — | JG36** |
| 1.125 | — | JG361** |

** Special for large O.D. cable.

NOTE:

When standard plugs or connectors are required to be furnished with one or more of the above accessories, add the suffix and catalog number of the accessory selected to the catalog number of the plug or connector. Complete list price is the total of the list price of the device plus the list price of the accessory.

Examples — Using Catalog No. 3934:

- Combo. Gland Nut and Cable Clamp 3934-3906
- Adapter at ¼" 3934-FSA22
- ½" Cable Bushing 3934-JG323

Material — Oil-resistant Neoprene.



Type 2
Cable Bushing



Type 3
Cable Bushing

Type FS (Shallow) and Type FD (Deep)

Aluminum boxes have 6-32 cover mounting holes tapped to accommodate all FS and FD cover assemblies.

Brass boxes have 10-24 cover mounting holes tapped to accommodate all FS and FD cover assemblies.



Single-Gang



Two-Gang



DSFD

| GANGS | TYPE | CAST ALUMINUM | CAST BRASS | OVERALL DIMENSIONS* | FOR USE WITH |
|--------|------|---------------|------------|-----------------------|--------------|
| SINGLE | FS | 3701A | 3721 | 4.12" x 2.62" x 2.31" | 15-20A |
| | FD | 3711A | 3731 | 4.12" x 2.62" x 2.94" | 30A |
| | DSFD | 3781A | 3782 | 4.12" x 3.62" x 4.12" | 30A |
| TWO | FS | 3702A | 3722 | 4.12" x 5.5" x 2.25" | 15-20A |
| | FD | 3712A | 3732 | 4.12" x 5.62" x 2.87" | 30A |

* Dimensions are overall exclusive of conduit pads and mounting lugs

NOTE:

When Type FD devices (20A) are to be mounted in boxes, Type FD boxes should be used. FS boxes will not accommodate FD devices (30A or 3P4W).

Mounting — All the above boxes are for surface mounting. For flush mounting, see **page 94**.

Boxes — Cast brass, natural finish; cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish.

* Dimensions are overall exclusive of conduit pads and mounting lugs

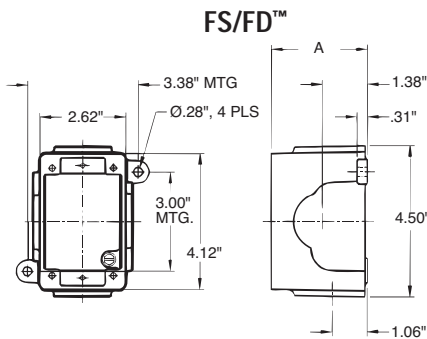
Outlets — Unless otherwise specified, furnished with one .75" outlet per gang, top or bottom. Additional outlets charged extra — see price list. Specify size and location.

Maximum Conduit — FS and FD: 1", one per gang top and bottom and one each side.

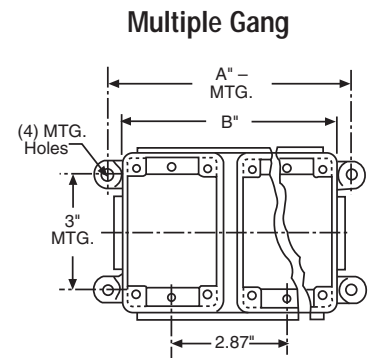
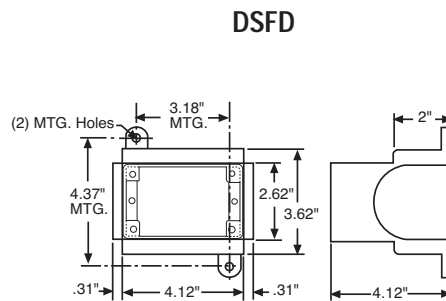
DSFD — One 1.5" or two .5" top and bottom.

Cast iron available on special order — consult your Thomas & Betts representative.

Dimensions



| TYPE | A |
|------|------|
| FS | 2.31 |
| FD | 2.94 |



| A | | B | |
|-------|-------|-------|-------|
| FS | FD | FS | FD |
| 6.50" | 6.50" | 5.50" | 5.62" |

Russellstoll®

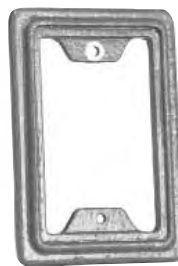
FS/FD™ Adapters and Covers

Adapter Flush Frames*

For mounting to standard wall outlet boxes (2 screw mount).

| GANGS | CAST ALUMINUM | CAST BRASS | OVERALL DIMENSIONS |
|-------|---------------|------------|--------------------|
| 1 | 3671A | 3681 | 5" x 3.5" |
| 2 | 3672A | 3682 | 5" x 6.5" |

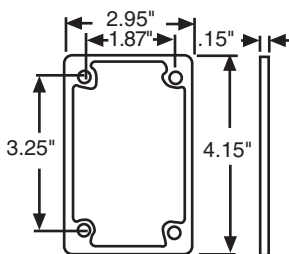
Adapters and covers to fit boxes on [page 93](#).



Blank Cover*

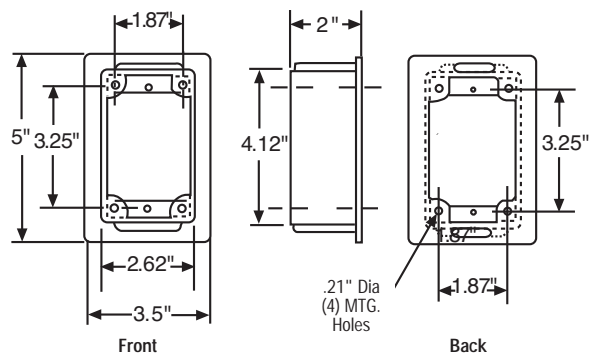
Covers standard FS/FD™ box openings.

| CAT. NO. | MATERIAL |
|----------|---------------|
| 3677A | Cast Aluminum |
| 3687 | Cast Brass |



Flush Wall Mounting Extension*

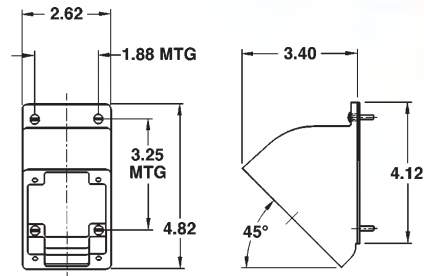
| CAT. NO. | MATERIAL |
|----------|---------------|
| 3679A | Cast Aluminum |
| 3679B | Cast Brass |



45° Angle Adapter*

Mounts to any FS/FD™ box.

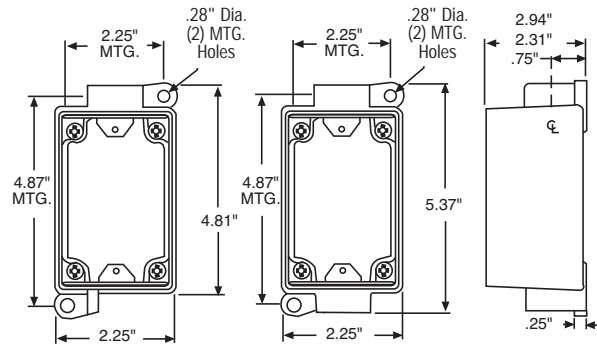
| CAT. NO. | MATERIAL |
|----------|---------------|
| 3678A | Cast Aluminum |
| 3678B | Cast Brass |



Type FSWS and FDWS (with Mounting Shelf for Box-Mounted Devices)

Aluminum Die-Cast Boxes with cover mounting holes tapped for 6-32 screws to accommodate all FS and FD cover assemblies.

| CAT. NO. | CONDUIT ENTRIES | |
|----------|-----------------|--------|
| | TOP | BOTTOM |
| FSWS-62 | 3/4" | NA |
| FDWS-62 | 3/4" | NA |
| FDWS-622 | 3/4" | 3/4" |
| FDWS-63 | 1" | NA |
| FDWS-633 | 1" | 1" |



* Furnished complete with gasket and screws.

NOTE:

Materials — Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish; cast brass, natural finish.

Boxes — Aluminum die-cast, corrosion-resistant copper-free alloy, epoxy powder coat finish.

Outlets — Standard as listed.

Mounting — All of the above boxes are for surface mounting.

Russellstoll®

FS/FD™ Mechanically Interlocked Receptacles

Washdown Industrial/Light Marine — FS/FD™

Marine/Series Industrial — 20 and 30 Amp, 250VAC

Mechanically interlocked FS/FD™ Interface receptacle outlets, available through 30 amp 250VAC, provide added electrical safety in branch circuits.

By design, the plug must be fully inserted into the interlocked receptacle before the switch or circuit breaker can be turned to the "ON" position, and the switch or circuit breaker must be in the "OFF" position before the plug can be withdrawn. This design ensures that when properly installed and operated, the circuit is made and broken by the switch or circuit breaker, not by the connectors.

As with all Russellstoll products, mechanically interlocked receptacles were designed with safety, durability and performance in mind.



Safety

- Mechanical linkage prevents plug insertion or withdrawal unless switch is in "OFF" position
- Circuit breaker protection available on many models
- Ground contacts "make first," "break last"

Durability

- Constructed of copper-free cast aluminum (some types available in brass)
- Sturdy die-cast and sand-cast housings

Performance

- Precision-made, self-aligning and self-wiping contacts
- Receptacles provided with spring-actuated, self-closing flaps
- Devices available in watertight and weathertight versions
- Solderless screw terminals for convenient wiring

FS/FD™ Mechanically Interlocked Receptacles

Mechanically Interlocked Receptacle with Switch

Rating:
20 Amp/600VAC
30 Amp/250VAC



| POLES/WIRES | ALUMINUM** RECEPTACLE W/BOX | FS/FD PLUG | BRASS RECEPTACLE W/BOX | FS/FD PLUG | DURAGARD® PLUG | BUSHING I.D. |
|-------------|--------------------------------|---------------|---------------------------|---------------|-------------------|-----------------|
| 2P3W | F20493C | 3750 | 1593LP | 3750B | 9P33U0 | 5/8" |
| 3P4W | F20493A** | 3760 | 1594LP | 3760B | 9P34U0 | 3/4" |

** For flap cover brass version, add "-B" suffix.

Mechanically Interlocked Receptacle with Circuit Breaker

Rating:
20 Amp/250VAC
30 Amp/250VAC



| POLES/ WIRES | TRIP RATING | ALUMINUM RECEPTACLE W/BOX | FS/FD PLUG | DURAGARD PLUG | BUSHING I.D. |
|-----------------|----------------|------------------------------|---------------|------------------|-----------------|
| 2P3W | 20A | F33048B | 3750 | 9P33U0 | 5/8" |
| | 30A | F33048C | 3750 | | |
| 3P4W | 20A | F33054B | 3760 | 9P34U0 | 3/4" |
| | 30A | F33054C | 3760 | | |
| 50A, 250V* | 50A | C1479AH | 3760 | 9P34U0* | 7/8" |

* Consult technical services for all 50A trip applications (30A device, 50A trip). Also see DuraGard Interlocks. For brass versions, contact Technical Services.

NOTE: For panel mounting or cover assemblies only, please consult your Thomas & Betts representative.

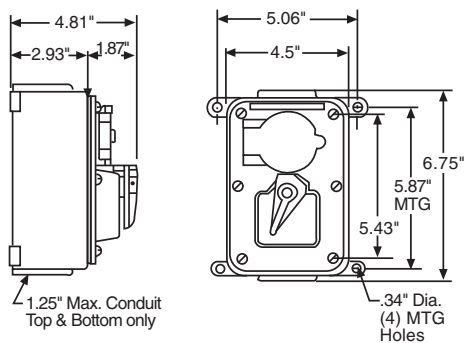
Specifications

- Housings: Cast brass, natural finish. Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish
- Cable Bushings: Oil-resistant, Neoprene strain-relief cable bushings regularly furnished with hole size as listed for plug; other hole sizes available if specified on order; see Accessory Reference Section, Bushing sizes on **page 92**
- Outlets: Unless otherwise specified, boxes are furnished blank
- Receptacle interlocked with switch: Maximum conduit outlets 1½" top and bottom. Specify outlets required
- Receptacle Interlocked with Circuit Breaker: Maximum conduit outlet 1½" at locations V, W, X, Y and Z as per diagram; specify outlets required, use symbols

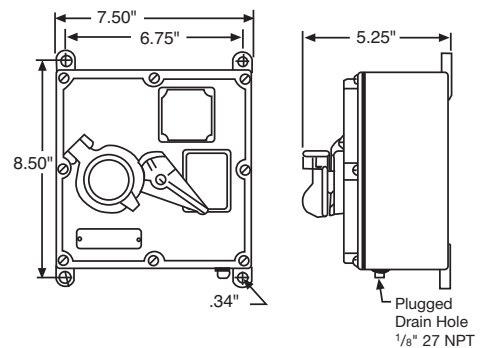
Dimensions

Interlocked with Switch, Surface Mount

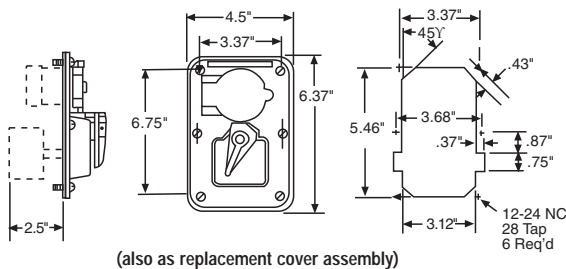
CAT. NO. F18196B&C and F20493A&B



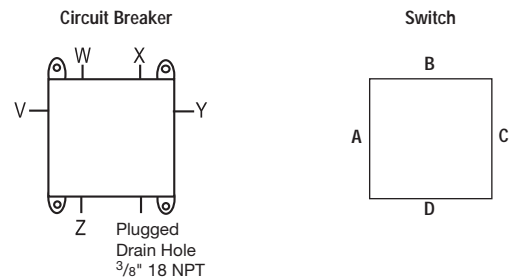
Interlocked with Circuit Breaker



Machine Panel Mount

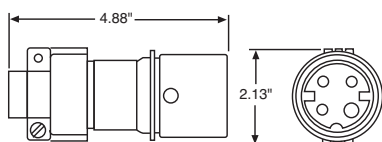


Floor Extension Mount

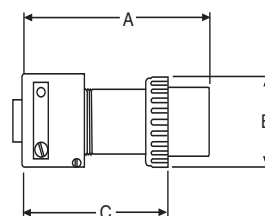


Standard Plug

20/30 Amp FS/FD



30/50 Amp DuraGard



| Amps | | A | B | C |
|--------|--------|-------|------|-------|
| 30 Amp | Inches | 5.38 | 2.38 | 4.16 |
| | mm | 136.6 | 60.5 | 105.7 |
| 50 Amp | Inches | 5.75 | 2.38 | 4.16 |
| | mm | 146.1 | 60.5 | 105.7 |

UniGard® Pin and Sleeve IEC Connections Overview

Safety, Performance and Durability... in a Snap!

Washdown Industrial/Light Marine — UniGuard®



**Beverage
Plants**



**Construction
Sites**



**Food
Processing**



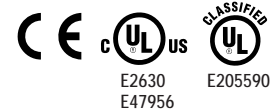
**Marine and
Shipboard**



**Pulp and
Paper Mills**



**Chemical
Plants**



Extensive Product Family

- Safe and reliable, portable electrical connections
- Wide variety of plugs, connectors, receptacles, inlets and mounting boxes
- Watertight (IP67) and splashproof (IP44) versions available
- 20, 30, 60 and 100 Amp ratings for small, medium or large current loads
- cULus Listed for North American ratings
- UL classified to IEC 309-1 and IEC 309-2 for North American and International ratings
- Complete interchangeability with all manufacturers' IEC309-1 and IEC 309-2 devices
- Meets IEC 309 global configurations for safety in industrial applications
- 16, 32, 63 and 125A international ratings available

Watertight

- Watertight design and construction meet stringent IP67 internal protection standards
- Rugged thermoplastic housings resist impact or abuse and provide excellent corrosion resistance
- Unique Thomas & Betts strain relief grip and sealing system ensures superior cable retention and watertight conductor termination
- Ideal for outdoor, wet, marine and washdown applications
- Unique 75% faster assembly with EZ Klik® handle locking, and EZ Tite™ cable grip system

Splashproof

- Suitable for indoor use where splashing liquids and other contaminants may interfere with electrical connections
- Ideal for most heavy commercial applications and light industrial applications
- Available in 20 and 30 Amp ratings

EZ Klik® Locking Mechanism



Self-Aligning Solid Contacts —

- Self-aligning nickel-plated full-round pins and sleeves for maximum cool contact area
- Sleeve pressure rings ensure constant surface contact force
- Nickel plating offers maximum corrosion for any use

Screw Collars Stay Put —

Turreted grip allows for easy handling

The Easy Way —

EZ Klik® locking feature on all 20A/30A plugs and connectors

75% Faster Cable Builds — EZ Tite™ System

- One-piece cable gland
- Nylon locking screw prevents loosening
- Easy hand assembly of cable gland, Grip Tite™ 6-finger clamp and onion-ring bushing



Safe Connections Standard —

Ground contacts “make first, break last” for safe connections even under load

UniGard® Pin and Sleeve IEC Connections Overview

Combination Flap/Screw Cover —

- Integral Neoprene gasket for IP67 watertight protection
- Standard flap cover for IP44 splashproof protection
- Unique flex hinge design

Neoprene Cable Bushing —

- Onion-ring design
- Universal fit capability

Solid Neoprene Gasket in Handle

Grip Tite™ 6-Finger Clamp —

- Provides superior cable retention

Secure Grip Handle —

- Tapered shoulder (20A/30A)
- Ribbed (60A/100A)

Raised Ground Terminal —

- Ensures safe connections every time

Fast and Easy Wiring —

- Unique, one-way terminal access
- Clearly marked terminal connections

Double Secure Wiring —

- Dual, combination point terminal screws for fail-safe connections



Standard Interface/World Ready Full International Compliances

EN60309

UL Classification to IEC 309-1 and IEC 309-2

cULus Listing: UL 1682/1686 and CSA C22.2 No. 182.1

CE conforms to EC Low Voltage Directive

North American and Global Voltage Polarization
"clock positions" available in all standard ratings

Solid, Safe Voltage Selections

One-piece contact carriers with full-color IEC standard voltage-phasing

Coding ensures correct product application every time



Features

No Tools, No Screws Necessary

- EZ Klik® locking handle saves 75% on assembly time
- Unique EZ Klik® assembly feature on 20 and 30 Amp plugs and connectors makes installation and inspection fast and reliable
- Captured gaskets in handles seal out water, chemicals and dust

Easy Action Single-Wiring Point Access Saves Time Wiring

- All terminal screws face in same direction allowing installer to make safe and secure conductor terminations in 30% less time than other devices
- Rugged, corrosion-free thermoplastic housings are color-coded for safe and reliable connections to all other mating type/polarizations, with raised ground terminal standard

Simple Cable Clamping

- Threaded EZ Tite™ cable gland on 20 and 30 Amp devices makes assembly fast and easy
- One-piece lock screw verifies clamp locking hold, with no external metal contact possible (20 and 30 Amp devices)

Unique Fast Assembly

- One-piece EZ Tite™ cable gland with locking screw loads to cable followed by Grip Tite™ 6-finger cable clamp/grip piece
- Watertight onion-ring bushing fits a wide variety of outside diameters

Watertight and Grip Tite™ Safety

- Grip Tite™ flexible 6-finger clamp teeth holds well beyond all agency test pullout forces
- No internal clamps required
- Available in all amperages

The Performance Connection

- Watertight spring-loaded covers with high-strength flex-hinge screw covers on IP67 devices
- Flap covers on IP44 splashproof styles
- Safety, performance and durability for all IEC 309 applications worldwide

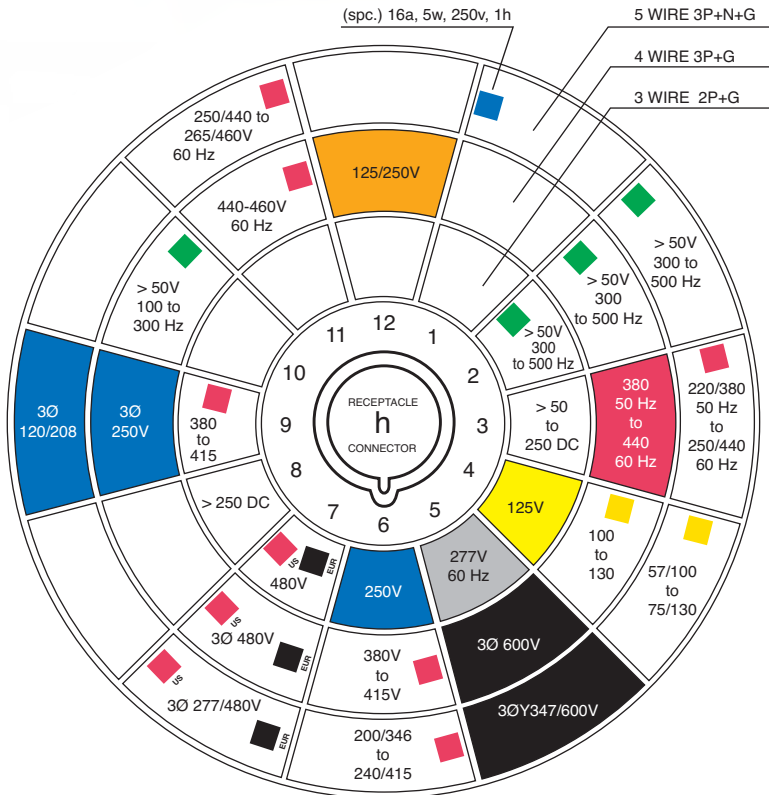
UniGard® Polarization Guide — North American Ratings

UniGard Global Configuration Standards

Configuration

It's impossible to mismatch different voltages of the IEC 309-2 Standard Devices

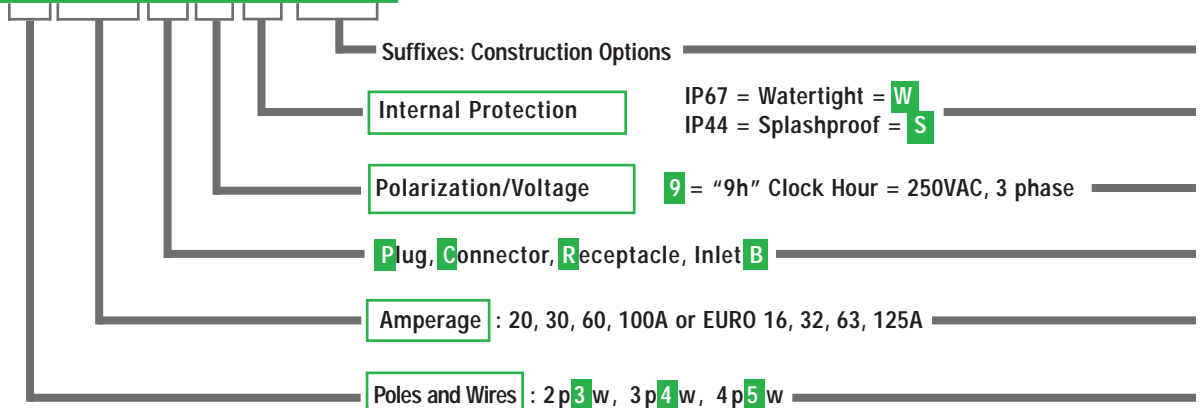
- **Device size determines amperage.** Each voltage grouping is a different size so they are easily distinguishable for compatibility.
- **All IEC 309-2 devices are color-coded.** Each voltage grouping has its own distinct color coding for mating compatibility.
- **Every IEC 309-2 mating plug grounding pin is a mirror image of the female device.** Devices of differing voltages cannot be mated to one another.
- **The Female receptacles and connectors have a "clock face" voltage polarization.** A "keyway" female housing notch is always at 6 o'clock reference position. Ground contact (sleeve) position on this "clockface" establishes voltage polarization (ie. "7h" = 7 o'clock ground sleeve position). Male pin positions are mirror image.



Washdown Industrial/Light Marine — UniGard®

Catalog Numbering System

RS 4 30 P 9 W



| Rated Voltage | Color | Usage (N. Amer., R.O.W. Euro) |
|--------------------|--------|-------------------------------|
| 110–130V | Yellow | No. Amer. and Euro. |
| 208–250V | Blue | N. Amer. and Euro. |
| 380–415V | Red | Euro. |
| 500V + | Black | N. Amer. and Euro. |
| 277/480V | Red | N. Amer. |
| 277V | Gray | N. Amer. |
| 125/250V | Orange | N. Amer. |
| 250/440V | Red | Latin America |
| 50–600V, 300/400Hz | Green | Euro. and N. Amer. |
| 50–250VDC | White | Euro. and N. Amer. |

Russellstoll®

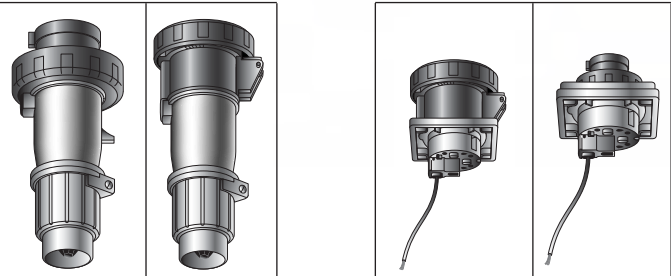
UniGard® Watertight/Splashproof Pin and Sleeve Devices IP67 and IP44 — 20 Amp

Washdown Industrial/Light Marine — UniGard®

20 AMP



IP67 (shown)



| Poles and Wires | Configuration | | | Voltage/ Color Coding | Plug | Connector | Cable O.D. Range Inches | Receptacle* | Inlet* | |
|-----------------|--------------------------|----------------|---------------|--------------------------|------------|-----------|----------------------------|-------------|-----------|-----------|
| | Receptacle/ Connector | Plug/ Inlet | Clock Hour | | | | | | | |
| WATERTIGHT IP67 | 2P3W | | | 4h | 125 | RS320P4W | RS320C4W | .57-.71 | RS320R4W | RS320B4W |
| | 2P3W | | | 6h | 250 | RS320P6W | RS320C6W | .57-.71 | RS320R6W | RS320B6W |
| | 2P3W | | | 5h | 277 | RS320P5W | RS320C5W | .57-.71 | RS320R5W | RS320B5W |
| | 2P3W | | | 7h | 480 | RS320P7W | RS320C7W | .57-.71 | RS320R7W | RS320B7W |
| | 3P4W | | | 12h | 125/250 | RS420P12W | RS420C12W | .57-.71 | RS420R12W | RS420B12W |
| | 3P4W | | | 9h | 3Ø250 | RS420P9W | RS420C9W | .57-.71 | RS420R9W | RS420B9W |
| | 3P4W | | | 7h | 3Ø480 | RS420P7W | RS420C7W | .57-.71 | RS420R7W | RS420B7W |
| | 3P4W | | | 5h | 3Ø600 | RS420P5W | RS420C5W | .57-.71 | RS420R5W | RS420B5W |
| | 4P5W | | | 9h | 3ØY120/208 | RS520P9W | RS520C9W | .57-.71 | RS520R9W | RS520B9W |
| | 4P5W | | | 7h | 3ØY277/480 | RS520P7W | RS520C7W | .57-.71 | RS520R7W | RS520B7W |
| | 4P5W | | | 5h | 3ØY347/600 | RS520P5W | RS520C5W | .57-.71 | RS520R5W | RS520B5W |

IP44 Construction: No screw collars on male devices; female devices have flap covers only.

| | | | | | | | | | | |
|------------------|------|--|--|-----|-------------|-----------|-----------|---------|-----------|-----------|
| SPLASHPROOF IP44 | 2P3W | | | 4h | 125 | RS320P4S | RS320C4S | .57-.71 | RS320R4S | RS320B4S |
| | 2P3W | | | 6h | 250 | RS320P6S | RS320C6S | .57-.71 | RS320R6S | RS320B6S |
| | 2P3W | | | 5h | 277 | RS320P5S | RS320C5S | .57-.71 | RS320R5S | RS320B5S |
| | 3P4W | | | 12h | 125/250 | RS420P12S | RS420C12S | .57-.71 | RS420R12S | RS420B12S |
| | 3P4W | | | 9h | 3ph.250 | RS420P9S | RS420C9S | .57-.71 | RS420R9S | RS420B9S |
| | 4P5W | | | 9h | 3ph.120/208 | RS520P9S | RS520C9S | .57-.71 | RS520R9S | RS520B9S |

* See page 111 for back box/mounting options.

UL Listing E2630, E47956
UL Classification E205590

Liquidtight Conduit Adapter Kit

| CAT. NO. | DESCRIPTION |
|----------|-----------------------|
| 2LTK4C50 | 20A 3 and 4W 1/2" NPT |
| 3LTK4C75 | 20A 5W 3/4" NPT |

Thomas & Betts

www.tnb.com

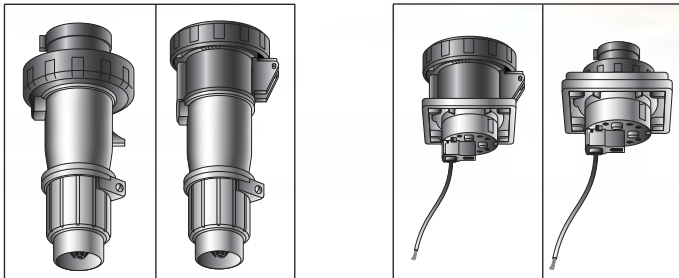
United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

UniGard® Watertight/Splashproof Pin and Sleeve Devices IP67 and IP44 — 30 Amp

30 AMP



IP67 (shown)



Washdown Industrial/Light Marine — UniGard®

| | Poles and Wires | Configuration | | | Voltage/ Color Coding | Plug | Connector | Cable O.D. Range Inches | Receptacle* | Inlet* |
|------------------------|-----------------|--------------------------|----------------|---------------|--------------------------|-----------|-----------|----------------------------|-------------|-----------|
| | | Receptacle/ Connector | Plug/ Inlet | Clock Hour | | | | | | |
| WATERTIGHT IP67 | 2P3W | | | 4h | 125 | RS330P4W | RS330C4W | .675-.91 | RS330R4W | RS330B4W |
| | 2P3W | | | 6h | 250 | RS330P6W | RS330C6W | .675-.91 | RS330R6W | RS330B6W |
| | 2P3W | | | 7h | 480 | RS330P7W | RS330C7W | .675-.91 | RS330R7W | RS330B7W |
| | 3P4W | | | 12h | 125/250 | RS430P12W | RS430C12W | .675-.91 | RS430R12W | RS430B12W |
| | 3P4W | | | 9h | 3Ø250 | RS430P9W | RS430C9W | .675-.91 | RS430R9W | RS430B9W |
| | 3P4W | | | 7h | 3Ø480 | RS430P7W | RS430C7W | .675-.91 | RS430R7W | RS430B7W |
| | 3P4W | | | 5h | 3Ø600 | RS430P5W | RS430C5W | .675-.91 | RS430R5W | RS430B5W |
| | 4P5W | | | 9h | 3ØY120/208 | RS530P9W | RS530C9W | .675-.91 | RS530R9W | RS530B9W |
| | 4P5W | | | 7h | 3ØY277/480 | RS530P7W | RS530C7W | .675-.91 | RS530R7W | RS530B7W |
| | 4P5W | | | 5h | 3ØY347/600 | RS530P5W | RS530C5W | .675-.91 | RS530R5W | RS530B5W |

IP44 Construction: No screw collars on male devices; female devices have flap covers only.

| | Poles and Wires | Receptacle/ Connector | Plug/ Inlet | Clock Hour | Voltage/ Color Coding | Plug | Connector | Cable O.D. Range Inches | Receptacle* | Inlet* |
|-------------------------|-----------------|--------------------------|----------------|---------------|--------------------------|-----------|-----------|----------------------------|-------------|-----------|
| SPLASHPROOF IP44 | 2P3W | | | 4h | 125 | RS330P4S | RS330C4S | .675-.91 | RS330R4S | RS330B4S |
| | 2P3W | | | 6h | 250 | RS330P6S | RS330C6S | .675-.91 | RS330R6S | RS330B6S |
| | 2P3W | | | 5h | 277 | RS330P5S | RS330C5S | .675-.91 | RS330R5S | RS330B5S |
| | 3P4W | | | 12h | 125/250 | RS430P12S | RS430C12S | .675-.91 | RS430R12S | RS430B12S |
| | 3P4W | | | 9h | 3ph.250 | RS430P9S | RS430C9S | .675-.91 | RS430R9S | RS430B9S |
| | 4P5W | | | 9h | 3ph.120/208 | RS530P9S | RS530C9S | .675-.91 | RS530R9S | RS530B9S |

* See page 111 for back box/mounting options.

UL Listing E2630, E47956
UL Classification E205590

Liquidtight Conduit Adapter Kit

| CAT. NO | DESCRIPTION |
|----------|-----------------------|
| 3LTK4C50 | 30A 3 and 4W 1/2" NPT |
| 3LTK4C10 | 30A 3 and 4W 1" NPT |
| 3LTK4C75 | 30A 3 and 4W 3/4" NPT |
| 3LTK5C75 | 30A 5W 3/4" NPT |
| 3LTK5C10 | 30A 5W 1" NPT |

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

Thomas & Betts

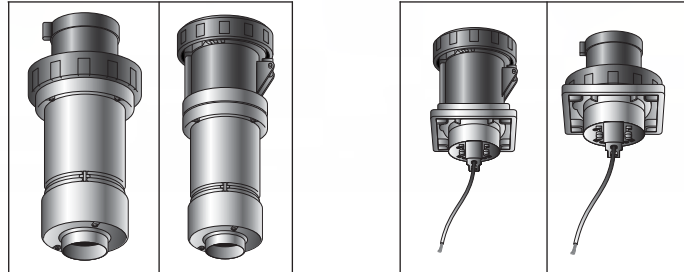
www.tnb.com

Russellstoll®

UniGard® Watertight Pin and Sleeve Devices IP67 — 60 Amp

Washdown Industrial/Light Marine — UniGard®

60 AMP



| Poles/ Wires | Configuration | | | Voltage/ Color Coding | Plug | Connector | Cable O.D. Range Inches | Receptacle* | Inlet* |
|-----------------|--------------------------|----------------|---------------|-----------------------------|-----------|-----------|-------------------------------|-------------|-----------|
| | Receptacle/ Connector | Plug/ Inlet | Clock Hour | | | | | | |
| 2P3W | | | 4h | 125 | RS360P4W | RS360C4W | .937-1.375 | RS360R4W | RS360B4W |
| 2P3W | | | 6h | 250 | RS360P6W | RS360C6W | .937-1.375 | RS360R6W | RS360B6W |
| 2P3W | | | 5h | 277 | RS360P5W | RS360C5W | .937-1.375 | RS360R5W | RS360B5W |
| 2P3W | | | 7h | 480 | RS360P7W | RS360C7W | .937-1.375 | RS360R7W | RS360B7W |
| 2P3W | | | 3h | 250DC | RS360P3W | RS360C3W | .937-1.375 | RS360R3W | RS360B3W |
| 3P4W | | | 12h | 125/250 | RS460P12W | RS460C12W | .937-1.375 | RS460R12W | RS460B12W |
| 3P4W | | | 9h | 3Ø250 | RS460P9W | RS460C9W | .937-1.375 | RS460R9W | RS460B9W |
| 3P4W | | | 7h | 3Ø480 | RS460P7W | RS460C7W | .937-1.375 | RS460R7W | RS460B7W |
| 3P4W | | | 5h | 3Ø600 | RS460P5W | RS460C5W | .937-1.375 | RS460R5W | RS460B5W |
| 4P5W | | | 9h | 3ØY120/208 | RS560P9W | RS560C9W | .937-1.375 | RS560R9W | RS560B9W |
| 4P5W | | | 7h | 3ØY277/480 | RS560P7W | RS560C7W | .937-1.375 | RS560R7W | RS560B7W |
| 4P5W | | | 5h | 3ØY347/600 | RS560P5W | RS560C5W | .937-1.375 | RS560R5W | RS560B5W |

* See page 111 for back box/mounting options.

UL Listing E2630, E47956

UL Classification E205590

NOTE:

All UniGard 60 and 100 Amp devices ship standard with IEC 309-1 configuration "pilot" pin/sleeves used for auxiliary contact service.

Special construction without these pilot contacts is available. Add "XC" to end of Cat. No.

Liquidtight Conduit Adapter Kit*

| CAT. NO. | DESCRIPTION |
|----------|---------------|
| 6LTK5C75 | 60A 5W ¾" NPT |
| 6LTK5C10 | 60A 5W 1" NPT |

* Additional sizes available on request.

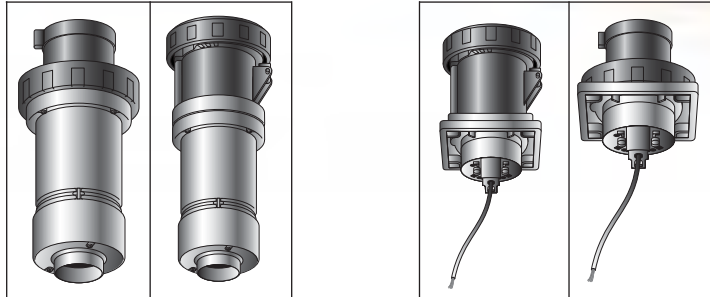
Thomas & Betts

www.tnb.com

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

UniGard® Watertight Pin and Sleeve Devices IP67 — 100 Amp

100 AMP



Washdown Industrial/Light Marine — UniGard®

| | Poles/ Wires | Configuration | | | Voltage/ Color Coding | Plug | Connector | Cable O.D. Range Inches | Receptacle* | Inlet* |
|-----------------|-----------------|--------------------------|----------------|---------------|-----------------------------|------------|------------|-------------------------------|-------------|------------|
| | | Receptacle/ Connector | Plug/ Inlet | Clock Hour | | | | | | |
| WATERTIGHT IP67 | 2P3W** | | | 6h | 250 | RS3100P6W | RS3100C6W | 1.2650–1.790 | RS3100R6W | RS3100B6W |
| | 2P3W** | | | 7h | 480 | RS3100P7W | RS3100C7W | 1.2650–1.790 | RS3100R7W | RS3100B7W |
| | 3P4W | | | 12h | 125/250 | RS4100P12W | RS4100C12W | 1.2650–1.790 | RS4100R12W | RS4100B12W |
| | 3P4W | | | 9h | 3Ø250 | RS4100P9W | RS4100C9W | 1.2650–1.790 | RS4100R9W | RS4100B9W |
| | 3P4W | | | 7h | 3Ø480 | RS4100P7W | RS4100C7W | 1.2650–1.790 | RS4100R7W | RS4100B7W |
| | 3P4W | | | 5h | 3Ø600 | RS4100P5W | RS4100C5W | 1.2650–1.790 | RS4100R5W | RS4100B5W |
| | 4P5W | | | 9h | 3ØY120/208 | RS5100P9W | RS5100C9W | 1.2650–1.790 | RS5100R9W | RS5100B9W |
| | 4P5W | | | 7h | 3ØY277/480 | RS5100P7W | RS5100C7W | 1.2650–1.790 | RS5100R7W | RS5100B7W |
| | 4P5W | | | 5h | 3ØY347/600 | RS5100P5W | RS5100C5W | 1.2650–1.790 | RS5100R5W | RS5100B5W |

* See page 111 for back box/mounting options.

** Alternate vendor-supplied item; construction features will vary from specs in this catalog. Full IEC approval and mating guaranteed. Contact Technical Services for inlet/receptacle mounting components.

UL Listing E2630, E47956

UL Classification E205590

NOTE: All UniGard 60 and 100 Amp devices ship standard with IEC 309-1 configuration "pilot" pin/sleeves used for auxiliary contact service.

Special construction without these pilot contacts is available. (Add "XC" to end of Cat. No.)

Liquidtight Conduit Adapter Kit

| CAT. NO. | DESCRIPTION |
|----------|-------------|
|----------|-------------|

| | |
|-------------|---------------------|
| 10LTK5C10▼ | 100A 4W, 5W 1" NPT |
| 10LTK5C125▼ | 100A 4W, 5W 1¼" NPT |
| 10LTK5C150▼ | 100A 4W, 5W 1½" NPT |

▼ For 4-wire and 5-wire plugs and connectors only. Contact Technical Services for 3-wire plug and connector conduit adapters. 100A 3-wire plugs and connectors use PG48 backhandle thread.

Performance — Electrical

| | |
|--|---|
| Dielectric Voltage Withstand | 3000 volts for 1 minute (fixed devices) 2200 volts for 1 minute (portable devices) |
| Maximum Working Voltage | 600VAC/250VDC (minimum creepage and clearances per UL 840) |
| Current Interrupting/Load Breaking | Tested to 150% of full rated current for circuit interrupting |
| Temperature Rise | Maximum 30° C rise at full rated current after 50 cycles overload at 150% rated load at 0.75-pf |
| Endurance with Load Per IEC309-1 Clause 21 | 20 Amp: 5000 cycles — Load only 30 Amp: 1000 cycles — Alternating load 60 Amp: 1000 cycles — Alternating load 100 Amp: 250 cycles — Alternating load |

Performance — Mechanical

| | |
|--|--|
| Cold (-25° C) Impact Resistance | Per UL 1682 Section 34 and IEC 309-1 Clause 24 |
| Cable O.D. Accommodation | Round portable service cord from 0.57" O.D. through 1.79" O.D. |
| Terminal Identification | In accordance with UL 1682 standards and IEC390-1: as L1-L2-L3-N-G |
| Cable Pull-Out Force | Per UL 1682 Section 33 and IEC309-1 Clause 23 |
| Product Identification | Molded-in product trademark(s) and UL approved product label |

Performance — Environmental

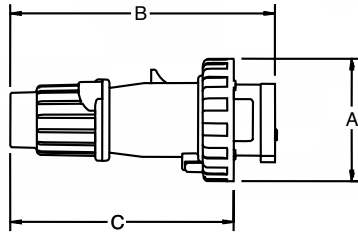
| | |
|-------------------------------|--|
| Moisture Resistance | Per IEC309-1; Watertight flap/screw cover on IP67 devices or splashproof flap cover on IP44 devices |
| Flammability | All components V1 or better per UL94, V0 product ratings available |
| Operating Temperatures | Maximum continuous 90° C/194° F; minimum -25° C/-13° F |
| Chemical Resistance | Resists standard industrial hydrocarbons, acids, bases and solvents |
| Corrosion Resistance | All metallic components stainless steel or nickel-plated brass Sleeve pressure rings of zinc-plated steel |

Materials

| | |
|----------------------------------|--|
| Housing | Valox® |
| Contact Carriers | Valox |
| Cable Gland Nut | Valox |
| Cable Bushing | Solid Neoprene, onion-ring type |
| O-Ring, Seals and Gaskets | Solid Neoprene |
| Pins & Sleeves | Nickel-plated brass |
| Sleeve Force Ring | Zinc-plated steel |
| Terminal Screws | Nickel-plated steel |
| Flap/Screw Cover Springs | Stainless steel |
| EZ Cliik® Spring | Stainless steel |
| Mounting Flanges | Valox |
| Cast Enclosures/Adapters | 2-layer electrostatic epoxy-coated, copper-free aluminum enclosures (Valox Euro style NM also available) |

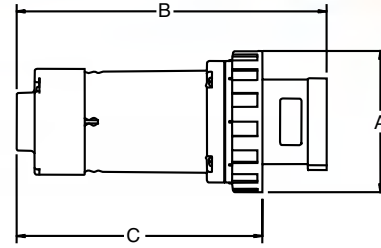
(Valox® is a trademark of GE)





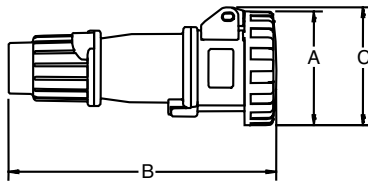
Plug IP67 16/20A and 30/32A

| CAT. NO. | A | | B | | C | | CORD GRIP RANGE | |
|-------------|--------|-----|--------|-----|--------|-----|-----------------|-------|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.87 | 73 | 6.20 | 157 | 5.23 | 133 | .570-.710 | 14-18 |
| 16/20A 3P4W | 3.17 | 81 | 6.47 | 164 | 5.51 | 140 | .570-.710 | 14-18 |
| 16/20A 4P5W | 3.48 | 88 | 7.02 | 178 | 6.06 | 154 | .570-.710 | 14-18 |
| 30/32A 2P3W | 3.66 | 93 | 7.37 | 187 | 6.13 | 156 | .675-.910 | 17-23 |
| 30/32A 3P4W | 3.66 | 93 | 7.37 | 187 | 6.13 | 156 | .675-.910 | 17-23 |
| 30/32A 4P5W | 3.96 | 101 | 8.15 | 207 | 6.91 | 176 | .675-.910 | 17-23 |



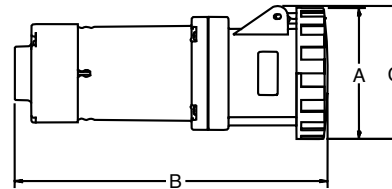
Plug IP67 60/63A and 100/125A

| CAT. NO. | A | | B | | C | | CORD GRIP RANGE | |
|---------------|--------|-----|--------|-----|--------|-----|-----------------|-------|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 60/63A 2P3W | 4.41 | 112 | 9.68 | 246 | 7.67 | 195 | .937-1.375 | 24-35 |
| 60/63A 3P4W | 4.41 | 112 | 9.68 | 246 | 7.67 | 195 | .937-1.375 | 24-35 |
| 60/63A 4P5W | 4.41 | 112 | 9.68 | 246 | 7.67 | 195 | .937-1.375 | 24-35 |
| 100/125A 3P4W | 5.06 | 129 | 12.16 | 309 | 9.83 | 250 | 1.265-1.790 | 32-45 |
| 100/125A 4P5W | 5.06 | 129 | 12.16 | 309 | 9.83 | 250 | 1.265-1.790 | 32-45 |



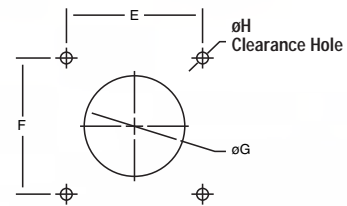
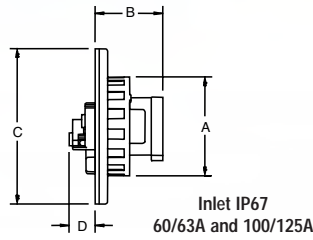
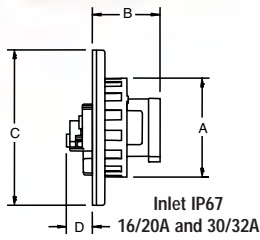
Connector IP67 16/20A and 30/32A

| CAT. NO. | A | | B | | C | | CORD GRIP RANGE | |
|-------------|--------|-----|--------|-----|--------|-----|-----------------|-------|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.87 | 73 | 6.75 | 171 | 2.97 | 75 | .570-.710 | 14-18 |
| 16/20A 3P4W | 3.17 | 81 | 7.04 | 179 | 3.28 | 83 | .570-.710 | 14-18 |
| 16/20A 4P5W | 3.48 | 88 | 7.62 | 194 | 3.75 | 95 | .570-.710 | 14-18 |
| 30/32A 2P3W | 3.66 | 93 | 8.04 | 204 | 4.04 | 103 | .675-.910 | 17-23 |
| 30/32A 3P4W | 3.66 | 93 | 8.04 | 204 | 4.04 | 103 | .675-.910 | 17-23 |
| 30/32A 4P5W | 3.96 | 101 | 8.83 | 224 | 4.03 | 102 | .675-.910 | 17-23 |



Connector IP67 60/63A and 100/125A

| CAT. NO. | A | | B | | C | | CORD GRIP RANGE | |
|---------------|--------|-----|--------|-----|--------|-----|-----------------|-------|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 60/63A 2P3W | 4.41 | 112 | 10.52 | 267 | 4.47 | 114 | .937-1.375 | 24-35 |
| 60/63A 3P4W | 4.41 | 112 | 10.52 | 267 | 4.47 | 114 | .937-1.375 | 24-35 |
| 60/63A 4P5W | 4.41 | 112 | 10.52 | 267 | 4.47 | 114 | .937-1.375 | 24-35 |
| 100/125A 3P4W | 5.06 | 129 | 12.80 | 325 | 5.06 | 129 | 1.265-1.790 | 32-45 |
| 100/125A 4P5W | 5.06 | 129 | 12.80 | 325 | 5.06 | 129 | 1.265-1.790 | 32-45 |

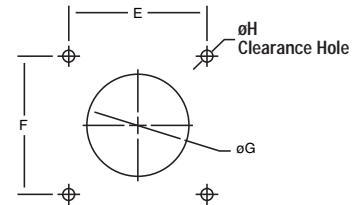
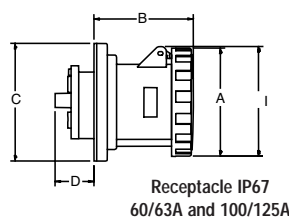
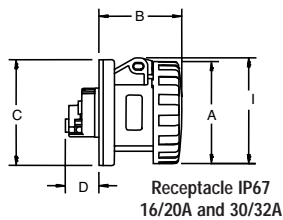


Inlet IP67 16/20A and 30/32A

| CAT. NO. | A | | B | | C | | D | | E | | F | | G | | H | |
|-------------|--------|-----|--------|----|--------|-----|--------|----|--------|----|--------|----|--------|----|--------|-----|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.87 | 73 | 1.96 | 50 | 4.50 | 114 | .75 | 19 | 3.87 | 98 | 3.87 | 98 | 3.0 | 76 | .282 | 7.2 |
| 16/20A 3P4W | 3.17 | 81 | 1.96 | 50 | 4.50 | 114 | .75 | 19 | 3.87 | 98 | 3.87 | 98 | 3.03 | 77 | .282 | 7.2 |
| 16/20A 4P5W | 3.48 | 88 | 1.96 | 50 | 4.50 | 114 | .75 | 19 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 |
| 30/32A 2P3W | 3.66 | 93 | 2.32 | 59 | 4.50 | 114 | 1.32 | 34 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 |
| 30/32A 3P4W | 3.66 | 93 | 2.32 | 59 | 4.50 | 114 | 1.32 | 34 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 |
| 30/32A 4P5W | 3.96 | 101 | 2.32 | 59 | 4.50 | 114 | 1.32 | 34 | 3.87 | 98 | 3.87 | 98 | 3.75 | 95 | .282 | 7.2 |

Inlet IP67 60/63A and 100/125A

| CAT. NO. | A | | B | | C | | D | | E | | F | | G | | H | |
|---------------|--------|-----|--------|----|--------|-----|--------|----|--------|-----|--------|-----|--------|-----|--------|-----|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 60/63A 2P3W | 4.41 | 112 | 3.44 | 87 | 4.50 | 114 | 1.68 | 43 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 |
| 60/63A 3P4W | 4.41 | 112 | 3.44 | 87 | 4.50 | 114 | 1.68 | 43 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 |
| 60/63A 4P5W | 4.41 | 112 | 3.44 | 87 | 4.50 | 114 | 1.68 | 43 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 |
| 100/125A 3P4W | 5.06 | 129 | 3.88 | 99 | 5.50 | 140 | 1.94 | 49 | 4.87 | 124 | 4.87 | 124 | 4.5 | 114 | .282 | 7.2 |
| 100/125A 4P5W | 5.06 | 129 | 3.88 | 99 | 5.50 | 140 | 1.94 | 49 | 4.87 | 124 | 4.87 | 124 | 4.5 | 114 | .282 | 7.2 |

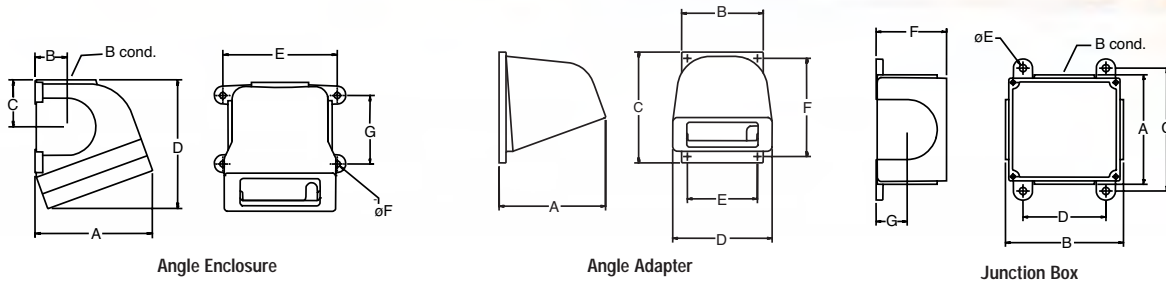


Receptacle IP67 16/20A and 30/32A

| CAT. NO. | A | | B | | C | | D | | E | | F | | G | | H | | I | |
|-------------|--------|-----|--------|----|--------|----|--------|----|--------|----|--------|----|--------|----|--------|-----|--------|-----|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.87 | 73 | 2.32 | 59 | 2.97 | 76 | .94 | 24 | 2.36 | 60 | 2.36 | 60 | 2.56 | 65 | .219 | 5.5 | 2.97 | 75 |
| 16/20A 3P4W | 3.17 | 81 | 2.34 | 60 | 2.97 | 76 | .94 | 24 | 2.36 | 60 | 2.36 | 60 | 2.56 | 65 | .219 | 5.5 | 3.28 | 83 |
| 16/20A 4P5W | 3.48 | 88 | 2.37 | 60 | 2.97 | 76 | .94 | 24 | 2.36 | 60 | 2.36 | 60 | 2.56 | 65 | .219 | 5.5 | 3.75 | 95 |
| 30/32A 2P3W | 3.66 | 93 | 2.79 | 71 | 2.97 | 76 | 1.52 | 39 | 2.36 | 60 | 2.36 | 60 | 2.56 | 65 | .219 | 5.5 | 4.04 | 103 |
| 30/32A 3P4W | 3.66 | 93 | 2.79 | 71 | 2.97 | 76 | 1.52 | 39 | 2.36 | 60 | 2.36 | 60 | 2.56 | 65 | .219 | 5.5 | 4.04 | 103 |
| 30/32A 4P5W | 3.96 | 101 | 2.81 | 71 | 2.97 | 76 | 1.52 | 39 | 2.36 | 60 | 2.36 | 60 | 2.56 | 65 | .219 | 5.5 | 4.03 | 102 |

Receptacle IP67 60/63A and 100/125A

| CAT. NO. | A | | B | | C | | D | | E | | F | | G | | H | | I | |
|---------------|--------|-----|--------|-----|--------|-----|--------|----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 60/63A 2P3W | 4.41 | 112 | 4.16 | 106 | 4.50 | 114 | 1.68 | 43 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 | 4.47 | 114 |
| 60/63A 3P4W | 4.41 | 112 | 4.16 | 106 | 4.50 | 114 | 1.68 | 43 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 | 4.47 | 114 |
| 60/63A 4P5W | 4.41 | 112 | 4.16 | 106 | 4.50 | 114 | 1.68 | 43 | 3.87 | 98 | 3.87 | 98 | 3.5 | 89 | .282 | 7.2 | 4.47 | 114 |
| 100/125A 3P4W | 5.06 | 129 | 4.52 | 115 | 5.50 | 140 | 1.94 | 49 | 4.87 | 124 | 4.87 | 124 | 4.5 | 114 | .282 | 7.2 | 5.06 | 129 |
| 100/125A 4P5W | 5.06 | 129 | 4.52 | 115 | 5.50 | 140 | 1.94 | 49 | 4.87 | 124 | 4.87 | 124 | 4.5 | 114 | .282 | 7.2 | 5.06 | 129 |



Angle Enclosure

Angle Adapter

Junction Box

20° Angle Enclosures*

| CAT. NO. | CONDUIT SIZE | USE | A | | B | | C | | D | | E | | F | | G | |
|-----------|--------------|---------------------|--------|-----|--------|----|--------|----|--------|-----|--------|-----|--------|----|--------|-----|
| | | | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| BE3-B75 | ¾" | 20A and 30A Devices | 3.34 | 85 | .97 | 25 | 1.12 | 28 | 4.12 | 105 | 4.00 | 102 | .25 | 6 | 2.38 | 60 |
| BE3-B100 | 1" | 20A and 30A Devices | 3.34 | 85 | .97 | 25 | 1.12 | 28 | 4.12 | 105 | 4.00 | 102 | .25 | 6 | 2.38 | 60 |
| AE6-B125 | 1¼" | 60A Devices | 5.13 | 130 | 1.41 | 36 | 2.05 | 52 | 5.62 | 143 | 5.00 | 127 | .28 | 7 | 3.00 | 76 |
| AE6-B150 | 1½" | 60A Devices | 5.13 | 130 | 1.41 | 36 | 2.05 | 52 | 5.62 | 143 | 5.00 | 127 | .28 | 7 | 3.00 | 76 |
| AE10-B150 | 1½" | 100A Devices | 7.05 | 179 | 1.81 | 46 | 2.68 | 68 | 6.88 | 175 | 5.50 | 140 | .34 | 9 | 4.00 | 102 |
| AE10-B200 | 2" | 100A Devices | 7.05 | 179 | 1.81 | 46 | 2.68 | 68 | 6.88 | 175 | 5.50 | 140 | .34 | 9 | 4.00 | 102 |

* For use where there is no existing T&B Russellstoll JB series junction box installed. For 20/30A inlets, use 60A size.

20° Angle Adapters*

| CAT. NO. | USE | A | | B | | C | | D | | E | | F | |
|----------|---------------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| AA3 | 20A and 30A Devices | 3.17 | 81 | 3.00 | 76 | 4.25 | 108 | 3.00 | 76 | 2.50 | 64 | 3.75 | 95 |
| AA6L | 60A Devices | 5.23 | 133 | 4.00 | 102 | 5.43 | 138 | 4.88 | 124 | 3.44 | 87 | 4.81 | 122 |
| AA10L | 100A Devices | 7.36 | 187 | 5.50 | 140 | 5.50 | 140 | 6.00 | 152 | 4.87 | 124 | 4.87 | 124 |

* To be used with JB series junction boxes or panel mount. For 20/30A inlets, use 60A size.

Rectangular Junction Boxes*

| CAT. NO. | CONDUIT SIZE | USE | A | | B | | C | | D | | E | | F | | G | |
|-----------|--------------|---------------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|----|--------|----|--------|----|
| | | | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| JB3-B75 | ¾" | 20A and 30A Devices | 2.94 | 75 | 4.19 | 106 | 3.69 | 94 | 2.69 | 68 | .25 | 6 | 2.38 | 60 | 1.25 | 32 |
| JB3-B100 | 1" | 20A and 30A Devices | 2.94 | 75 | 4.19 | 106 | 3.69 | 94 | 2.69 | 68 | .25 | 6 | 2.38 | 60 | 1.25 | 32 |
| JB6-B125 | 1¼" | 60A Devices | 4.00 | 102 | 5.63 | 143 | 4.94 | 125 | 3.81 | 97 | .34 | 9 | 3.00 | 76 | 1.50 | 38 |
| JB6-B150 | 1½" | 60A Devices | 4.00 | 102 | 5.63 | 143 | 4.94 | 125 | 3.81 | 97 | .34 | 9 | 3.00 | 76 | 1.50 | 38 |
| JB10-B150 | 1½" | 100A Devices | 5.50 | 140 | 5.50 | 140 | 4.25 | 108 | 6.75 | 171 | .34 | 9 | 3.75 | 95 | 2.00 | 51 |
| JB10-B200 | 2" | 100A Devices | 5.50 | 140 | 5.50 | 140 | 4.25 | 108 | 6.75 | 171 | .34 | 9 | 3.75 | 95 | 2.00 | 51 |

* Unless otherwise specified, junction boxes are furnished with one conduit size at location B. To be used with AA series angle adapters. For 20/30A inlets, use 60A size.

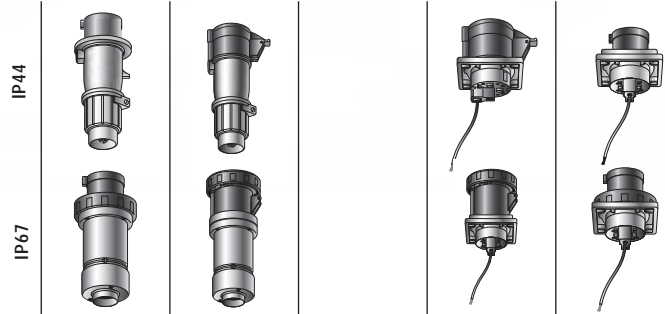
Russellstoll®

UniGard® International Amperage Ratings

Washdown Industrial/Light Marine — UniGard®

International Ratings

Common polarizations shown. Other ratings are available; contact technical services. For 16A or 32A IP67 watertight ratings (-W suffix), substitute -W instead of -S in catalog number. Example: RS316P4W.



| 16 Amp IP44 | POLES/ WIRES | RECEPTACLE/ CONNECTOR | CONFIGURATION PLUG/ INLET | CLOCK HOUR | VOLTAGE/ COLOR CODING | PLUG | CONNECTOR | CABLE O.D. RANGE INCHES | RECEPTACLE | INLET |
|-------------|-----------------|--------------------------|---------------------------------|----------------------|-----------------------------|----------|-----------|-------------------------------|------------|----------|
| | 2P3W | | | 4h | 110V | RS316P4S | RS316C4S | .57-.71 | RS316R4S | RS316B4S |
| 2P3W | | | 6h | 250V | RS316P6S | RS316C6S | .57-.71 | RS316R6S | RS316B6S | |
| 3P4W | | | 6h | 380-415V | RS416P6S | RS416C6S | .57-.71 | RS416R6S | RS416B6S | |
| 4P5W | | | 6H | 220-240/ 380-415V | RS516P6S | RS516C6S | .57-.71 | RS516R6S | RS516B6S | |

See page 104 for Conduit Adapter Options.

| | | | | | | | | | | |
|-------------|------|--|--|----|----------------------|--|----------|----------|----------|----------|
| 32 Amp IP44 | 2P3W | | | 4h | 110V | RS332P4S | RS332C4S | .675-.91 | RS332R4S | RS332B4S |
| | 2P3W | | | 6h | 250V | RS332P6S | RS332C6S | .675-.91 | RS332R6S | RS332B6S |
| | 3P4W | | | 6h | 380-415V | RS432P6S | RS432C6S | .675-.91 | RS432R6S | RS432B6S |
| | 3P4W | | | 3h | 380-440V | SPECIAL APPLICATION — CONTACT TECHNICAL SERVICES | | | | |
| | 4P5W | | | 6h | 220-240/ 380-415V | RS532P6S | RS532C6S | .675-.91 | RS532R6S | RS532B6S |

See page 105 for Conduit Adapter Options.

| | | | | | | | | | | |
|-------------|------|--|--|----|----------------------|----------|----------|------------|----------|----------|
| 63 Amp IP67 | 2P3W | | | 6h | 250V | RS363P6W | RS363C6W | .937-1.375 | RS363R6W | RS363B6W |
| | 3P4W | | | 6h | 380-415V | RS463P6W | RS463C6W | .937-1.375 | RS463R6W | RS463B6W |
| | 4P5W | | | 6h | 220-240/ 380-415V | RS563P6W | RS563C6W | .937-1.375 | RS563R6W | RS563B6W |

See page 106 for Conduit Adapter Options.

| | | | | | | | | | | |
|--------------|-------|--|--|----|----------------------|-----------|-----------|-------------|-----------|-----------|
| 125 Amp IP67 | 2P3W* | | | 6h | 250V | RS3125P6W | RS3125C6W | 1.265-1.790 | RS3125R6W | RS3125B6W |
| | 3P4W | | | 6h | 380-415V | RS4125P6W | RS4125C6W | 1.265-1.790 | RS4125R6W | RS4125B6W |
| | 4P5W | | | 6h | 220-240/ 380-415V | RS5125P6W | RS5125C6W | 1.265-1.790 | RS5125R6W | RS5125B6W |

See page 111 for back box/mounting options.

Euro color is "red"; devices supplied in North America will use "blue" (mating is not affected).

*Alternate vendor supplied item; construction features will vary from specs in this catalog. Full IEC approval and mating guaranteed. Contact technical services for inlet/receptacle mounting components.

UL Classification E205590

NOTE: All UniGard 63 and 125 amp devices ship standard with IEC 309-1 configuration "pilot" pin/sleeves used for auxiliary contact service. Special construction without these pilot contacts is available. (Add "XC" to end of catalog number.)

Thomas & Betts

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

International Amperages — UniGard® Series Specifications

Performance — Electrical

| | |
|------------------------------------|--|
| Dielectric Voltage Withstand | 3000 volts for 1 minute per IEC 309-1, Clause 19 |
| Maximum Working Voltage | 690VAC/250VDC (minimum creepage and clearances per IEC) |
| Current Interrupting/Load Breaking | Tested to 125% rated current at 110% rated voltage per IEC 309-1 clause 20 |
| Temperature Rise | Maximum 50° C rise at rated current per IEC 309-1 Clause 22, Table 8 |
| Endurance with Load | 16 Amp: 5000 cycles — Load only |
| Per IEC 309-1 Clause 21 | 32 Amp: 1000 cycles — Alternating load |
| | 63 Amp: 1000 cycles — Alternating load |
| | 100 Amp: 250 cycles — Alternating load |

Performance — Mechanical

| | |
|---------------------------------|---|
| Cold (-25° C) Impact Resistance | Per IEC 309-1 Clause 24; -25° C with 75cm drop |
| Cable O.D. Accommodation | Round portable service cords from 14.5mm O.D. through 50mm O.D. |
| Terminal Identification | In accordance with IEC 309-1 standards; as L1-L2-L3-N-G |
| Cable Pull-Out Force | In accordance with IEC 309-1, Clause 23 |
| Product Identification | Molded-in product trademark(s) and CE mark on packaging |

Performance — Environmental

| | |
|------------------------|--|
| Moisture Resistance | Per IEC 309-1; watertight flap/screw cover on IP67 devices or flap cover on IP44 devices |
| Flammability | Per IEC 695-2-1; housing glow wire tested to 650° C; contact carrier insert tested to 850° C |
| Operating Temperatures | Maximum continuous 90° C/194° F; Minimum -25° C/-13° F with impact |
| Chemical Resistance | Resists standard industrial hydrocarbons, acids, bases and solvents |
| Corrosion Resistance | All metallic components stainless steel or nickel-plated brass |
| | Sleeve pressure rings of zinc-plated steel |
| UV Resistance | External thermoplastic components are UV stabilized |
| | IP67 Series 2 is suitable for outdoor use |

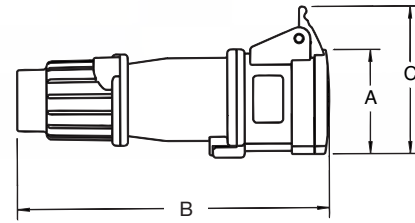
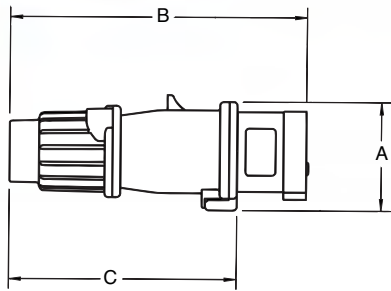
Materials

| | |
|---------------------------|---|
| Housing | Valox® |
| Contact Carriers | Valox |
| Cable Gland Nut | Valox |
| Cable Bushing | Solid Neoprene, onion-ring type |
| O-Ring, Seals and Gaskets | Solid Neoprene |
| Pins and Sleeves | Nickel-plated brass |
| Sleeve Force Ring | Zinc-plated steel |
| Terminal Screws | Nickel-plated steel |
| Flap/Screw Cover Springs | Stainless steel |
| EZ Cliik® Spring | Stainless steel |
| Mounting Flanges | Valox |
| Cast Enclosures/Adapters | 2-layer electrostatic epoxy-coated, copper-free aluminum enclosures (Valox Euro style NM available) |



E205590



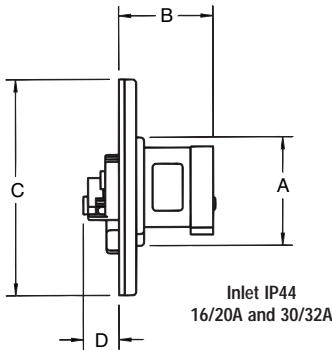


Plug IP44

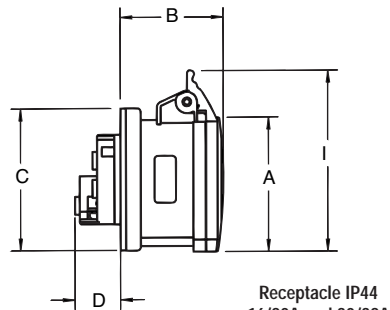
| CAT. NO. | A | | B | | C | | CORD GRIP RANGE | |
|-------------|--------|----|--------|-----|--------|-----|-----------------|-------|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.26 | 58 | 6.20 | 157 | 4.76 | 121 | .570-.710 | 14-18 |
| 16/20A 3P4W | 2.52 | 64 | 6.47 | 164 | 5.04 | 128 | .570-.710 | 14-18 |
| 16/20A 4P5W | 2.85 | 73 | 7.02 | 178 | 5.58 | 142 | .570-.710 | 14-18 |
| 30/32A 2P3W | 2.85 | 73 | 7.37 | 187 | 5.58 | 142 | .675-.910 | 17-23 |
| 30/32A 3P4W | 2.85 | 73 | 7.37 | 187 | 5.58 | 142 | .675-.910 | 17-23 |
| 30/32A 4P5W | 3.13 | 80 | 8.15 | 207 | 6.36 | 162 | .675-.910 | 17-23 |

Connector IP44

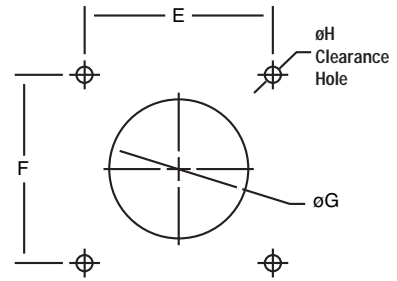
| CAT. NO. | A | | B | | C | | CORD GRIP RANGE | |
|-------------|--------|----|--------|-----|--------|-----|-----------------|-------|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.18 | 55 | 6.53 | 166 | 3.07 | 78 | .570-.710 | 14-18 |
| 16/20A 3P4W | 2.43 | 62 | 6.83 | 173 | 3.33 | 85 | .570-.710 | 14-18 |
| 16/20A 4P5W | 2.81 | 71 | 7.41 | 188 | 3.79 | 96 | .570-.710 | 14-18 |
| 30/32A 2P3W | 2.81 | 71 | 7.81 | 198 | 3.79 | 96 | .675-.910 | 17-23 |
| 30/32A 3P4W | 2.81 | 71 | 7.81 | 188 | 3.79 | 96 | .675-.910 | 17-23 |
| 30/32A 4P5W | 3.09 | 79 | 8.62 | 219 | 4.17 | 106 | .675-.910 | 17-23 |



Inlet IP44
16/20A and 30/32A



Receptacle IP44
16/20A and 30/32A



Inlet IP44

| CAT. NO. | A | | B | | C | | D | | E | | F | | G | | H | |
|-------------|--------|----|--------|----|--------|-----|--------|----|--------|----|--------|----|--------|----|--------|-----|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.26 | 58 | 1.96 | 50 | 4.50 | 114 | .75 | 19 | 3.87 | 98 | 3.87 | 98 | 2.38 | 60 | .282 | 7.2 |
| 16/20A 3P4W | 2.52 | 64 | 1.96 | 50 | 4.50 | 114 | .75 | 19 | 3.87 | 98 | 3.87 | 98 | 2.38 | 60 | .282 | 7.2 |
| 16/20A 4P5W | 2.85 | 73 | 1.96 | 50 | 4.50 | 114 | .75 | 19 | 3.87 | 98 | 3.87 | 98 | 2.38 | 60 | .282 | 7.2 |
| 30/32A 2P3W | 2.85 | 73 | 2.32 | 59 | 4.50 | 114 | 1.32 | 34 | 3.87 | 98 | 3.87 | 98 | 2.38 | 60 | .282 | 7.2 |
| 30/32A 3P4W | 2.85 | 73 | 2.32 | 59 | 4.50 | 114 | 1.32 | 34 | 3.87 | 98 | 3.87 | 98 | 2.38 | 60 | .282 | 7.2 |
| 30/32A 4P5W | 3.13 | 80 | 2.32 | 59 | 4.50 | 114 | 1.32 | 34 | 3.87 | 98 | 3.87 | 98 | 2.38 | 60 | .282 | 7.2 |

Receptacle IP44

| CAT. NO. | A | | B | | C | | D | | E | | F | | G | | H | | I | |
|-------------|--------|----|--------|----|--------|----|--------|----|--------|----|--------|----|--------|----|--------|-----|--------|-----|
| | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
| 16/20A 2P3W | 2.18 | 55 | 2.11 | 54 | 2.97 | 76 | 0.94 | 24 | 2.36 | 60 | 2.36 | 60 | 2.38 | 60 | .219 | 5.5 | 3.07 | 78 |
| 16/20A 3P4W | 2.43 | 62 | 2.13 | 54 | 2.97 | 76 | 0.94 | 24 | 2.36 | 60 | 2.36 | 60 | 2.38 | 60 | .219 | 5.5 | 3.33 | 85 |
| 16/20A 4P5W | 2.81 | 71 | 2.17 | 55 | 2.97 | 76 | 0.94 | 24 | 2.36 | 60 | 2.36 | 60 | 2.38 | 60 | .219 | 5.5 | 3.79 | 96 |
| 30/32A 2P3W | 2.81 | 71 | 2.56 | 65 | 2.97 | 76 | 1.52 | 39 | 2.36 | 60 | 2.36 | 60 | 2.38 | 60 | .219 | 5.5 | 3.79 | 96 |
| 30/32A 3P4W | 2.81 | 71 | 2.56 | 65 | 2.97 | 76 | 1.52 | 39 | 2.36 | 60 | 2.36 | 60 | 2.38 | 60 | .219 | 5.5 | 3.79 | 96 |
| 30/32A 4P5W | 3.09 | 79 | 2.60 | 66 | 2.97 | 76 | 1.52 | 39 | 2.36 | 60 | 2.36 | 60 | 2.38 | 60 | .219 | 5.5 | 4.17 | 106 |



IEC 309 Safety Interlock — The UniGard® Difference

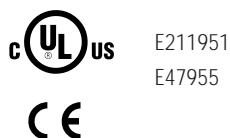


Watertight — IP67

- “W” suffixes (UL Type 4X construction)
- Rugged thermoplastic housings resist impact or abuse and provide excellent corrosion resistance
- Rugged V0-5VA flameproof housings
- Ideal for outdoor, wet, marine and washdown applications
- Unique industry-first circuit breaker interlock
- US: 20, 30, 60 and 100 amp sizes
- International: 16, 32, 63 and 125 amp sizes

Splashproof — IP44

- “S” suffixes (NEMA 3R construction)
- Suitable for indoor use where splashing liquids and other contaminants may interfere with electrical connections
- Ideal for most heavy commercial applications and light industrial applications
- US 20, 30 and 60 amp ratings
- International 16, 32 and 63 amp ratings



The Only True Circuit Breaker Interlocked IEC 309 Receptacle (Outlet)

- Circuit breaker integrated interlock mechanism
- UL 489 Listed 22KAIC protection
- Alternate trip ratings available
- Auxiliary switch option

OR

Switched-Only Version

- Rugged UL Listed switch
- Proven performance components
- Through 600VAC 4P5W plus auxiliary contacts capable



Protection and Safety in Power Delivery

- Red vertical “ON” indication
- Lock on and Lock “OFF” positions
- Branch circuit load and operation protection or switched-only version (shown)



Mount It Anywhere

- Swivel 3- or 4-point feet variable footprint for flexible mounting
- Fits in web of 8" I-beams



Wire It Up, Sideways or Down

- Top, side and bottom entry
- Industry standard entry sizes



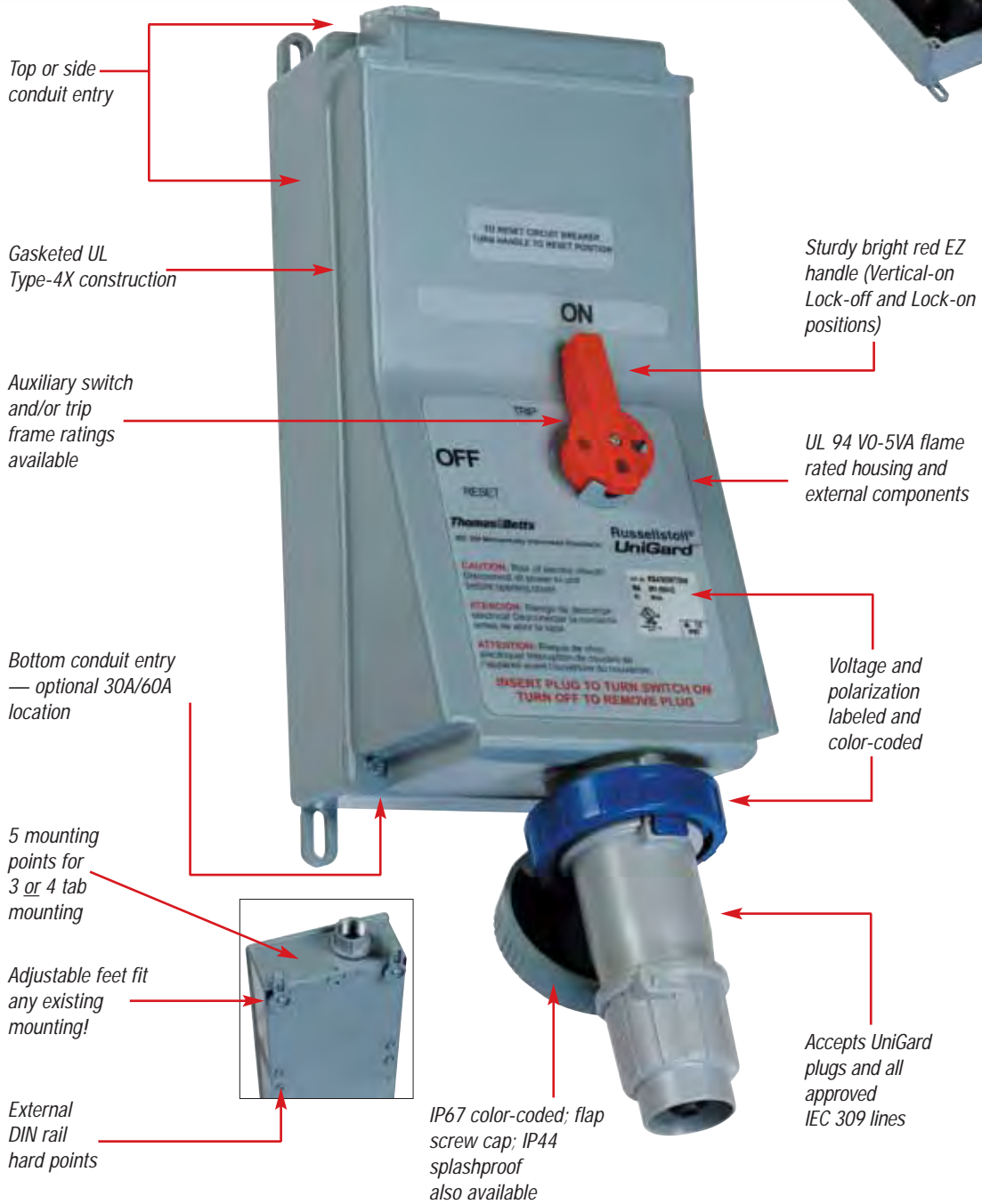
| TOP AND BOTTOM | TOP | SIDE ENTRY |
|----------------|------------|------------|
| 20/30 Amp | 60/100 Amp | All |

Russellstoll®

UniGard® IEC 309 Safety Interlock

Washdown Industrial/Light Marine — UniGard®

Integral UL 489 22KAIC
Circuit Breaker OR
Switched Interlocked Receptacle



Thomas & Betts

www.tnb.com

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

Russellstoll® UniGard® IEC 309 Circuit Breaker Interlocked Receptacle

16/20A, 30/32A, 60/63A and 100/125A International and U.S. Ratings IN ALL STANDARD VOLTAGE POLARIZATIONS:

| RANGE | COLOR CODE | USAGE (N. AMER., R.O.W. EURO) | 2P3W | 3P4W | 4P5W |
|-------------------|------------|-------------------------------|------|--------------|--------|
| 110–130V | YELLOW | N. AMER./EURO | 4H | 4H | — |
| 208–250V | BLUE | N. AMER./EURO | 6H | 9H | 9H |
| 380–415V | RED | EURO. | 9H | 6H/3H (SPEC) | 6H |
| 500V + | BLACK | N. AMER./EURO | — | 5H | 5H |
| 277/480V | RED | N. AMER. (BLACK-EURO) | 7H | 7H | 7H |
| 277V | GRAY | N. AMER. | 5H | — | — |
| 125/250V | ORANGE | N. AMER. | — | 12H | — |
| 250/440V | RED | LATIN AMERICA/N. AMER. | — | 11H | 11H/3H |
| To 600V, To 400Hz | GREEN | N. AMER./EURO | 2H | 2H | 2H |

Contact T&B for other special polarizations.

Specifications for Any New or Replacement Project

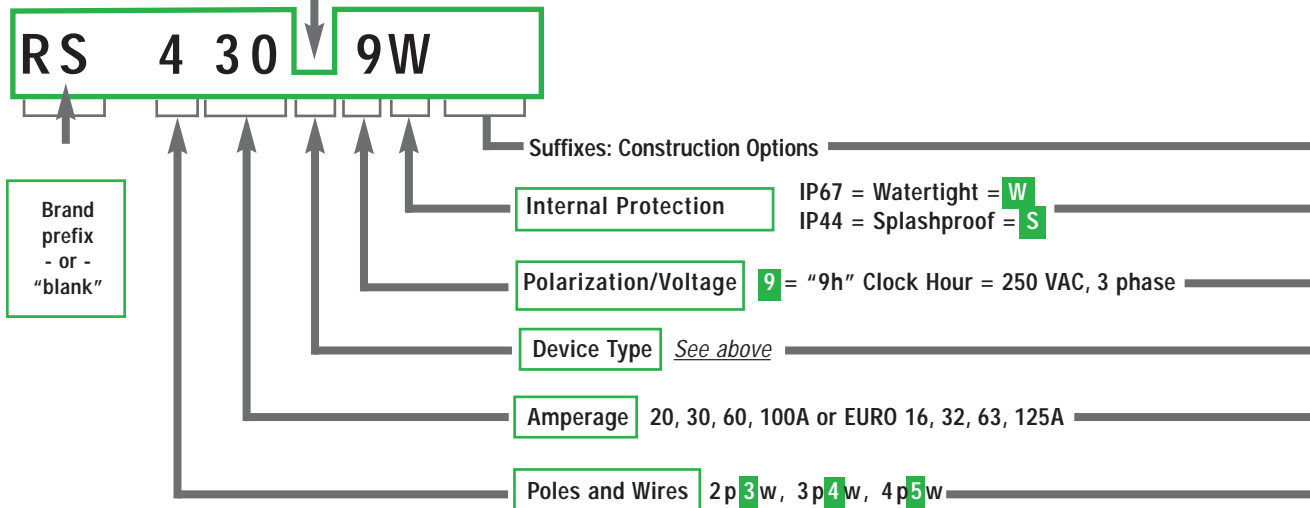
2 options available

MT

Integral Circuit Breaker (UL 231 and UL 489) Power Outlet
> (replaces all fused-switched competitor "FMIR" or "MIF" series) (US amperage only)

MI

Rotary Switched (UL 508 and UL 98) Manual Motor Controller Outlet
> (replaces all switched-only competitor "MI" or "MIR" series) (all amperages)



Specifications: IEC 309 Interlocked Receptacles — North American Standards

Performance — Electrical

| | |
|--|--|
| Dielectric Voltage Withstand | 3000 volts |
| Maximum Working Voltage | 480 volts RMS (circuit breaker version) 600 volts RMS (switch version) |
| Current Interrupting | Certified for current interrupting at full rated current and voltage |
| Short-Circuit Current Rating Operations | 10,000 RMS symmetrical amperes Mechanical: 10,000 cycles Electrical: 6000 cycles |
| HP Ratings (switch version) | Complies with NEC® 430-151 ratings |
| Circuit Breaker UL Listed Interrupting Rating | 22,000 AIC |

Performance — Mechanical

| | |
|--|--|
| Cold (-35° C) Impact Resistance | In accordance with UL 746C |
| Wiring Accommodations | Suitable for metallic conduit. Conduit entry locations at enclosure top and bottom (60A and 100A top only) |
| Terminal Identification | In accordance with UL, CSA and IEC 309 conventions |
| Product Identification | Identification, ratings and color code in accordance with UL, CSA and IEC 309 requirements |
| Lockout/Tagout | "ON" and "OFF" lockout/tagout capability at switch handle. Complies with OSHA Reg. 29CFR 1910.147 |
| Mounting | External adjustable feet |

Performance — Environmental

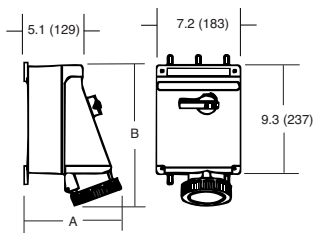
| | |
|-------------------------------|---|
| Moisture Resistance | Screw cap version: UL Type 4X, IP67 Flap cap version: IP44 |
| Flammability | UL 94-5VA and V0 classifications |
| Operating Temperatures | Maximum continuous: 60° C (140° F) Minimum continuous: -40° C (-40° F) |
| UV Resistance | UV-stabilized material |
| Chemicals | Resists most standard industrial hydrocarbons, acids, bases and solvents |

Materials

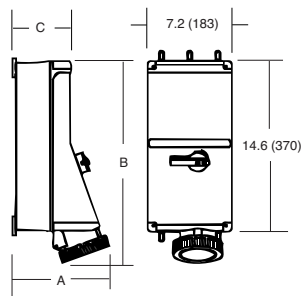
| | |
|--|--|
| Enclosure (all exterior components) | UL 94-5VA/V0, UV-stabilized, impact-modified Valox® |
| Contact Carrier | Molded arc-resistant UL 94-V0 thermoplastic |
| Gaskets | Neoprene or EPDM |
| Contacts (sleeves) | Nickel-plated brass |
| Hardware (screws and springs) | Steel with zinc-plated blue chromate or nickel plating |

Approvals and Compliances

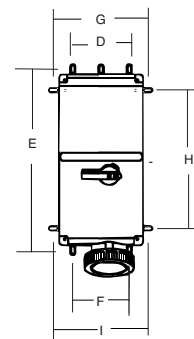
UL 508 and UL 98 (switch version)
UL 231 and UL 489 (circuit breaker version)
UL 1682
CSA C22.2 No. 14, 182.1
IEC 309-1, -2



OVERALL DIMENSIONS (INCHES — MM)



OVERALL DIMENSIONS (INCHES — MM)



MOUNTING DIMENSIONS (INCHES — MM)

| DIM. | 16/20A, 30/32A AND 60/63A SWITCH VERSIONS | | | | | | 30A AND 60A BREAKER AND 100/125A SWITCH AND BREAKER VERSIONS | | | | | |
|------|---|----------|----------|----------|----------|----------|--|----------|----------|----------|----------|--|
| | 16/20A | | 30/32A | | 60/63A | | 30A | | 60A | | 100/125A | |
| | IP44 | IP67 | IP44 | IP67 | IP44 | IP67 | IP44 | IP67 | IP44 | IP67 | IP67 | |
| A | 7.5-140 | 8.0-203 | 7.7-196 | 8.2-208 | 8.0-203 | 8.5-216 | 7.7-196 | 8.2-208 | 8.0-203 | 8.5-216 | 9.8-249 | |
| B | 10.8-273 | 10.9-277 | 11.2-284 | 11.4-289 | 11.9-302 | 12.2-309 | 16.4-417 | 16.5-418 | 17.0-432 | 17.4-443 | 17.7-450 | |
| C | 5.1-129 | 5.1-129 | 5.1-129 | 5.1-129 | 5.1-129 | 5.1-129 | 5.1-129 | 5.1-129 | 5.1-129 | 5.1-129 | 5.6-149 | |

| DIM. | 16/20A 30/32A 60/63A SWITCH | 30A 60A BREAKER | 100/125A SWITCH 100A BREAKER |
|------|--------------------------------------|-----------------------|---------------------------------------|
| D | 5.5-140 | 5.5-140 | 5.5-140 |
| E | 10.0-254 | 15.2-387 | 15.2-387 |
| F | 5.5-140 | 5.5-140 | 6.0-152 |
| G | 8.0-203 | 8.0-203 | 8.0-203 |
| H | 7.5-191 | 12.8-324 | 12.8-324 |
| I | 8.0-203 | 8.0-203 | 8.5-215 |

3-pt. and 4-pt. mounting positions available. 100A versions have 4-pt. mounting position only.
Adjustable mounting feet, vertical or horizontal.
Slotted through holes for easier alignment.



Russellstoll®

Industrial and Commercial Applications



Industrial and Commercial



DuraTite® and Ever-Lok® Locking Connections

| | |
|---|---------|
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| Heavy-Service Ever-Lok® Dimensions | 139–140 |
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Thomas&Betts

www.tnb.com

Russellstoll®

Overview and Comparison

Defined

- Any application where electrical connections need protection from water and/or dust entering the contacts or the wiring compartment
- Less credit cable sealing but easier to use device locking designs are employed
- Metal connectors are usually preferred with thermoplastic options increasing. Thermoplastic devices must withstand normal industrial handling

Russellstoll Line Selections for Indoor Applications

DuraTite® to 3P4W 20A and 30A

A new thermoplastic option to 20/30A Standard Ever-Lok plugs and connectors. 20A and 30A plugs will mate directly to Standard Ever-Lok receptacles, with a new EZTab locking feature. For new installations, specify Ever-Lok receptacles with DuraTite plugs and connectors. Clamp or conduit options complete a flexible value option for new and existing installations.

Ever-Lok® Standard and Midget Series to 3P4W 15A through 50A

Steel self-locking housings make Standard and Midget Ever-Lok connections famous for their endurance in punishing factory installations. Clamp, bushing or hub fitting cable entries are offered for both with Standard Ever-Lok available at 20A, 30A and 50A over the 15A Midget Ever-Lok. Standard voltage polarizations are maintained in these lines through 480VAC.

Heavy Service Ever-Lok to 4P4W 30A through 100A

The standard in portable welding installations, from 30A to 100A. Rugged aluminum housings and self-locking upon insertion, HSE series products are ideal for indoor factory use. With unique handle designs, a simple 1/8 turn counter-clockwise releases plug for withdrawal. Switched/fused or circuit breaker interlocks in several configurations are also offered. See Automotive/Industrial Interlock section.

IEC (IP44) to 4P5W 20A through 100A

Thermoplastic International Standard 309-2 or CEE-17 type connector lines usage is growing in OEM, export and standard performance applications. The IP44 indoor use style is splashproof when mated and directly interchangeable with other manufacturers. International designations shadow U.S. ratings: 20/16A, 30/32A, 60/63A and 100/125A. IP44 devices have NO locking features except flap covers, with catalog numbers "S" or "SW" suffixes.



Typical Application Groups

General Industrial

Lighting Connections
Indoor Welding Stations
Machinery/Tool Connections
Power Distribution Panels
Convenience Power
Battery Charging Equipment

Instrumentation

Portable Equipment
Critical Power Connections
Motor Power Connections
Critical Robotics Power
Test Equipment
Laboratory/Test Stations

Construction

Generator Set Panels
Portable Tools and Equipment
Limited-Life Installations
Portable Lighting Equipment

OEMs

Export Machinery
Critical Power Connections
International Indoor Usage
Transportable Equipment

Non-Metallic Self-Locking Plugs, Connectors and Receptacles



Industrial Specification Grade Redefined

From our industry standard Ever-Lok series of plugs, connectors and receptacles, Russellstoll has developed DuraTite — the first non-metallic, self-locking pin and sleeve power interconnection system. In 20 and 30 amp ranges, DuraTite mates with existing 15–30A Ever-Lok receptacles already in use.

Industrial “Safety Grade” Construction

- 20 and 30 Amp plugs and connectors (600VAC max.)
- Indoor industrial and heavy-duty use
- Durable, tough and flame safety rated housings
- **DuraV®** housing material specially selected for hot or cold washdown duty
- **Flame safe** UL94-V0 rated housings
- **Superior performance** in corrosive environments
- **High-visibility** yellow housings

Safe and Reliable Power Connections: Pin and Sleeve, Voltage Polarized



- **Long life:** Round, self cleaning, constant pressure pin and sleeve contacts, of solid CDA 360 brass for long reliable electrical life
- **More power, operates cooler:** Large circular electrical contact area allows more current flow with lower temperature rise
- **Ground pin keyed for voltage polarization** (O-ring seal)
- **Voltage polarized for safe connection** (U-ground) (pins shown with optional O-ring seals)




























Easy To Wire

- **“No Twist-Off” locking plugs:** Integral threaded screw collars and compression type bushings make wiring a snap
- **Fast assembly and wiring:** “Drop-In” rear loaded interiors use no assembly screws, versus 3–5 or more with other connectors. 30/50A connectors use unique E-Z Tite™ external gland lock screw
- **Set screw terminals:** Are quick and easy to wire, with complete wire capture in deep pin/sleeve barrels

Russellstoll®

DuraTite® and Ever-Lok® Plugs, Connectors and Receptacles

Industrial and Commercial — DuraTite® and Ever-Lok®

| @ 250V AMPS | VOLTAGE | FACE RECEP./ CONN. | CAT. NOS. | | | | | | |
|-------------------------------|-------------------|---|--|--|--|---|--|---|---|
| | | | PLUG | | CONNECTOR | | STD. I.D. BUSHING: PLUG/ CONN.* | RECEPTACLE — EVER-LOK | |
| | | |  DURATITE |  EVER-LOK |  DURATITE |  EVER-LOK | |  |  |
| 2P3W 20A | 125VAC |  | 5P23U1LD | 8013U1 8153U1 8593U1 | 5C23U1LD | 8023U1 8093U1 8683U1 | .625 | 8003U1 | 8083U1 |
| | 250VAC |  | 5P23U2LD | 8013U2 8153U2 8593U2 | 5C23U2LD | 8023U2 8093U2 8683U2 | .625 | 8003U2 | 8083U2 |
| | 277 |  | 5P23U3LD | 8013U3 8153U3 8593U3 | 5C23U3LD | 8023U3 8093U3 8683U3 | .625 | 8003U3 | 8083U3 |
| | 480 |  | 5P23U4LD | 8013U4 8153U4 8593U4 | 5C23U4LD | 8023U4 8093U4 8683U4 | .625 | 8003U4 | 8083U4 |
| | 600 |  | 5P23U5LD | 801345 8153U5 8593U5 | 5C23U5LD | 8023U5 8093U5 8683U5 | .625 | 8003U5 | 8083U5 |
| | through 600 (all) |  | 5P23U0LD | 8013 8153 8593 | 5C23U0LD | 8023 8093 8683 | .625 | 8003N | 8083N |
| 2P3W 30A | 125VAC |  | 5P33U1LD | -- | 5C33U1LD | -- | .700 | NA | NA |
| | 250VAC |  | 5P33U2LD | -- | 5C33U2LD | -- | .700 | NA | NA |
| | 277VAC |  | 5P33U3LD | -- | 5C33U3LD | -- | .700 | NA | NA |
| | 480VAC |  | 5P33U4LD | -- | 5C33U4LD | -- | .700 | NA | NA |
| | 600VAC |  | 5P33U5LD | -- | 5C33U5LD | -- | .700 | NA | NA |
| | through 600 (all) |  | 5P33U0LD | 8015 8155 8656 | 5C33U0LD | 8025 8095 8646 | .700 | 8030N | 8005N |
| 3P4W 20A (10A, 600V) | 125/250VAC |  | 5P24U1LD | -- | 5C24U1LD | -- | .625 | NA | NA |
| | 3Ø 250VAC |  | 5P24U2LD | -- | 5C24U2LD | -- | .625 | NA | NA |
| | 3Ø 480VAC |  | 5P24U4LD | -- | 5C24U4LD | -- | .625 | NA | NA |
| | 347/600VAC |  | 5P24U5LD | -- | 5C24U5LD | -- | .625 | NA | NA |
| | through 600 (all) |  | 5P24U0LD | 8018 8158 8594 | 5C24U0LD | 8028 8098 8684 | .625 | 8008 | 8084 |
| 3P4W 30A (20A, 600V) | 125/250VAC |  | 5P34U1LD | -- | 5C34U1LD | -- | .750 | NA | NA |
| | 3Ø 250VAC |  | 5P34U2LD | -- | 5C34U2LD | -- | .750 | NA | NA |
| | 3Ø 480VAC |  | 5P34U4LD | -- | 5C34U4LD | -- | .750 | NA | NA |
| | 347/600V |  | 5P34U5LD | -- | 5C34U5LD | -- | .750 | NA | NA |
| | through 600 (all) | | 5P34U0LD | 8014 8154 8597 8657 | 5C34U0LD | 8024 8094 8687 8647 | .750 | 8031 | 8004 |

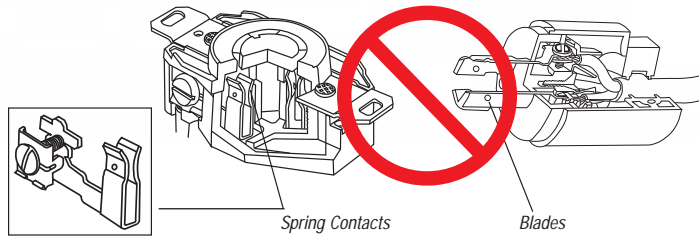
NOTE: DuraTite plugs and connectors will mate but not lock to metal plugs and connectors referenced above. DuraTite will lock to existing metal receptacles, from standard Ever-Lok line.

Thomas & Betts

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

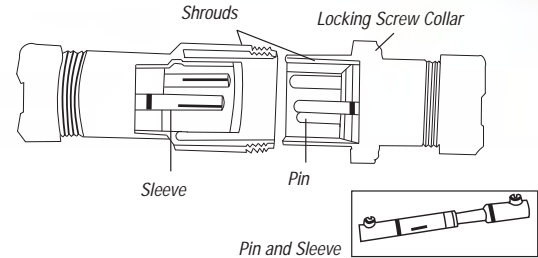


Bladed Plug and Receptacle



Spring-blade contact designs offer point contact only, with minimal mechanical support in receptacles. Higher heat is generated with use as contacts loosen due to age and dirt accumulation, resulting in failures. Exposed blade contacts can easily be damaged.

Pin and Sleeve Connector and Plug



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

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 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 |

Performance — Environmental

| | |
|-------------------------------|---|
| Moisture Resistance | Per UL 1682 Paragraph 49. Flap cover on receptacle, O-rings optional on all pins, sleeves and interiors. Watertight interiors with optional O-rings. Meets requirements for NEMA 3R/12 and IP44 |
| 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 |

Material

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

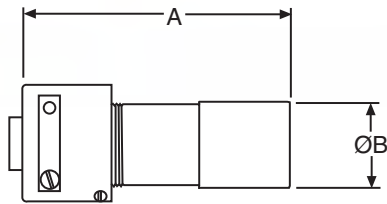
Approvals



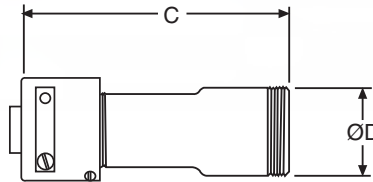
Russellstoll®

DuraTite® Dimensions

Plugs



Connectors



| AMPS | | A* | ØB | C* | ØD |
|------|--------|-------|------|-------|------|
| 20A | inches | 3.87 | 1.53 | 4.40 | 1.79 |
| | mm | 98.3 | 38.9 | 111.8 | 45.5 |
| 30A | inches | 6.00 | 1.79 | 6.25 | 2.05 |
| | mm | 152.4 | 45.5 | 158.8 | 52.1 |

* NOTE: Dimensions will vary slightly with assembly.

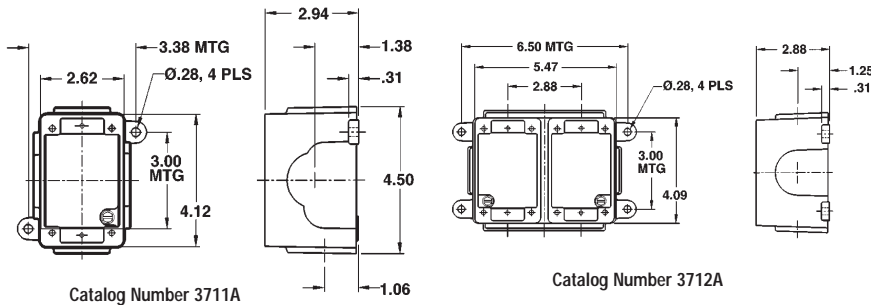
Receptacles

DuraTite mates and locks to standard Ever-Lok (see page 120).

Accessories

Additional Boxes and Accessories Available: Ever-Lok Section

Conduit Boxes (For Surface Mounting)

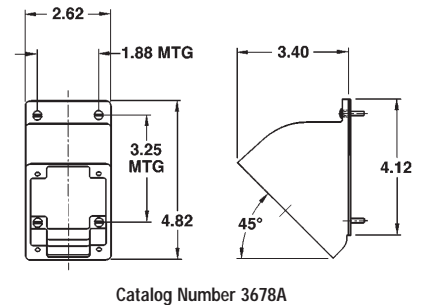


| | CAST ALUMINUM | CAST BRASS |
|--------|---------------|------------|
| Single | 3711A | 3731 |
| Double | 3712A | 3732 |

NOTE: 1/4" NPT Hole standard.

Additional accessories are available. Consult your Thomas & Betts representative.

45° Angle Adapter



| CAST ALUMINUM | CAST BRASS |
|---------------|------------|
| 3678A | 3678B |

Ever-Lok® Locking Connections Overview

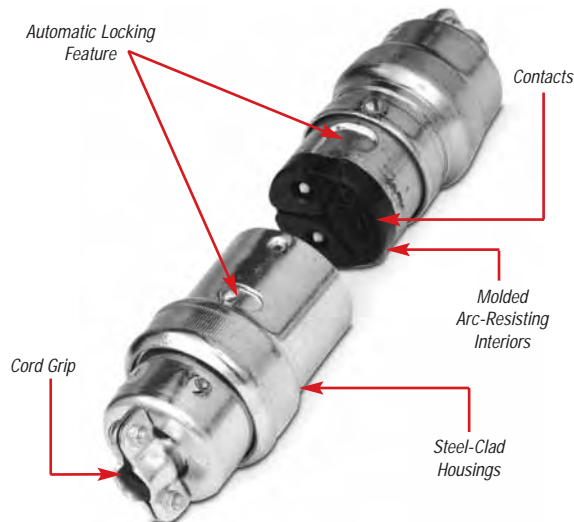
Standard: 10–50 Amp, Maximum 600VAC or 250VDC

Heavy Service: 30–100 Amp, Maximum 480VAC or 250VDC

Midget: 10–20 Amp, Maximum 250VAC or 250VDC



Design Features



When an Ever-Lok connection is made, it is a mechanical attachment that will not pull apart unless it is unlocked by hand.

To install, line up the tabs and plug it straight in. External buttons or ribs lock with the mating internal housing automatically. When an Ever-Lok connector plugs in, it stays in. Locked housings do the work so Ever-Lok contacts can carry the load! A firm grip and a counter-clockwise reverse twist release locking for easy removal.

- 1. Automatic Locking** — Automatic locking feature mechanically attaches the plug casing to the receptacle or connector and eliminates strain on electrical contacts.
- 2. Positive Grounding** — Casings are positively grounded by means of phosphor-bronze ground straps integral with ground contacts. Equipment grounding is secured by separate set of contacts which “make first” and “break last” as required by UL.
- 3. Dust-Proof** — On clamp-type plugs and connectors, a washer is provided in each cap to be forced over the cord. This serves as a shield to prevent metal particles, dust, etc., from entering the interiors of plugs and connectors.
Bushing-type plugs and connectors are furnished with a gland nut and Neoprene cable bushing gland to exclude dust and moisture. A formed glide washer is also provided to facilitate tightening of the gland nut.
Receptacle covers are sealed to boxes by gaskets and have hinged flaps which are gasket-lined and equipped with strong springs to keep them closed and dust out.
- 4. Steel-Clad** — Plugs and connectors are plated steel. Plugs have encased locking spring in machine assembled non-separable housings.
- 5. Cord Grip** — Plugs and connectors are provided with adjustable cord grips, preventing strains on connections.
- 6. Contacts** — Contacts are precision-made, self-wiping and self-aligning brass and nickel-plated brass.
- 7. Unit Assembly** — Contacts and terminals are permanently assembled in an arc-resisting composition body, permitting removal of interior as a unit for wiring. All connections are entirely enclosed, thus avoiding accidental short circuits and tampering by inexperienced personnel.
- 8. Handles Lined** — Shell handles have a HDPE liner to contain stray wire ends.
- 9. Interiors** — All interiors are molded arc-resisting composition.

DuraTite® line offers thermoplastic

Male Plugs

| | 250VAC RATING | RATING | CLAMP TYPE | MAX CABLE DIA. | BUSHING TYPE | CABLE BUSHING HOLE DIA. | HUB TYPE* | CONDUIT SIZE | |
|------|---------------|--|----------------------------------|--|----------------|-------------------------|----------------------------|--------------|--------------|
| 2P3W | 15 Amp | 20 Amp, 1275VAC 15 Amp, 250VAC 10 Amp, 600VAC | 8013 | ½" | 8153 | ⅝" | 8593 8593CTN** | ½" ½" | |
| | | 20 Amp, 125VAC | 8013U1 | ½" | 8153U1 | ⅝" | 8593U1 8593U1CT* | ½" ½" | |
| | | 15 Amp, 250VAC | 8013U2 | ½" | 8153U2 | ⅝" | 8593U2 | ½" | |
| | | 15 Amp, 277VAC | 8013U3 | ½" | 8153U3 | ⅝" | 8593U3 | ½" | |
| | | 15 Amp, 480VAC | 8013U4 | ½" | 8153U4 | ⅝" | Consult T&B Representative | | |
| | | 15 Amp, 600VAC | 8013U5 | ½" | 8153U5 | ⅝" | Consult T&B Representative | | |
| | 30 Amp | 30 Amp, 250VAC 20 Amp, 600VAC | 8015 | ⅝" | 8155 | ⅝" | 8656 | ¾" | |
| 3P4W | 15 Amp | 20 Amp, 125VAC 10 Amp, 250VAC 15 Amp, 250VAC 10 Amp, 600VAC | 8018 | ½" | 8158 | ⅞" | 8594 | ½" | |
| | | 30 Amp | 20 Amp, 600VAC 30 Amp, 250VAC | 8014 | ⅝" | 8154 | ¾" | 8597 8657 | ½" ¾" |
| | | | 50 Amp | 50 Amp, 250VAC 30 Amp, 250VAC 30 Amp, 600VAC | 8314-S 8314 | ¾" 1 ⅛" | 8354 | 1" | 8396 8397 |

* Hub with clamp added at size.

** Accommodates rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit.

NOTE (for Plugs and Connectors):

Cable Bushing — Oil-resistant Neoprene cable bushing regularly furnished with hole size as listed. Other hole sizes available at no extra cost, when specified on order. See **page 135** for available sizes. Bushing-type plugs and connectors can be furnished with adapters to accommodate rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit. See **page 135**.

"N" in catalog number refers to nickel-plated neutral pin replace.
Ex: 8013 with 8013N.




NOTE: Special construction options for Ever-Lok plugs include control "Dummy Plugs" for press lockout function. Consult Technical Services (8158-F22863).



performance and Ever-Lok interface.

See page 120.

Female Connectors

|  | |  | |  | |
|---|-------------------|---|-------------------------|---|--------------|
| CLAMP TYPE | MAX. CABLE RATING | BUSHING TYPE | CABLE BUSHING HOLE DIA. | HUB TYPE** | CONDUIT SIZE |
| 8023 | 1/2" | 8093 | 3/8" | 8683N/8683CTN* | 1/2" |
| 8023U1 | 1/2" | 8093U1 | 3/8" | 8683U1/8683U1CT* | 1/2" |
| 8023U2 | 1/2" | 8093U2 | 3/8" | 8683U2 | 1/2" |
| 8023U3 | 1/2" | 8093U3 | 3/8" | 8683U3 | 1/2" |
| Consult T&B Representative | | Consult T&B Representative | | Consult T&B Representative | |
| Consult T&B Representative | | Consult T&B Representative | | Consult T&B Representative | |
| 8025 | 3/8" | 8095 | 3/8" | 8646 | 3/4" |
| 8028 | 1/2" | 8098 | 1/16" | 8684 | 1/2" |
| 8024 | 5/8" | 8094 | 3/4" | 8687/8687CT* | 1/2" |
| | | | | 8647 | 3/4" |
| | | | | 8386 | 1/2" |
| 8324S | 3/4" | 8394 | 1" | 8387 | 3/4" |

Industrial and Commercial — DuraTite® and Ever-Lok®

Standard Service Female Receptacles



| | 250VAC RATING | RATING | FEMALE RECEPTACLE ONLY WITH FLAP COVER [^] | RECEPTACLE WITH BOX FSWS-62* | 2-GANG [‡] |
|----------------|----------------|----------------|---|------------------------------|---------------------|
| 2P3W | 15 Amp | 20 Amp, 125VAC | 8003 | 8083 | 8128 |
| | | 15 Amp, 250VAC | | | |
| | | 10 Amp, 600VAC | | | |
| | | 20 Amp, 125VAC | | | |
| | | 15 Amp, 250VAC | | | |
| | | 15 Amp, 277VAC | | | |
| | 30 Amp | 15 Amp, 480VAC | 8003U1 | 8083U1 | 8128U1 |
| | | 15 Amp, 600VAC | 8003U2 | 8083U2 | 8128U2 |
| 3P4W | 15 Amp | 15 Amp, 277VAC | 8003U3 | 8083U3 | 8128U3 |
| | | 15 Amp, 480VAC | 8003U4 | 8083U4 | 8128U4 |
| | | 15 Amp, 600VAC | 8003U5 | 8083U5 | 8128U5 |
| | | 30 Amp, 250VAC | 8005 | 8030 | 8131 |
| | 30 Amp | 20 Amp, 600VAC | — | — | — |
| | | 10 Amp, 250VAC | 8008 | 8084 | 8129 |
| | 50 Amp | 15 Amp, 250VAC | — | — | — |
| | | 10 Amp, 600VAC | — | — | — |
| 20 Amp, 600VAC | | — | With FD Box | With FD Box | |
| 30 Amp, 250VAC | | 8004 | 8031 | 8132 | |
| 50 Amp | 50 Amp, 250VAC | — | With FD Box | With FD Box | |
| | 30 Amp, 250VAC | 8304 | 8331 | 8334 | |
| | 30 Amp, 600VAC | — | — | — | |

NOTE:

[^] For FS, FD, FSWS, FDWS and similar conduit fittings.

* Receptacle with box and cover.

** Provided with FDWS62 Box.

[‡] Two-gang receptacles can also be provided in mixed configurations including NEMA bladed, etc. Consult Technical Services.

Male inlets (reversed contacts service): Use receptacle mountings but accept standard female connector.

Horsepower ratings:

- 1/2 hp, 1-phase, 230VAC
- 1 hp, 3-phase, 115VAC

NOTE: Standard Ever-Lok receptacles also accept DuraTite plugs.




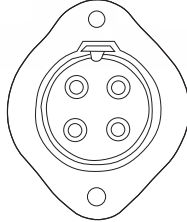
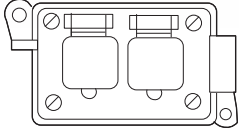
Reverse Service Male Receptacles

| | |
|--|--|
|  |  |
| MALE INLET | MALE INLET WITH BOX** |
| 8143 | 8143D |
| 8143U1 | 8143U1D |
| 8143U2 | 8143U2D |
| 8143U3 | 8143U3D |
| Consult your Thomas & Betts representative Consult your Thomas & Betts representative | Consult your Thomas & Betts representative Consult your Thomas & Betts representative |
| 8146 | Consult your Thomas & Betts representative |
| — | — |
| 8144 | 8144D |
| — | — |
| 8147 | 8147D |
| — | — |
| 8374 | 8374 |
| — | — |

Specifications

- Receptacle Housing: Plated steel; receptacle with cover only; furnished with 6-52 mounting screws; for mounting on switch box or outlet box, use adapter plate 8091A; see **page 134**
- Back Boxes: Cast aluminum, epoxy powder coat finish; flap and screw caps aluminum, corrosion-resistant copper-free alloy or steel, CAD plated
- Plug: All cable entry styles of plugs with equivalent ratings fit above receptacles
- Conduit Boxes: Type FSWS-62 or FDWS-62 standard, cast aluminum; additional boxes available; see **page 133**
- Gang Type: Can be furnished in gang or tandem units and in combination with other FS and FD devices; see **page 133**
- Outlets: Unless otherwise specified, furnished with one 3/4" outlet; additional outlets charged extra, specific size and location; consult Technical Services

Standard Service Female Receptacles

| | | | | | | |
|------|----------------------------------|---|---------------|--|---|---------------|
| | |  | |  |  | |
| | | SINGLE RECEPTACLE | | FLANGED PANEL MOUNT RECEPTACLE | DUPLIX RECEPTACLE | |
| | RATING | RECEPTACLE ONLY | WITH BACK BOX | | RECEPTACLES ONLY | WITH BACK BOX |
| 2P3W | 10 Amp, 250VDC 20 Amp 250VAC* | 8703 | 8753 | 8943 | 8733 | 8773 |
| | 20 Amp 125VAC | 8703U1 | 8753U1 | 8943U1 | 8733U1 | 8773U1 |
| | 15 Amp 250VAC | 8703U2 | 8753U2 | 8943U1 | 8733U2 | 8773U2 |
| | | | | | | |
| 3P4W | 10 Amp 125VDC 20 Amp 250VAC** | 8704 | 8754 | 8944 | 8734 | 8774 |
| 4P5W | 10 Amp 125VDC 20 Amp 250VAC** | 8705 | 8755 | 8945 | 8735 | 8775 |

NOTES:

* 1/2 hp, 1-Phase, 230VAC

**1 hp, 3-Phase, 115VAC

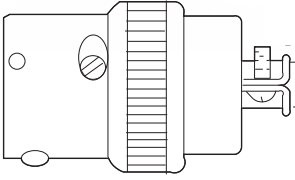
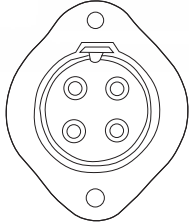
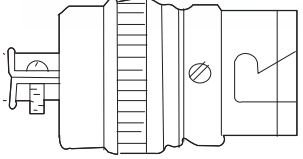
Specifications

- Receptacle Housing: Heavy gauge steel, plated
- Back Boxes: Type FSWS-62 standard, cast aluminum; Additional boxes available, see **page 133**
- Gang Type: Can be furnished in gang or tandem units and in combination with other FS and FD devices, see **page 133**
- Outlets: Standard, one 3/4" top or bottom; additional outlets charged extra; see boxes listed on **page 133**
- Plug and Connector Housings: Steel, plated
- Cable Diameter: Clamp Type: .500" max. cable diameter
- Bushing Type: 2P3W — .563" diameter standard
3P4W — .281" diameter standard
4P5W — .594" diameter standard
- Cable Bushing: Oil-resistant Neoprene cable bushing regularly furnished with hole size as listed. Other hole sizes available at no extra cost when specified on order; see **page 135** for available sizes



Standard Service Plugs and Connectors

Reverse Service

|  | |  |  | |
|---|---------------------------------|---|---|-------------------------------|
| CLAMP TYPE^ MALE PLUG | CLAMP TYPE^ FEMALE CONNECTOR | MALE FLANGED PANEL MOUNT | CLAMP TYPE^ FEMALE PLUG | CLAMP TYPE^ MALE CONNECTOR |
| 8713 | 8723 | 8943R | 8713R | 8723R |
| 8713U1 | 8723U1 | 8943U1R | 8713U1R | 8723U1R |
| 8713U2 | 8723U2 | 8943U2R | 8713U2R | 8723U2R |
| 8714 | 8724 | 8944R | 8714R | 8724R |
| 8715 | 8725 | 8945R | 8715R | 8725R |

^ Plugs and connectors are also available as bushing or hub type similar to those in standard Ever-Lok.
Please consult your Thomas & Betts representative.

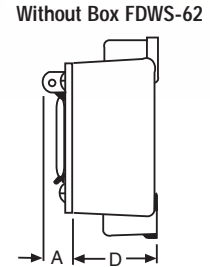
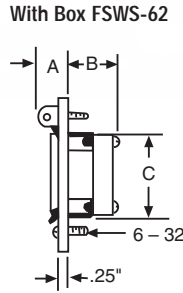
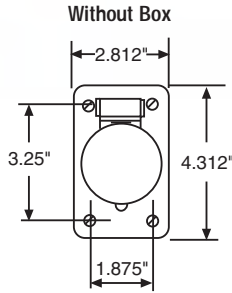
Industrial and Commercial — DuraTite® and Ever-Lok®

Russellstoll®

Ever-Lok® Dimensions

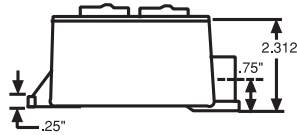
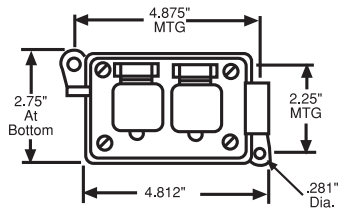
Industrial and Commercial — DuraTite® and Ever-Lok®

Female Receptacles and Reverse Service



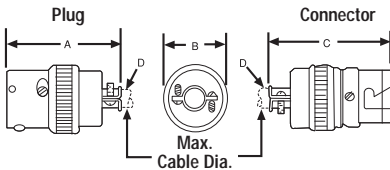
| Size | STANDARD SERVICE | | | | REVERSE SERVICE | | | |
|-----------------|------------------|--------|--------|--------|-----------------|--------|--------|--------|
| | A | B | C | D | A | B | C | D |
| Standard | | | | | | | | |
| 10 Amp | .875" | 1.375" | 2.375" | 2.313" | .875" | 2.000" | 1.750" | 2.937" |
| 15 Amp | .875" | 1.500" | 2.875" | 2.937" | .875" | 1.500" | 2.875" | 2.937" |
| 20 Amp | 1.470" | 1.875" | 2.125" | 2.937" | 1.470" | 1.875" | 2.125" | 2.937" |
| 30 Amp | .687" | 1.810" | 1.280" | NA | .687" | 1.810" | 1.280" | NA |
| 50 Amp | | | | | | | | |
| Midget | | | | | | | | |

Midget Duplex

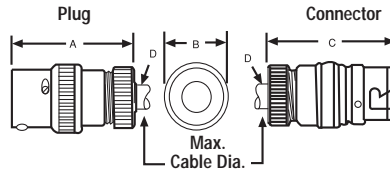


Plugs and Connectors

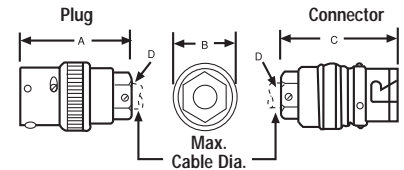
Clamp Type



Bushing Type



Hub Type



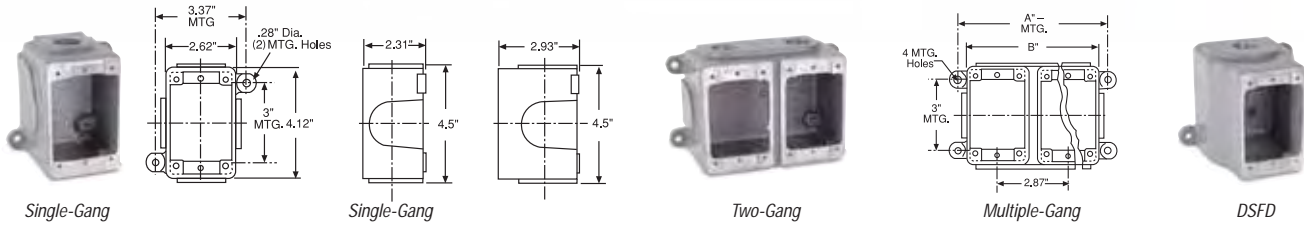
| Size | CLAMP TYPE | | | | BUSHING TYPE | | | | HUB TYPE | | | |
|-----------------|------------|--------|--------|--------|--------------|--------|--------|--------|----------|--------|--------|--------|
| | A | B | C | D | A | B | C | D | A | B | C | D |
| Standard | | | | | | | | | | | | |
| 15-20 Amp | 3.125" | 1.750" | 3.187" | 0.500" | 3.250" | 1.750" | 3.375" | 0.750" | 3.125" | 1.750" | 3.187" | 0.500" |
| 30 Amp | 3.437" | 2.125" | 4.250" | 0.625" | 3.750" | 2.125" | 4.500" | 1.125" | 3.500" | 2.125" | 4.250" | 0.750" |
| 50 Amp | 4.750" | 2.125" | 4.750" | 1.125" | 4.875" | 2.125" | 4.875" | 1.125" | 4.500" | 2.125" | 4.625" | 0.750" |
| Midget | | | | | | | | | | | | |



Mounting Options for Midget and Standard Ever-Lok

Type FS (Shallow) and Type FD (Deep)

Aluminum boxes have 6-32 cover mounting holes tapped to accommodate all FS and FD cover assemblies.
 Brass boxes have 10-24 cover mounting holes tapped to accommodate all FS and FD cover assemblies.



| GANGS | TYPE | CAST ALUMINUM | CAST BRASS | OVERALL DIMENSIONS* |
|--------|------|---------------|------------|-----------------------|
| Single | FS | 3701A | 3721 | 4.12" x 2.62" x 2.31" |
| | FD | 3711A | 3731 | 4.12" x 2.62" x 2.94" |
| | DSFD | 3781A | 3782 | 4.12" x 3.62" x 4.12" |
| Two | FS | 3702A | 3722 | 4.12" x 5.5" x 2.25" |
| | FD | 3712A | 3732 | 4.12" x 5.62" x 2.87" |

* Dimensions are overall exclusive of conduit pads and mounting lugs.

NOTE:

When Type FD devices are to be mounted in boxes, Type FD boxes should be used. FS boxes will not accommodate FD devices.

Mounting — All the above boxes are for surface mounting. For flush mounting, see page 134.

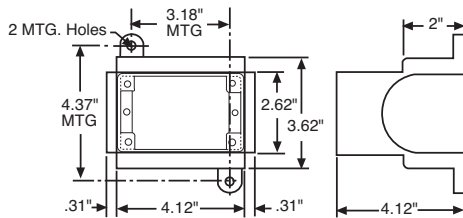
Boxes — Cast brass, natural finish; cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish.

Conduit Entries — Unless otherwise specified, furnished with one .75" outlet per gang, top or bottom. Additional conduit entries available — see price list. Specify size and location.

Maximum Conduit — FS and FD: 1", one per gang top and bottom and one each side.

DSFD — One 1.5" or two .5" top and bottom. Cast iron available on special order — consult your Thomas & Betts representative.

DSFD

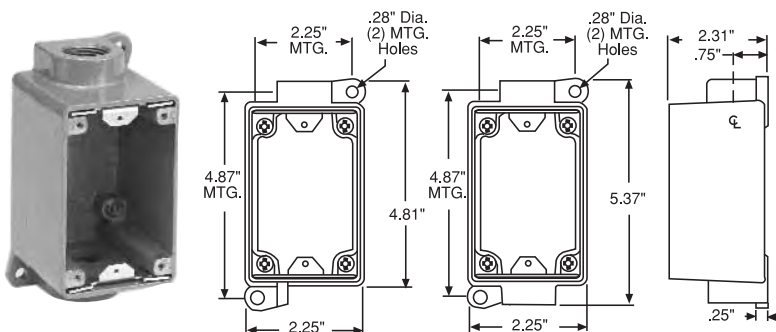


Multiple-Gang Dimensions

| GANGS | A | | B | |
|--------|--------|--------|--------|--------|
| | FS | FD | FS | FD |
| 2-Gang | 6.50" | 6.50" | 5.50" | 5.62" |
| 3-Gang | 11.25" | 9.37" | 10.37" | 8.50" |
| 4-Gang | 14.12" | 12.25" | 13.25" | 11.37" |

Type FSWS and FDWS (with Mounting Shelf for Box-Mounted Devices)

Aluminum Die-Cast Boxes with cover mounting holes tapped for 6-32 screws to accommodate all FS and FD cover assemblies.



| CAT. NO. | CONDUIT ENTRIES | |
|----------|-----------------|--------|
| | TOP | BOTTOM |
| FSWS-62 | 3/4" | NA |
| FDWS-62 | 3/4" | NA |
| FDWS-622 | 3/4" | 3/4" |
| FDWS-63 | 1" | NA |
| FDWS-633 | 1" | 1" |

NOTE:

Boxes — Aluminum die-cast, corrosion-resistant copper-free alloy, epoxy powder coat finish.

Conduit Entries — Standard as listed.

Mounting — All of the above boxes are for surface mounting.

Russellstoll®

Ever-Lok® Accessories

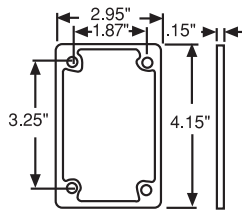
Adapter Flush Frames*

| GANGS | CAST ALUMINUM | CAST BRASS | OVERALL DIMENSIONS |
|-------|---------------|------------|--------------------|
| 1 | 3671A | 3681 | 5" x 3.5" |
| 2 | 3672A | 3682 | 5" x 6.5" |



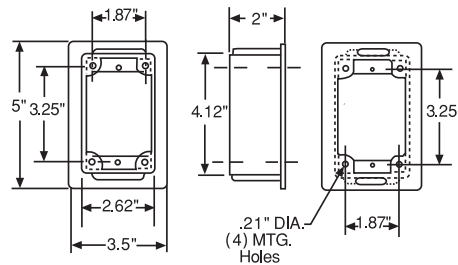
Blank Cover*

Covers Standard FS/FD™ box openings.



| CAT. NO. | MATERIAL |
|----------|---------------|
| 3677A | Cast Aluminum |
| 3687 | Cast Brass |

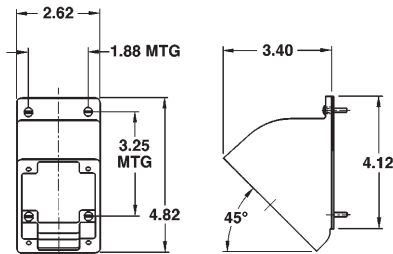
Flush Wall-Mounting Extension*



| CAT. NO. | MATERIAL |
|----------|---------------|
| 3679A | Cast Aluminum |
| 3679B | Cast Brass |

45° Angle Adapter*

Mounts to any FS/FD™ box.



Catalog Number 3678A

| CAT. NO. | MATERIAL |
|----------|---------------|
| 3678A | Cast Aluminum |
| 3678B | Cast Brass |

* Furnished complete with gasket and screws.

Material — Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish. Cast brass, natural finish.

Adapter Sub-Plate

The addition of this adapter sub-plate will permit the use of Ever-Lok conduit box-type receptacles in switch boxes or outlet boxes with raised covers, as listed. Used on standard (deep) stamped metal conduit boxes. Adapts two-hole to four-hole patterns.



| CAT. NO. | MATERIAL |
|----------|---------------|
| 8091A | Cast Aluminum |

Combination Gland Nut and Cable Clamp



Provides extra clamping protection in hard service applications. Relieves terminals and rubber gland of all cable strain.

| PLUG OR CONNECTOR SIZE | CAST ALUMINUM CAT. NO. | CAST BRASS CAT. NO. | MAX. CABLE DIA. |
|------------------------|------------------------|---------------------|-----------------|
| 10 Amp | 3905 | 3905B | .62" |
| 20 Amp | 3906 | 3906B | 1.12" |
| 30 Amp | — | — | — |

Material — Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish, cast brass.

Conduit Adapters



Adapter tapped with NPT thread to accommodate armored and non-metallic cable or flexible conduit.

| PLUG OR CONNECTOR SIZE | CAST ALUMINUM CAT. NO. | CAST BRASS CAT. NO. | TAPPED HOLE NPT |
|------------------------|------------------------|---------------------|-----------------|
| 15 Amp | FSA11 | FSA11B | .5" |
| | FSA12 | FSA12B | .75" |
| 30 Amp | FSA21 | FSA21B | .5" |
| 50 Amp | FSA22 | FSA22B | .75" |
| | FSA23 | FSA23B | 1" |

Cable Bushings

| HOLE DIAMETER FOR CABLE | SIZE 1 MIDGET EVER-LOK | SIZE 2 STD. 15 AMP | SIZE 3 20, 30 AND 50 AMP |
|-------------------------|------------------------|--------------------|--------------------------|
| .250" | MG0 | — | — |
| .313" | — | SG05 | — |
| .375" | — | SG1 | JG31 |
| .438" | MG15 | SG15 | — |
| .500" | MG2 | SG2 | JG32 |
| .531" | — | SG2A | — |
| .563" | MG25 | SG25 | JG325 |
| .594" | MG2B | SB2B | — |
| .625" | — | SG3 | JG33 |
| .688" | — | SG3A | — |
| .750" | — | SG4 | JG34 |
| .875" | — | — | JG35 |
| 1.000" | — | — | JG36* |
| 1.125" | — | — | JG361** |

Material — Oil-resistant Neoprene.

Size 3 Cable Bushing:

* Style for maximum cable only.

** Special minimum wall style.

NOTE:

Bushing Specials available at time of order.

When standard plugs or connectors are required to be furnished with one or more of the above accessories, add the suffix and catalog number of the accessory selected to the catalog number of the plug or connector. Complete list price is the total of the list price of the device plus the list price of the accessory.

Example — Catalog No. SKP3G with adapter tapped 3/8" would be Catalog No. SKP3G/JG31.



Size 2
Cable Bushing



Size 3
Cable Bushing

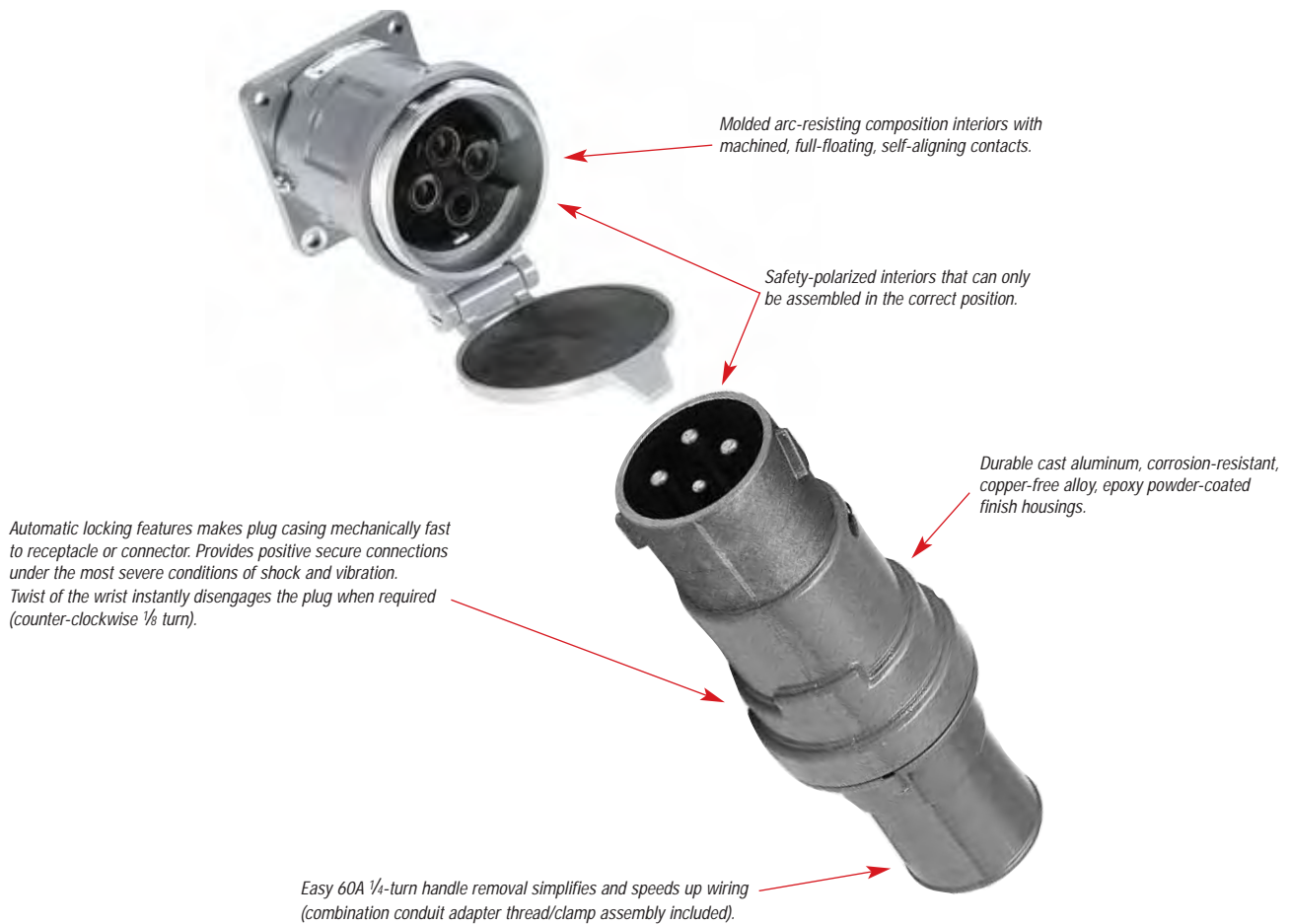
Heavy-Duty Automatic Locking Receptacles, Plugs and Connectors

30–100 Amp, 480VAC/250VDC





Heavy Service Ever-Lok components stay plugged in so your portable equipment stays on. The industrial standard for portable welders and other industrial equipment locks in place automatically at insertion — no screw collars to bother with. With its contoured handle, an easy counter-clockwise twist releases the plug for withdrawal, even under full-rated load/circuit-interrupting conditions.

Simple and rugged, the Heavy Service Ever-Lok self-locking system sets the standard for easy access in facilities, welding and industrial equipment use. All standard receptacle configurations are available, as well as reversed contact service options.

Design Features



Heavy Service Ever-Lok® Plugs, Connectors and Receptacles

| | | Plugs | Connectors | Receptacles | |
|----------------------|--------------|---|---|--|---|
| | |  |  |  |  |
| Configuration | | | | HSF Series Basic Receptacle | HSA Series* |
| 30 Amp | 2P3W 3P4W | 8407 8408 | 8443 8444 | HSF8403 HSF8404 | 8403 8404 |
| 60 Amp | 2P3W 3P4W | 8417 8418† | 8453 8454 | HSF8413 HSF8414 | 8413 8414 |
| 100 Amp | 3P4W | 8428-72 | 8464-72 | HSF8424-72 | 8424-72 |

NOTE:

Reverse service available by adding "R" suffix to catalog number. Solder lugs on 100 amp only.

Connectors — Can be furnished with conduit adapters to accommodate rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit. See page 141.

Flap covers are standard on all receptacles.

* Can be furnished with 45° angle adapter when specified on order. Add suffix -45 to catalog number.

† 8418 or F27194 Automotive 480VAC version plug.

Standard Cable Bushing

(see page 142 for other Bushings)

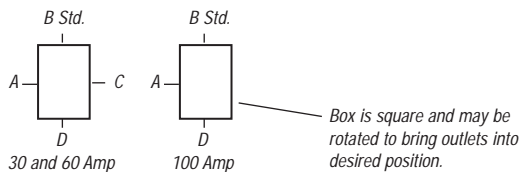
| CURRENT RATING | BUSHING | MAX. AWG SIZE |
|----------------|---------|--------------------------|
| 30 | 7/8" | #8, 7-strand or flexible |
| 60 | 1 1/8" | #4, 7-strand or flexible |
| 100 | 1 1/2" | #2, 7-strand or flexible |

Conduit Size

| CURRENT RATING | STD. SIZE | MAX. SIZE |
|----------------|-----------|-----------|
| 30 | 1" | 1 1/4" |
| 60 | 1" | 1" |
| 100 | 2" | 2" |

See page 141 for cable conduit adapters.

Outlet Location — Standard Series



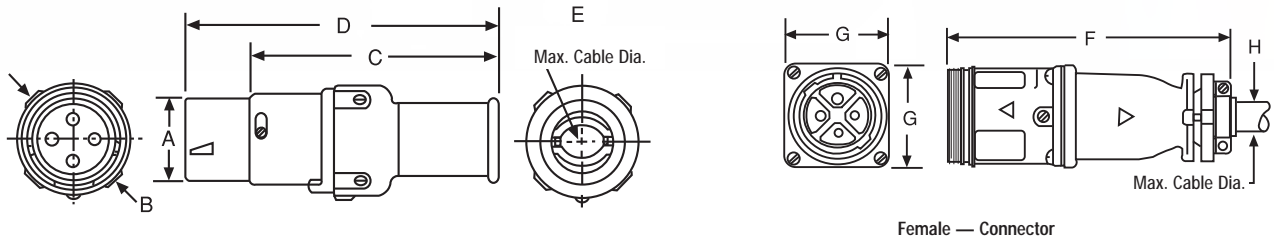
Receptacle Mounting Options Progressive Assembly

| MOUNTING STYLE | | TO ORDER USE: | CURRENT RATING | | |
|---|---|---|---------------------------------------|--|--|
| | | | 30 AMP | 60 AMP | 100 AMP |
| Standard Series HSA  |    | Receptacle + | Basic Receptacle* + | Basic Receptacle* + | Basic Receptacle* + |
| | | Vertical or Square Mount Box + | JB3-B100 1" Std. Conduit Size + | JB6-B150 1½" Std. Conduit Size + | JB10-B200 2" Std. Conduit Size + |
| | | Angle Adapter or JAA3-45 (45°) | JAA3 (20°) or JAA6-45 (45°) | JAA6-AB6 (20°) or JAA10-45 (45°) | JAA10 (20°) |
| Series HSR Straight  |    | Receptacle + | Basic Receptacle* + | Basic Receptacle* + | Basic Receptacle* + |
| | | Vertical Mount Box + | JB3-B100 1" Std. Conduit Size + | JB6-B150 1½" Std. Conduit Size + | JB10-B200 2" Std. Conduit Size + |
| | | Straight Adapter | JRA3 | JRA6-AB6 | JRA10 |
| Series HSB  |   | Receptacle + | Basic Receptacle* + | Basic Receptacle* + | Basic Receptacle* + |
| | | 30° Angle Adapter | JAAB3 | JAAB6 | JAAB10 |
| Series HSE  |   | Receptacle + | Basic Receptacle* + | Basic Receptacle* + | N/A |
| | | Angle Enclosure 1" Std. Conduit Size | JE3 1½" Std. Conduit Size | JE6 | — |
| Series HSH Horizontal  |    | Receptacle + | Basic Receptacle* + | — | — |
| | | Horizontal Mount Box + | JB3-B100 1" Std. Conduit Size + | N/A | N/A |
| | | Angle Adapter | JHA3 (20°) | — | — |

* Select appropriate receptacle by rating, configuration and voltage on page 137.

Ordering — Order individual pairs or use series letters followed by receptacle I.D. (ref. HSA series number).
Example: HSB8414. (For HSA, use receptacle catalog numbers only)

Plugs and Connectors

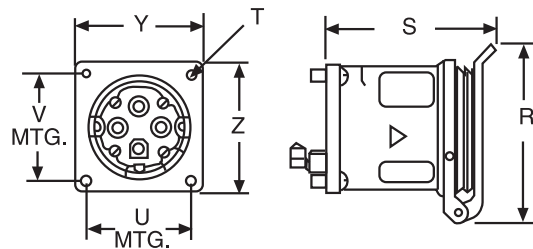


Dimensions for 2-, 3- or 4-Wire Weathertight Units

| AMP | A | B | C* | D | E | F | G | H |
|-----|--------|--------|--------|--------|--------|---------|--------|--------|
| 30 | 2" | 3" | 5.625" | 7" | 1" | 7.625" | 2.750" | 1.125" |
| 60 | 2.625" | 3.750" | 7.687" | 9.750" | 1.500" | 9.625" | 3.500" | 1.500" |
| 100 | 2.625" | 3.750" | 7.687" | 11" | 1.50" | 10.875" | 4" | 1.875" |

* Length of plug exposed when engaged in receptacle or connector.

Basic Receptacles



Dimensions for 3- or 4-Wire Units

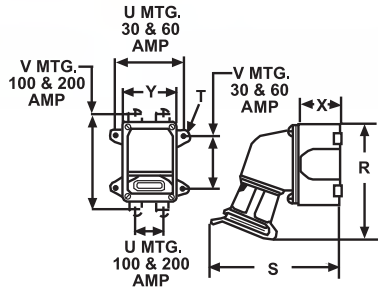
| AMP | Y | V | U | T | S | R | PANEL OPENING |
|-----|--------|--------|--------|--------|--------|---------|---------------|
| 30 | 2.750" | 2.250" | 2.250" | 0.213" | 3.250" | 7.000" | 2.250" D |
| 60 | 3.500" | 2.875" | 2.875" | 0.281" | 4.625" | 8.875" | 2.875" D |
| 100 | 4" | 3.375" | 3.375" | 0.281" | 5.875" | 10.500" | 3" |

Russellstoll®

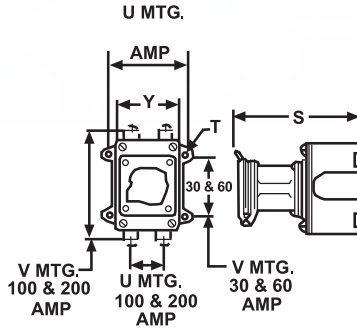
Heavy-Service Ever-Lok® Dimensions

Industrial and Commercial — DuraTite® and EverLok®

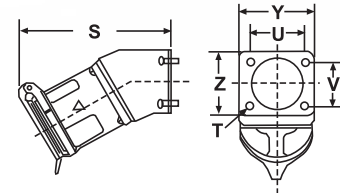
Standard Series HSA



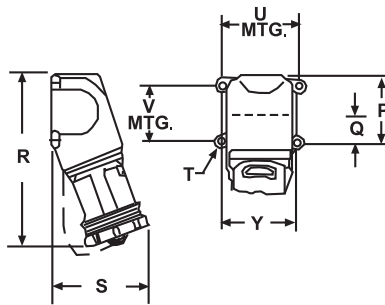
Series HSR



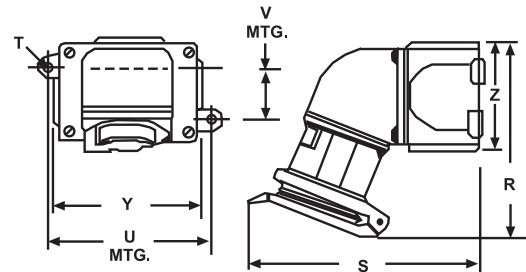
Series HSB



Series HSE



Series HSH





| AMP | SERIES | Z | Y | X | V | U | T | Q | P | S | R | PANEL OPENING |
|-----|-----------|--------|--------|--------|--------|--------|-------|--------|--------|---------|---------|---------------|
| 30 | HSA (20°) | 4.500" | 3.000" | 2.375" | 2.687" | 3.687" | .250" | — | — | 7.375" | 7 | — |
| | HSA (45°) | 4.500" | 3.000" | 2.375" | 2.687" | 3.687" | .250" | — | — | 7.875" | 6.625" | — |
| | HSR | 4.500" | 3.000" | 2.375" | 2.687" | 3.687" | .250" | — | — | 6.750" | — | — |
| | HSB | 3.125" | 3.125" | — | 2.250" | 2.250" | .213" | — | — | 6.250" | — | 2.250" |
| | HSE | — | 3.50" | — | — | 4.000" | .250" | 1.250" | 2.375" | 5.250" | 7.250" | — |
| | HSH | 3.937" | 4.500" | 2.375" | 3.687" | 2.687" | .250" | — | — | 7.250" | 6.125" | — |
| 60 | HSA (20°) | 5.625" | 4.000" | 3.000" | 3.812" | 4.937" | .343" | — | — | 9.250" | 8.875" | — |
| | HSA (45°) | 5.625" | 4.000" | 3.000" | 3.812" | 4.937" | .343" | — | — | 9.875" | 8.250" | — |
| | HSR | 5.625" | 4.000" | 3.000" | 3.812" | 4.937" | .343" | — | — | 8.375" | — | — |
| | HSB | 3.187" | 3.625" | — | 2.187" | 2.625" | .281" | — | — | 9.250" | — | 2.500" |
| | HSE | — | 4.250" | — | 3.125" | 4.500" | .281" | 1.562" | 3.687" | 6.750" | 9.750" | — |
| 100 | HSA (20°) | 5.500" | 5.500" | 3.750" | 6.750" | 4.250" | .343" | — | — | 10.750" | 10.500" | — |
| | HSA (45°) | 5.500" | 5.500" | 3.750" | 6.750" | 4.250" | .343" | — | — | 11.750" | 9.500" | — |
| | HSR | 5.500" | 5.500" | 3.750" | 6.750" | 4.250" | .373" | — | — | 12.250" | — | — |
| | HSB | 3.187" | 3.625" | — | 2.187" | 2.625" | .281" | — | — | 9.250" | — | 2.500" |

NOTE: U = horizontal mounting hole centers; V = vertical mounting hole centers.

Replacement Interiors

For Receptacles, Connectors, Plugs and Male Inlets

| |  <p>FEMALE INTERIORS: RECEPTACLES AND CONNECTORS</p> | | |  <p>MALE INTERIORS: PLUGS</p> | | |
|-------------|---|---------------|-----------------|--|---------------|-----------------|
| POLES/WIRES | 30 AMP | 60 AMP | 100 AMP | 30 AMP | 60 AMP | 100 AMP |
| 2P3P | ARU323 | ARU623 | — | APU323 | APU623 | — |
| 3P4W | ARU334 | ARU634 | ARU134-6 | APU334 | APU634 | APU134-6 |

NOTE:

Interiors — Arc-resisting composition with machined, full-floating, self-aligning contacts. Solder lug interior will not interchange with mechanical lug. If you have solder lugs, reorder solder lugs.

Conduit Adapters

Adapters are tapped NPT standard pipe thread to accommodate rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit.



JPA62 Conduit Adapter

Plug or Connector Sizes

| 30 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 60 AMP CAT. NO. | TAPPED HOLE SIZE NPT | 100 AMP CAT. NO. | TAPPED HOLE SIZE NPT |
|-----------------|----------------------|-----------------|----------------------|------------------|----------------------|
| JPA31 | ½" | JPA62 | ¾" | JPA104 | 1¼" |
| JPA32 | ¾" | JPA63 | 1" | JPA105 | 1½" |
| JPA33 | 1" | JPA64 | 1¼" | JPA106 | 2" |

NOTE:

Material — Cast aluminum, corrosion-resistant copper-free alloy, electrostatic epoxy coated. Furnished complete with gasket and screws.

To specify standard plugs or connectors equipped with one of the above adapters, add the catalog number of the adapter selected to the catalog number of the plug or connector. Complete list price is the list price of the device plus list price of the adapter.

Example: Cat. No. 8443 with adapter tapped 1" would be Cat. No. 8443/JPA33.

Cable Bushings

Boxed catalog numbers are standard bushing sizes. To order non-standard bushing, specify as follows: Example 8418/JG65.

| Hole Diameter for Cable | 30 Amp | 60 Amp | 100 Amp |
|-------------------------|--------|--------|---------|
| .375" | JG31 | — | — |
| .500" | JG32 | — | — |
| .563" | JG325 | — | — |
| .594" | JG32B | — | — |
| .625" | JG33 | JG63 | — |
| .750" | JG34 | JG64 | JG104 |
| .781" | JG341 | — | — |
| .875" | JG35 | JG65 | JG105 |
| .937" | JG355 | — | — |
| 1.000" | JG38* | JG66 | JG106 |
| 1.125" | JG361* | — | — |
| 1.188" | — | JG67 | JG107 |
| 1.313" | — | — | JG108 |
| 1.375" | — | JG69* | — |
| 1.500" | — | JG610* | JG1010 |
| 1.687" | — | — | JG1011 |
| 1.813" | — | — | — |
| 1.875" | — | — | JG1013* |

NOTE:

When ordering, select bushing size slightly larger than your cable O.D. for best fit.

Material — Neoprene.

Identification letter inside hole.

Standard Cable Bushings



Size No. 3, 6, 10 and 20

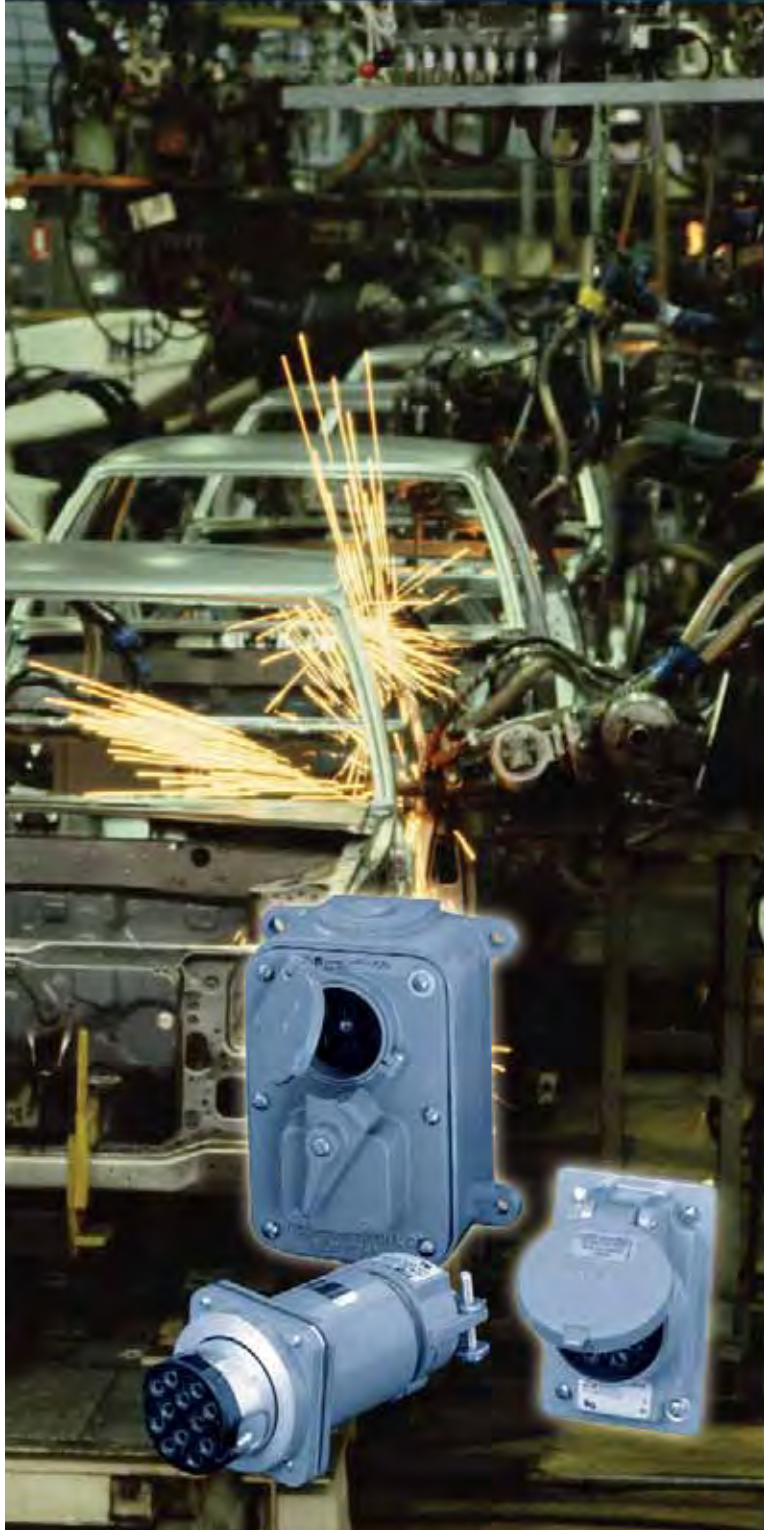
* Oversize Cable Bushings



Size No. 3, 6, 10 and 20



Control Circuit and Industrial Interlock Applications



Control Circuit Connectors

| | |
|--|---------|
| Control Circuit Connectors Overview | 144 |
| Types SK and SKW Overview | 145 |
| Type SK | 146–147 |
| Type SKW | 148–149 |
| Control Circuit Connector Accessories..... | 150–153 |

Industrial Interlocked Receptacles

| | |
|---|---------|
| Industrial Interlocked Receptacles..... | 154–162 |
|---|---------|

Russellstoll®

Control Circuit Connectors Overview

Defined

- Any application where electrical connections need protection from water and/or dust entering the contacts or the wiring compartment
- Cable or conduit sealing and device locking designs are critical
- Metal connectors are usually preferred for long service life

Russellstoll Line Selections for Indoor and Outdoor Applications

SK/SKW Multi-Pin Control Circuit to 11P12W 20A

The toughest multi-circuit, screw-termination circular connector system; use self-locking SK components indoor and collar-locking SKW components outdoor; load breaking at 20 amps. Solid brass (silver-plated) contacts ensure long life and interiors can be rebuilt. All pin counts are available from 3P4W through 11P12W, gasketed interiors in SKW.

Interlocks through 4P5W 30A through 400A

A broad offering of performance interlocks in sheet steel, cast aluminum or brass. Automotive/Industrial welding units include 60A and 100A versions, both Heavy Service Ever-Lok® and MaxGuard® lines. Switched, fused and circuit breaker versions are available as well as switchgear selections. Custom enclosures wall-mount or column-mount in standard 8" I-beam webs.

Switches 125/250VAC 10A, 20A and 30A

SPST and SPDT Tumbler Switches are offered in industrial and hazardous-duty styles. Heavy-duty, copper-free aluminum housings (brass available) around selected common ratings. Switches carry AC-only ratings (see Hazardous Duty section for explosion-proof switches).



Typical Application Groups

General Industrial Marine

Lighting Systems
Shore-to-Ship Power
Welding Stations
Portable Distribution Centers
Shipboard Power Outlets
Telephone Shore-to-Ship

Government, Municipal and Utilities

Portable Building Power
Army Corps of Engineers
Utilities Panels
Emergency Power Systems
Sewage Pumping Stations
Lighting and Controls

Construction and Agriculture

Generator Sets and Systems
Portable Tools and Equipment
Irrigation System Panels
Portable Lighting
and Equipment

Industrial and OEM

Factory Power Outlets
HVACR Controls
Machine Tool Controls
Amusement Park Systems

Control Circuit Connectors — Types SK and SKW Overview

20 Amp, 250 Volts AC or DC, 600 Volts AC Maximum Rating
Load-Breaking Multi-Circuit Receptacles, Plugs, Connectors and Inlets

Features and Benefits



Type SK

Type SK multi-circuit receptacles, plugs, inlets and connectors are designed for indoor or NEMA 1 automatic press, tool control and welder applications requiring rugged, shock-resistant devices capable of safely interrupting rated currents under load.

Receptacles and connectors have Neoprene gasket mounts and positive grounding path through separate contact. Equipment grounding contacts "make first" and "break last." Wiring space is generous. Listed ratings are for interrupting currents under load.

The time-tested Ever-Lok® automatic locking feature provides positive connections under the most severe conditions of shock and vibration. Yet a twist of the wrist instantly disengages the plug when required.

Type SKW

Type SKW multi-circuit receptacles, plugs, inlets and connectors are designed for outdoor NEMA 4, rough service and critical environment machinery, HVACR systems, servo control and other automatic/controlled functions requiring rugged, shock-resistant devices capable of safely breaking rated loads. These watertight and oil-tight devices are equipment grounded with ground contacts that "make first" and "break last." Wiring space is generous. Listed ratings are for full load interrupting currents.

Both series feature simple set-screw wiring termination in a circular connector with up to 11-pole 12-wire circuit capability. A wide selection of cable bushings can be specified upon ordering at no additional charge. Conduit adapters are also available for shielded or construction usage for both SK and SKW series.

NOTE: For more than 12 circuits, miniature connectors or rectangular format, ask about T&B Pos-E-Kon® line.

Indoor, NEMA1
 20 Amp Load Breaking
 250 Volts DC
 600 Volts AC (Maximum Rating)

Standard Service

Connector

Reverse Service

| POLES/ WIRES | FEMALE RECEPTACLE STYLE SKR | MALE PLUG STYLE SKP | FEMALE CONNECTOR STYLE SKC | MALE RECEPTACLE STYLE SKRR | CONNECTOR*/ FEMALE PLUG STYLE SKCU | CABLE BUSHING HOLE ID |
|-----------------|-----------------------------------|------------------------|----------------------------------|-------------------------------|--|-----------------------------|
| 2P3W | SKR3G | SKP3G | SKC3G | SKRR3G | SKCU3G | 5/8" |
| 3P4W | SKR4G | SKP4G | SKC4G | SKRR4G | SKCU4G | 5/8" |
| 4P5W | SKR5G | SKP5G | SKC5G | SKRR5G | SKCU5G | 3/4" |
| 5P6W | SKR6G | SKP6G | SKC6G | SKRR6G | SKCU6G | 3/4" |
| 6P7W | SKR7G | SKP7G | SKC7G | SKRR7G | SKCU7G | 3/4" |
| 7P8W | SKR8G | SKP8G | SKC8G | SKRR8G | SKCU8G | 7/8" |
| 8P9W | SKR9G | SKP9G | SKC9G | SKRR9G | SKCU9G | 7/8" |
| 9P10W | SKR10G | SKP10G | SKC10G | SKRR10G | SKCU10G | 1" |
| 10P11W | SKR11G | SKP11G | SKC11G | SKRR11G | SKCU11G | 1" |
| 11P12W | SKR12XG | SKP12XG | SKC12XG | SKRR12XG | SKCU12XG | 1" |

* Connectors: Both SKCU and SKC connectors will mate with standard service SKP plugs. SKC devices offer external shroud protection for female contacts. Both devices will lock with plug.

NOTE: With conduit fittings, plugs and connectors can be furnished with adapters to accommodate rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit. See **page 153**. Special construction: press control lockout dummy, Cat. #SKPD-

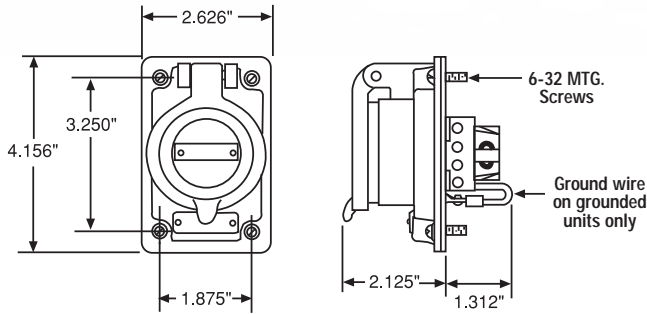
Specifications

- Receptacle Housing: Furnished with Neoprene gasket and 6-32 mounting screws
 Type SKWR — Cast aluminum, corrosion-resistant copper free alloy
 Style SKR — Heavy-gauge steel, plated
- Plug Housing:
 Type SKP — Steel, zinc-plated with heavy cast aluminum alloy cable clamp and cable bushing
 Type SKWP — Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish. Furnished with heavy cast cable clamp and cable bushing
- Connector Housing: Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish. Furnished with heavy cast cable clamp and cable bushing
- Conduit Boxes: Cast boxes for above receptacles are listed on **page 150**. Type SK receptacles require FD series or DSFD box; can be furnished with single-gang outlet box at additional cost. When required, add suffix catalog number of box to catalog number of receptacle
- Cable Bushing: Oil-resistant Neoprene strain relief cable bushing regularly furnished with hole size as listed; other hole sizes available at no extra cost if specified on order. See **page 153** for additional sizes
- Interiors: Contacts are removable and have pressure-type terminals for 12 AWG maximum conductors
- Insulating Bodies: Arc- and impact-resisting mold composition
- Contacts: Silver-plated with fully insulated pressure screw-type terminals
- Repair Kits: Pins/Sleeves Repair — Components for rebuild of 2-4 interiors

Male Devices **CAT. NO. SKX12MS**
 Female Devices **CAT. NO. SKX12FA**

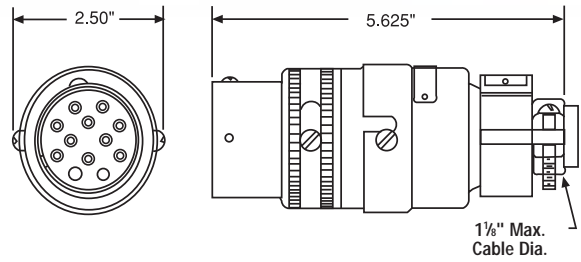
Standard Service

Female Receptacle — Style SKR



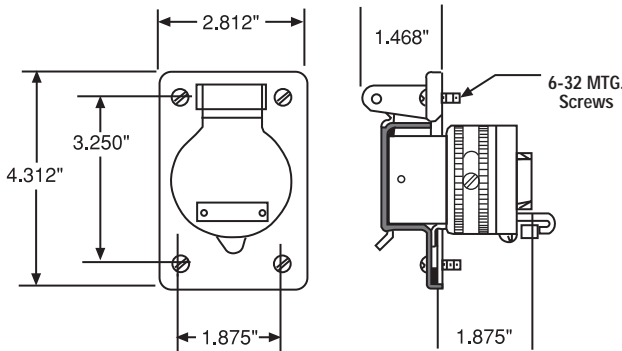
NOTE: All require FD or DSFD series box mounting.

Male Plug — Style SKP

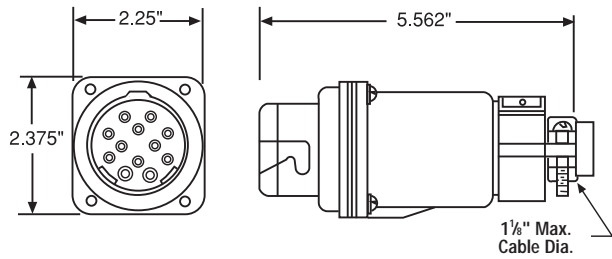


Reverse Service

Male Receptacle — Style SKRR

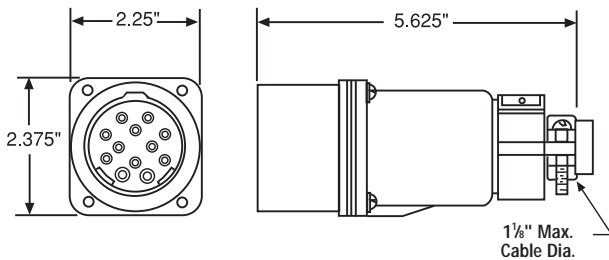


Female Plug — Style SKCU (non-shrouded connection)







Connector

Female Connector — Style SKC (shrouded style)



Ordering Information

Outdoor, NEMA 4 (with screw cap)
 20 Amp Load Breaking
 600 Volts AC Max.
 250 Volts DC

| |  |  |  |  | |
|-----------------|---|---|--|---|-----------------------------|
| POLES/ WIRES | FEMALE RECEPTACLE STYLE SKWR | MALE PLUG STYLE SKWP | FEMALE CONNECTOR STYLE SKWC | MALE MOTOR PLUG STYLE SKWM | CABLE BUSHING HOLE ID |
| 2P3W | SKWR3G | SKWP3G | SKWC3G | SKWM3G | 5/8" |
| 3P4W | SKWR4G | SKWP4G | SKWC4G | SKWM4G | 5/8" |
| 4P5W | SKWR5G | SKWP5G | SKWC5G | SKWM5G | 3/4" |
| 5P6W | SKWR6G | SKWP6G | SKWC6G | SKWM6G | 3/4" |
| 6P7W | SKWR7G | SKWP7G | SKWC7G | SKWM7G | 3/4" |
| 7P8W | SKWR8G | SKWP8G | SKWC8G | SKWM8G | 7/8" |
| 8P9W | SKWR9G | SKWP9G | SKWC9G | SKWM9G | 7/8" |
| 9P10W | SKWR10G | SKWP10G | SKWC10G | SKWM10G | 1" |
| 10P11W | SKWR11G | SKWP11G | SKWC11G | SKWM11G | 1" |
| 11P12W | SKWR12XG | SKWP12XG | SKWC12XG | SKWM12XG | 1 1/8" |

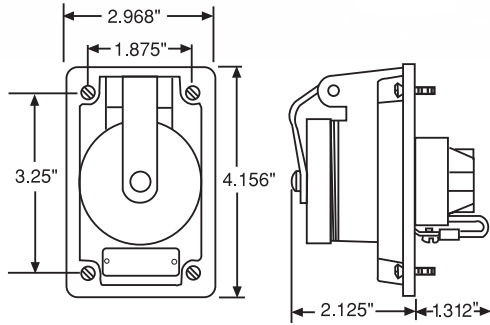
NOTE: SKWM male inlet accommodates SKWC Connector (Female). Plugs and connectors can be furnished with adapters to accommodate rigid conduit or standard connectors for armored and non-metallic cable or flexible conduit. See **page 153**.

Specifications

- Receptacle Housing: Type SKWR — Cast aluminum, corrosion-resistant copper-free alloy. Furnished with Neoprene gasket and stainless steel 6-32 mounting screws
- Plug and Connector Housing: Heavy cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish; furnished with heavy cast cable clamp and cable bushing
- Conduit Boxes: Cast boxes for above receptacles are on **page 150**. Can be furnished with single-gang outlet box at additional cost. When required, add suffix catalog number of box to catalog number of receptacle
- Cable Bushing: Oil-resistant, Neoprene strain relief cable bushing regularly furnished with hole size as listed. Other hole sizes available at no extra cost if specified on order. See **page 153** for additional sizes
- Protective Caps: Waterproof caps complete with mounting cable
 - Male Devices **CAT. NO. F26874C** (Cup Cap)
 - Female Devices **CAT. NO. F04077** (Screw Cap)
- Repair Kits: Pins/Sleeves Repair — Components for rebuild of 2-4 interiors
 - Male Devices **CAT. NO. SKX12MW**
 - Female Devices **CAT. NO. SKX12FA**

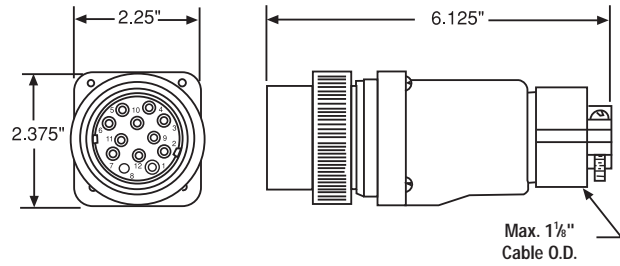
Receptacle

Style SKWR



Plug

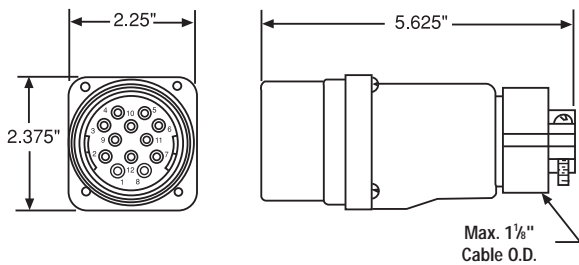
Style SKWP



NOTE: All require FD or DSFD series box mounting.

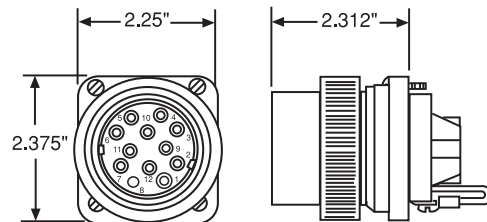
Connector

Style SKWC



Motor Plug

Style SKWM



Russellstoll®

Control Circuit Connector Accessories

Type FS (Shallow) and Type FD (Deep)

Aluminum boxes have 6-32 cover mounting holes tapped to accommodate all FS and FD cover assemblies.

Brass boxes have 10-24 cover mounting holes tapped to accommodate all FS and FD cover assemblies.



Single-Gang



Two-Gang



DSFD

| GANGS | TYPE | CAST ALUMINUM | CAST BRASS | OVERALL DIMENSIONS* |
|--------|------|---------------|------------|-----------------------|
| Single | FS | 3701A | 3721 | 4.12" x 2.62" x 2.31" |
| | FD | 3711A | 3731 | 4.12" x 2.62" x 2.94" |
| | DSFD | 3781A | 3782 | 4.12" x 3.62" x 4.12" |
| Two | FS | 3702A | 3722 | 4.12" x 5.5" x 2.25" |
| | FD | 3712A | 3732 | 4.12" x 5.62" x 2.87" |

* Dimensions are overall exclusive of conduit pads and mounting lugs.

NOTE:

When Type FD devices are to be mounted in boxes, Type FD boxes should be used. FS boxes will not accommodate FD devices.

Mounting — All the above boxes are for surface mounting. For flush mounting, see **page 151**.

Boxes — Cast brass, natural finish. Cast aluminum, corrosion-resistant, copper-free alloy, epoxy powder coat finish.

Outlets — Unless otherwise specified, furnished with one .75" outlet per gang, top or bottom. Additional outlets charged extra — see price list. Specify size and location.

Maximum Conduit — FS and FD: 1"; one per gang top and bottom and one each side.

DSFD — One 1.5" or two .5" top and bottom.

Cast iron available on special order — consult your Thomas & Betts representative.

Type FSWS and FDWS (with Mounting Shelf for Box-Mounted Devices)

Aluminum Die-Cast Boxes with cover mounting holes tapped for 6-32 screws to accommodate all FS and FD cover assemblies.

| CAT. NO. | STANDARD OUTLETS | |
|----------|------------------|--------|
| | TOP | BOTTOM |
| FSWS-62 | ¾" | NA |
| FDWS-62 | ¾" | NA |
| FDWS-622 | ¾" | ¾" |
| FDWS-63 | 1" | NA |
| FDWS-633 | 1" | 1" |



NOTE:

Boxes — Aluminum die-cast, corrosion-resistant copper-free alloy, epoxy powder coat finish.

Outlets — Standard as listed.

Mounting — All of the above boxes are for surface mounting.

Control Circuit Connector Accessories

Adapter Flush Frames*

| GANGS | CAST ALUMINUM | CAST BRASS | OVERALL DIMENSIONS |
|-------|---------------|------------|--------------------|
| 1 | 3671A | 3681 | 5" x 3.5" |
| 2 | 3672A | 3682 | 5" x 6.5" |



Blank Cover*

Covers standard FS/FD™ box openings.

| CAT. NO. | MATERIAL |
|----------|---------------|
| 3677A | Cast Aluminum |
| 3687 | Cast Brass |



Flush Wall Mounting Extension*

| CAT. NO. | MATERIAL |
|----------|---------------|
| 3679A | Cast Aluminum |
| 3679B | Cast Brass |



45° Angle Adapter*

Mounts to any FS/FD™ box.

| CAT. NO. | MATERIAL |
|----------|---------------|
| 3678A | Cast Aluminum |
| 3678B | Cast Brass |



Adapter Sub-Plate

The addition of this adapter sub-plate will permit the use of Ever-Lok® conduit box-type receptacles in switch boxes or outlet boxes with raised covers, as listed. Used on standard (deep) stamped metal conduit boxes. Adapts two-hole to four-hole patterns.

| CAT. NO. | MATERIAL |
|----------|---------------|
| 8091A | Cast Aluminum |

* Furnished complete with gasket and screws.

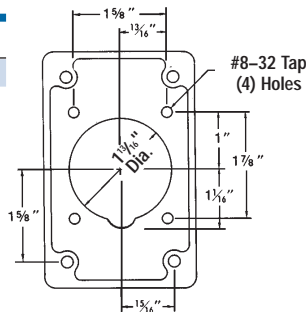
Material — Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish.
Cast brass, natural finish.



SKWM Mount Adapter Plate

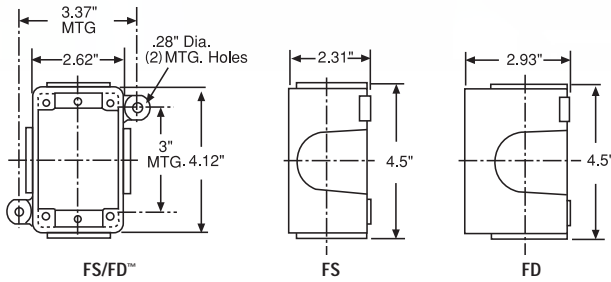
Used to mount SKWM to FS/FD™ standard series boxes.

| CAT. NO. | MATERIAL |
|----------|----------|
| SKWMFS | Aluminum |

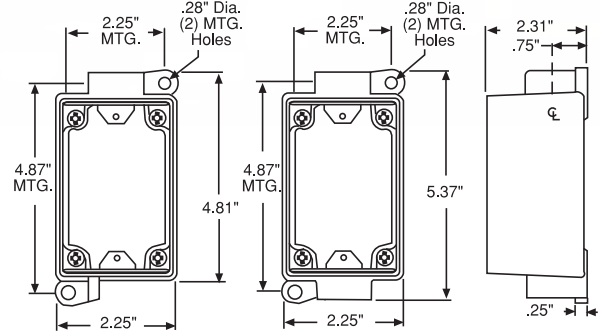


Type FS and FD

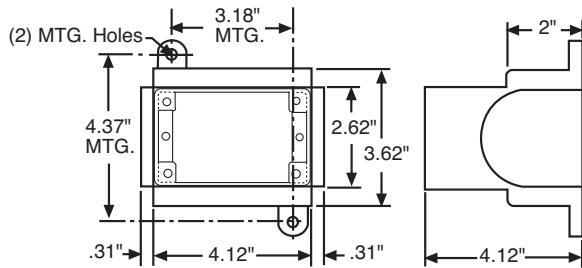
Single-Gang



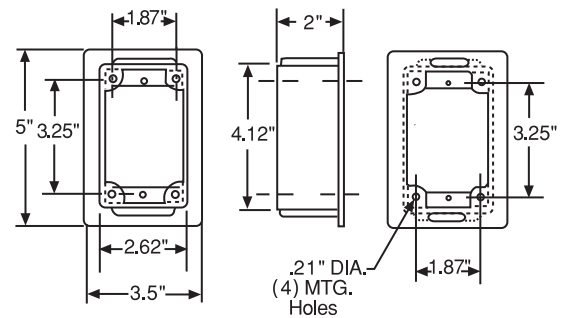
Type FSWS and FDWS



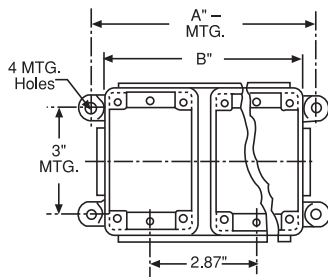
DSFD



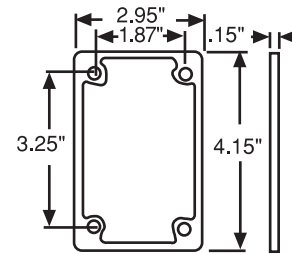
Flush Mounting Extension



Multiple-Gang



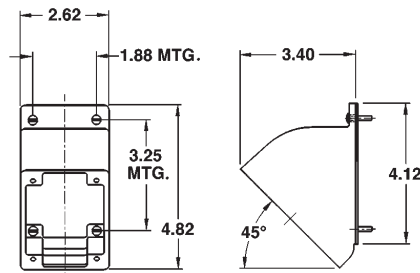
Blank Cover



Multiple-Gang Dimensions

| NO. OF GANGS | A | | B | |
|--------------|-------|-------|-------|-------|
| | FS | FD | FS | FD |
| 2-Gang | 6.50" | 6.50" | 5.50" | 5.62" |

45° Angle Adapter



Combination Gland Nut and Cable Clamp



Provides extra clamping protection in hard service applications. Relieves terminals and rubber gland of all cable strain.

| PLUG OR CONNECTOR SIZE | CAST ALUMINUM CAT. NO. | CAST BRASS CAT. NO. | MAX CABLE DIA. |
|------------------------|------------------------|---------------------|----------------|
| 20 Amp and SKW | 3906 | 3906B | 1 1/8" |

NOTE:

Material — Cast aluminum, corrosion-resistant copper-free alloy, epoxy powder coat finish or cast brass, natural finish.

Adapters for Conduit



Adapter tapped with NPT thread to accommodate armored and non-metallic cable or flexible conduit.

| PLUG OR CONNECTOR SIZE | CAST ALUMINUM CAT. NO. | CAST BRASS CAT. NO. | TAPPED HOLE NPSM |
|------------------------|------------------------|---------------------|------------------|
| 20 Amp and All SKW | FSA21 | FSA21B | 1/2" |
| | FSA22 | FSA22B | 3/4" |
| | FSA23 | FSA23B | 1" |

Cable Bushings

| HOLE DIAMETER FOR CABLE | SIZE 3 20 AMP |
|-------------------------|---------------|
| .375" | JG31 |
| .500" | JG32 |
| .563" | JG325 |
| .625" | JG33 |
| .750" | JG34 |
| .875" | JG35 |
| 1.000" | JG36* |
| 1.125" | JG361** |

Material — Oil-resistant Neoprene.

Size 3 Cable Bushing:

*Style for maximum cable only.

**Special minimum wall style.

NOTE:

When standard plugs or connectors are required to be furnished with one or more of the above accessories, add the suffix and catalog number of the accessory separated by a "/" to the catalog number of the plug or connector. Complete list price is the total of the list price of the device plus the list price of the accessory.

Example: Catalog No. SKP9G with with 1" bushing would be Catalog No. SKP9G/JG36.



Size 3 Cable Bushing



Industrial interlocked receptacles are available in 30 through 400 Amp. Switched receptacles have mechanical linkages for added safety. Safety features include:

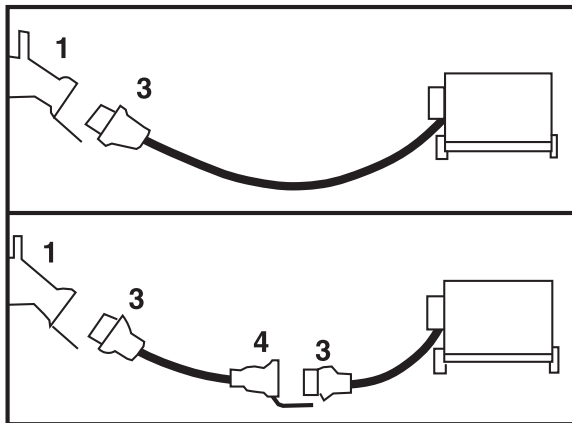
- Plugs cannot be inserted unless power is safely turned off
- Plugs cannot be removed until power is safely turned off
- Specialty designs may also automatically disengage power if plug is removed while power is on, either mechanically or electrically

Applications

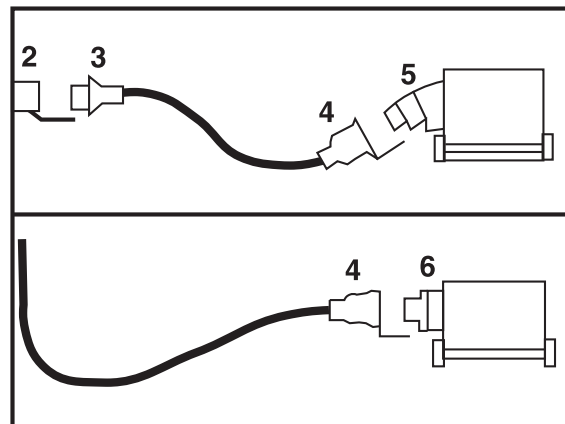
Applications where these units are most commonly used are:

- Welding stations in automotive and heavy industry
- Temporary and portable power distribution for construction
- Marine shore-to-ship power
- Industrial machinery installation
- Portable power distribution, vehicle and gen-set power for aerospace
- Custom systems in all industries

Sample Installation: Fixed Power Source (Wall) To Remote/Portable Location



1. Receptacle (wall-mounted female)
2. Receptacle (panel-mounted female)
3. Plug (attachment)



4. Female connector
5. Male Inlet with angle adapter
6. Male inlet with straight adapter

Other installations: generator power sources, custom control circuits, multiple voltage service — contact Technical Services.

Mounting Options



Industrial Wall-Mount Interlocks

- Indoor service NEMA 3R
- Fused protection
- 30–100A models, 600V
- Heavy Service Ever-Lok® or MaxGard® interfaces



Automotive/Heavy Industrial I-Beam Web-Mount

- Indoor service NEMA 12/3R
- Fused or circuit breaker protection
- 30–100A models, 600V
- Stepdown transformer-disconnect designs with convenience outlets
- Cast aluminum and sheet steel housing versions
- Mounts inside web of standard 8" I-beam column
- Interfaces with Heavy Service Ever-Lok, MaxGard, standard Ever-Lok and FS/FD™



Marine/Heavy Industrial and Custom

- Outdoor service NEMA — 3R to 4X
- Switched or circuit breaker protection
- 30–400A models, 600V
- Cast aluminum or cast brass
- Mounting to customer specifications
- Interfaces with MaxGard, FS/FD and more

Russellstoll®

Industrial Interlocked Receptacles

Control Circuit and Industrial Interlock

MaxGard Fused-Disconnect** Interlocked Receptacle with Disconnect Switch

Available in 30, 60 and 100 amp sizes, all polarizations.



MaxGard® Fused-Disconnect Interlocked Receptacle with Safety Switch meets UL, NEC® and major automotive specifications. This unit is the maximum in:

Safety

- Door safety switch with three external lockout points
- Safety fuse pulls for standard class R fuses
- Backup door safety latch

Durability

- Heavy .060 steel galvaneel with baked enamel, NEMA 3R/12 construction
- Clear shield for test probes

Performance

- Standard 600V cartridge fuse clips and spacing
- Fully interlocked MaxGard receptacle
- Angled front receptacle for easier access

Ordering Information

Maximum 600VAC or 250VDC

NOTE:

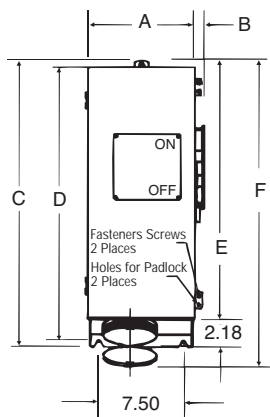
**Non-fused, non UL version available: Specify DNRF _____.

Standard polarizations shown. **Boldface** figures are for voltage assignment; for different ratings, see page 50.

Conduit Hubs

| AMP | STD. NPT THREAD OUTLET | MAX |
|-----|------------------------|-----|
| 30 | 1½" | 2½" |
| 60 | 2" | 2½" |
| 100 | 2" | 2½" |

Specifications on pages 48–49.



| | POLES/ WIRES | VOLTAGE | FUSED DISCONNECT** INTERLOCKED RECEPTACLE | MATING MAXGARD PLUG | STD. BUSHING |
|--------------------|-----------------|---------|--|------------------------|-----------------|
| | | | NEMA 12/3R CAT. NO. | CAT. NO. | ID |
| 30 Amp | 2P3W | 125 | DFRF3 1070 | DS3 107 MP000 | ⅞" |
| | 2P3W | 250 | DFRF3 2070 | DS3 207 MP000 | ⅞" |
| | 3P4W | 30/250 | DFRF3 3070 | DS3 307 MP000 | 1" |
| | 3P4W | 30/480 | DFRF3 4040 | DS3 404 MP000 | 1" |
| | 4P5W | 277/480 | DFRF3 5040 | DS3 504 MP000 | 1⅜" |
| 60 Amp | 2P3W | 250 | DFRF6 2070 | DS6 207 MP000 | 1⅜" |
| | 3P4W | 125/250 | DFRF6 3070 | DS6 307 MP000 | 1⅜" |
| | 3P4W | 30/480 | DFRF6 4040 | DS6 404 MP000 | 1⅜" |
| | 4P5W | 277/480 | DFRF6 5040 | DS6 504 MP000 | 1½" |
| 100 Amp | 2P3W | 250 | DFRF1 2070 | DS1 207 MP000 | 1⅞" |
| | 3P4W | 125/250 | DFRF1 3070 | DS1 307 MP000 | 1⅞" |
| | 3P4W | 30/480 | DFRF1 4040 | DS1 404 MP000 | 1⅞" |
| | 4P5W | 277/480 | DFRF1 5040 | DS1 504 MP000 | 2" |

▼ Control Contacts (position 9) use "K" example: DFRF1207K.
Always use liquidtight fittings to limit condensation entry.

Dimensions

| AMP | A | B | C | D | E | F |
|-----|-----|----|------|-----|------|-----|
| 30 | 9½" | ¾" | 25¾" | 25" | 22¾" | 30" |
| 60 | 9½" | ¾" | 25¾" | 25" | 22¾" | 30" |
| 100 | 9½" | ¾" | 25¾" | 25" | 22¾" | 30" |



Fused-Disconnect Interlocked Receptacle/Safety Switch

Heavy Service Ever-Lok 60 Amp

Standard fused/non-fused disconnect interlocked receptacle and safety switch is specified by major automotive manufacturers for welding disconnects and other applications. The Heavy Service Ever-Lok® system features "one-handed" insertion, locking and removal with your choice of switchgear!

Benefits

- Specified switchgear: GE or Square D
- Door safety switch with external lockout access
- Backup door safety latch
- Push-in plug locking: no screw collars needed
- Full interlocked outlet protection and functions
- Angled front receptacle in compact one-handed interlock

Options (Custom Capabilities)

- Other Russellstoll product interfaces
- 30, 60, 100 or 200 amp installations
- Specialty enclosures for your application
- Circuit breaker interlocked mechanisms

See pages 136–142 for full Heavy Service Ever-Lok line.

Features

- Heavy steel galvaneel with baked enamel finish
- NEMA 3R/12 construction
- Standard 600V class R fuses
- Listed components

GE Switchgear

| CAT. NO. | MATING PLUG |
|-----------|-----------------|
| TH3362JRS | 8418 or F27194† |

† F27194 Automotive, 480VAC label.

NOTE:

Mating Plugs sold separately.
Other styles available.

Square D (Mechanism)

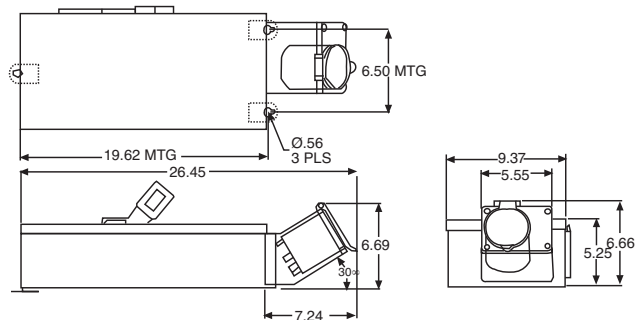
| CAT. NO. | MATING PLUG |
|--------------|-----------------|
| ESDFH8414F00 | 8418 or F27194† |

† F27194 Automotive, 480VAC label.

NOTES:

Mating Plugs sold separately.
Other styles available.

Also available: Many options for mounting, configuration or interfaces.



Combination Interlocked Transformer Disconnect Automotive/Heavy Industrial I-Beam Web Mount

60 Amp, 480VAC plus 120 or 240VAC convenience outlets to specification 3P4W (100A also available)

Benefits

Transformer Disconnects offer a combination of voltage outlets from a single facility 480V 3Ø service drop. Standard configurations include a fused, interlocked 480VAC, 60A 3Ø receptacle outlet and separately protected 120VAC, 15–20A convenience outlets. Custom configurations are available to meet your application requirements.

- Quickest way to expand or build a single voltage factory or facility, with voltage combinations available at every power drop
- Safest way to operate: with fuses and breaker protection for each receptacle. 60A plug cannot be inserted or removed unless power is off
- Most cost-effective way of providing power and convenience outlets in one location; wall mount or column mount in standard 8" I-beam pillars

Mechanical and Safety Features

- Three-point, two-way interlock function
 - Blade-type disconnect handle interlocked with door handle
 - Main disconnect uses steel rod arm interlock to 480VAC outlet

- High strength 3-point door hinge design
- Standard 8" I-beam web vertical mounting or conventional wall mount
- Easy access angled front 480VAC receptacle position
- Heavy-duty 14-gauge steel NEMA 3R/12 welded enclosure with gasketed door. Electrostatic epoxy powder coat gray finish
- Dual lockout locations on main switch handle and door handle

Optional Construction Features

- Stepdown transformer 2kVA/4kVA and secondary
- 30/60A outlet (Heavy Service Ever-Lok®, Angle Type or 30A MaxGard®)
- Convenience outlet types (including NEMA bladed styles) and protection

Ordering Information

- Many other configurations available



| CAT. NO. | 480VAC 60A RECEPTACLE | MATING PLUG | 120VAC 20A RECEPTACLE | MATING PLUG |
|--------------|-----------------------|-----------------|-----------------------|-------------|
| ERSFH8414FBB | 8414Spl. | 8418 or F27194† | 8003N (x2) | 8593CTN* |
| ERSFH8414FDC | 8414Spl. | 8418 or F27194† | 8003U-1 (x2) | 8013U-1* |

* Other styles available.

† F27194 Automotive 480VAC label.

NOTE:

Mating Plugs sold separately.

100A also available — consult your Thomas & Betts representative.

Specifications

Electrical and Safety Features:

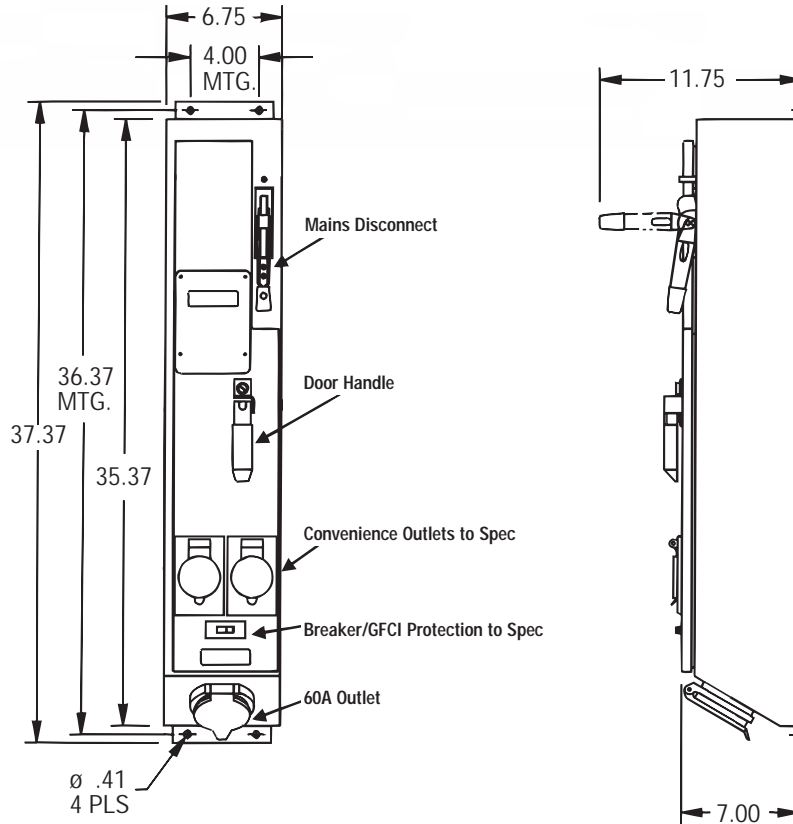
- Fused 480VAC 60A 3P4W Receptacle + Fused Dual 120VAC 20A 2P3W Outlets
- 20A Combination breaker/GFCI convenience outlets on door
- Heavy-duty (8-hour rated) 2kVA 480VAC–120VAC (fused primary) transformer; 4kVA option available



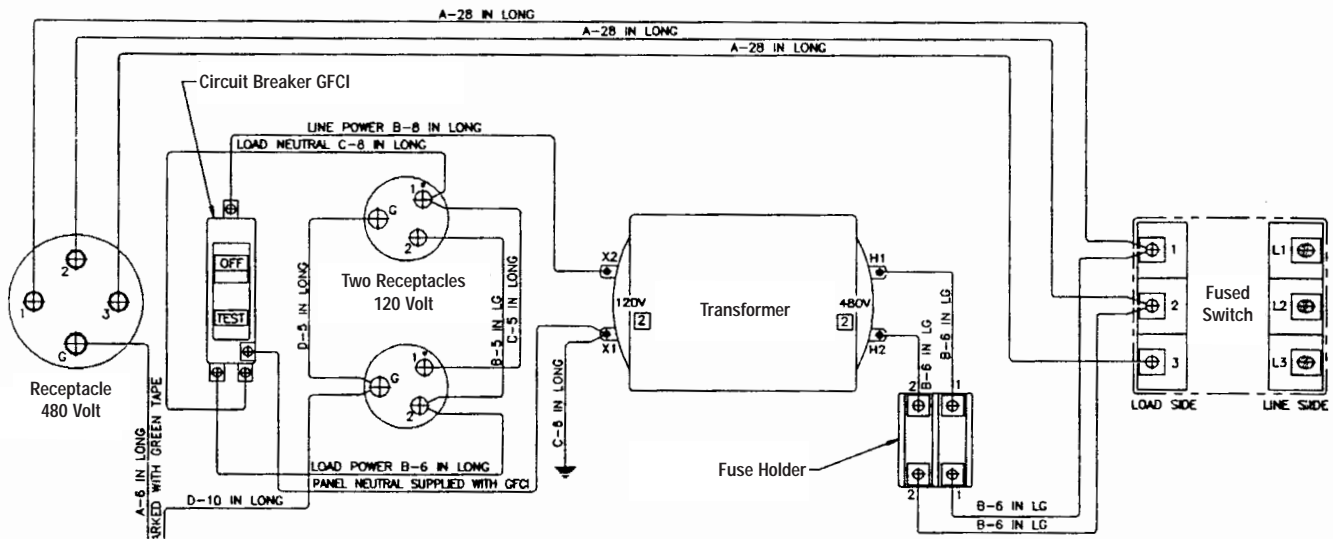
E57324



Dimensions



Wiring Diagram



Ever-Lok® Mechanically Interlocked Receptacle and Switch Automotive/Heavy Industrial I-Beam Web Mount Heavy Service Ever-Lok® Mechanically Interlocked Receptacles and Switch

60 Amp, 480VAC/250VDC, 3P4W
Circuit Breaker Interlocked Receptacle Option



Features and Benefits

Mechanically interlocked between the receptacle and the switch. Designed so that when the plug is fully inserted, the switch interlock is automatically released, permitting the switch to be turned on. The plug cannot be removed from the receptacle until the switch is manually turned off.

- Switch: 60 amp, 480VAC, 3-pole, quick "make" and quick "break"
- Housings: heavy cast aluminum corrosion-resistant copper-free alloy with gray electrostatic epoxy powder coat finish. Furnished with oil-resistant gaskets
- Handle lock-out feature
- Circuit-breaker interlocked version available in standard and high AIC models
- One-handed insertion or removal: unique auto-locking collar engages upon insertion, 1/8 counter-clockwise turn disengages for removal
- Simple and rugged full interlock safety. Plug cannot be inserted or withdrawn while power is on
- Fits in standard 8" I-beam web or wall mounting

| INTERLOCK CAT. NO. | MATING TYPE | PLUG |
|--------------------|-----------------|-----------------|
| CFCSRA13-60 | Switched only | 8418 or F27194† |
| F32753 ‡ | Circuit breaker | 8418 or F27194† |

† Automotive 480VAC.

‡ 70A Trip version F26313 and other variations also available.

NOTE:

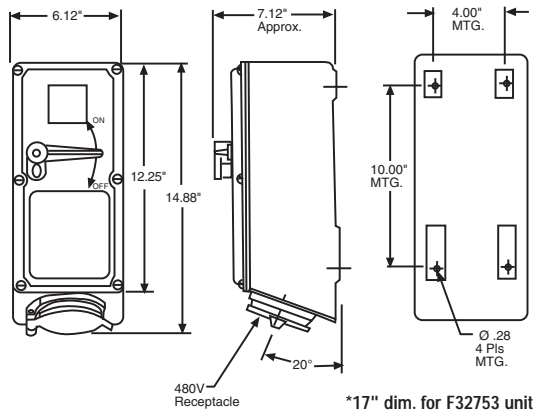
CFCSRA13-60 replaces previous Cat. #FCSRA13-60.

Mating Plugs sold separately.

Dimensions

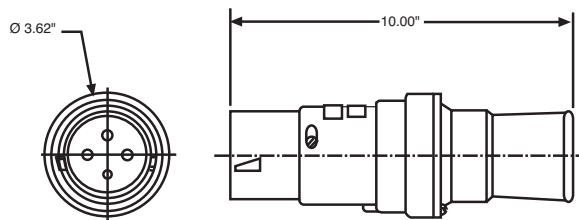
Mechanically Interlocked Switch

1/4" NPT Top Entry Std./Other Sizes Available



Mating Plug

60A, 3P4W, 8418 or F27194



Interlocked Switch (30A, 480VAC) Automotive/Heavy Industrial I-Beam Web Mount Interlocked Switch (FS/FD™ Interface)

30 Amp, 480VAC, 3P4W (other polarizations available)



Features and Benefits

The FS/FD™ Interlocked Switch is made of heavy-duty cast aluminum. The mechanical interlock functions when the plug is fully engaged, enabling the switch to be operated. Basic interlock design has many variations including screw cover, brass and circuit breaker versions.

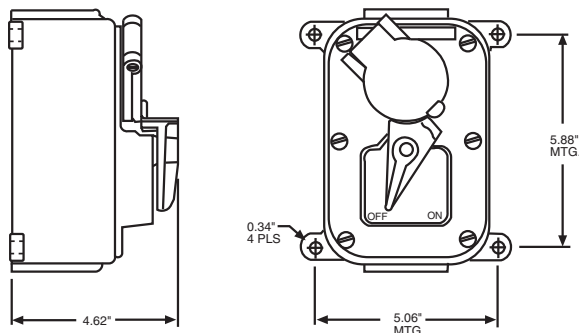
- Male plug cannot be plugged or unplugged under load
- Deadfront female receptacle for safety
- Weathertight receptacle made of cast aluminum, corrosion-resistant copper-free alloy, gray electrostatic epoxy powder coat finish
- Compact size for limited space applications
- Available with UL style steel back boxes to user specifications

| CAT. NO. | MATING PLUG |
|----------|-------------|
| F34331 | F34332 |

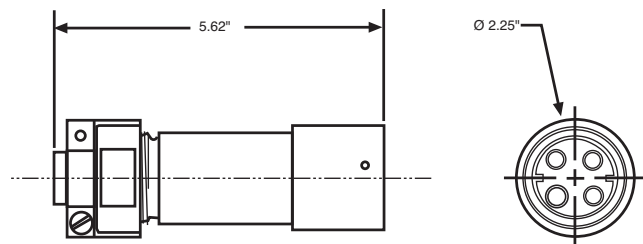
Mating plugs sold separately.

Dimensions

Interlocked Switch



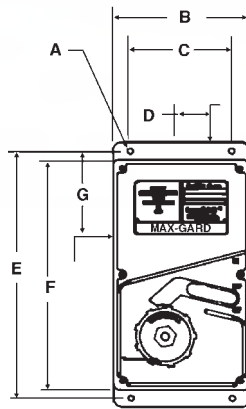
Mating Plug



Russellstoll®

Industrial Interlocked Receptacles

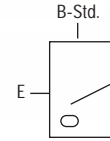
Control Circuit and Industrial Interlock



Maximum 600VAC/250VDC

Conduit Hubs: (at B or E)

| AMP | STD. NPT THREAD OUTLET | MAX |
|-----|------------------------|-----|
| 30 | 1½" | 2½" |
| 60 | 1½" | 2½" |
| 100 | 2" | 2½" |



▼ **Control Contacts** (position 12) use "K" example: DBRF6104060K0

Shunt Trip Breaker (position 13) add "Z" to above: DBRF6104060KZ

Breaker Trip Ratings (positions 9, 10, 11) 30 amp use 030; 50 amp use 050; 60 amp use 060

Non-Auto Sw. NAO (repl. "DBRF" with "DSRF")

For additional full line and polarization options, see MaxGuard section on pages 6–53.

MaxGuard® NEMA 4X interlocks are ideal for demanding non-hazardous areas where dust, dirt, moisture and corrosion might be a problem — such as shipyards, food processing facilities, manufacturing operations or similar areas.

Safety

- Gated deadfront waterproof receptacle
- Standard, high AIC or NA/switch circuit breaker
- Protective screw cap for watertight protection

Durability

- Thick-wall cast copper-free aluminum housing with epoxy powder coat finish
- Heavy-duty sliding bar interlock mechanism

Performance

- Heavy ON/OFF handle adds mechanical ability to electrical interlock function
- Standard conduit openings through top or side

Boldface figures are for voltage assignment; for different ratings, see page 50.

| POLES/ WIRES | VOLTAGE | MECHANICALLY INTERLOCKED RECEPTACLE NEMA 4X | MATING MAXGARD PLUG | STD. BUSHING ID | |
|-----------------|---------|---|------------------------|-----------------------|-----|
| | | CAT. NO. | CAT. NO. | | |
| 30 AMP | 2P3W | 125 | DBRF3 107 03000 | DS3 107 MP000 | ⅞" |
| | 2P3W | 250 | DBRF3 207 03000 | DS3 207 MP000 | ⅞" |
| | 3P4W | 30/250 | DBRF3 307 03000 | DS3 307 MP000 | 1" |
| | 3P4W | 30/480 | DBRF3 404 03000 | DS3 404 MP000 | 1" |
| | 4P5W | 277/480 | DBRF3 504 03000 | DS3 504 MP000 | 1⅛" |
| 60 AMP | 2P3W | 250 | DBRF6 207 06000 | DS6 207 MP000 | 1⅛" |
| | 3P4W | 125/250 | DBRF6 307 06000 | DS6 307 MP000 | 1⅛" |
| | 3P4W | 30/480 | DBRF6 404 06000 | DS6 404 MP000 | 1⅛" |
| | 4P5W | 277/480 | DBRF6 504 06000 | DS6 504 MP000 | 1½" |
| 100 AMP | 2P3W | 250 | DBRF1 207 10000 | DS1 207 MP000 | 1⅞" |
| | 3P4W | 125/250 | DBRF1 307 10000 | DS1 307 MP000 | 1⅞" |
| | 3P4W | 30/480 | DBRF1 404 10000 | DS1 404 MP000 | 1⅞" |
| | 4P5W | 277/480 | DBRF1 504 10000 | DS1 504 MP000 | 2" |
| 200 AMP | 3P4W | 277/480 | DBRF2 307 20000 | DS2 307 MP000 | 1¾" |
| | 3P4W | 30/480 | DBRF2 404 20000 | DS2 404 MP000 | 2¼" |
| | 4P5W | 277/480 | DBRF2 504 20000 | DS2 504 MP000 | 2½" |
| 400 AMP | 3P4W | 277/480 | DBRF4 307 40000 | DS4 307 MP000 | 3" |
| | 3P4W | 30/480 | DBRF4 404 40000 | DS4 404 MP000 | 3" |
| | 4P5W | 277/480 | DBRF4 504 40000 | DS4 504 MP000 | 3¼" |

Dimensions

| Amp | A | B | C | D | E | F | G |
|-----|----|------|-----|-----|------|------|-----|
| 30 | ⅞" | 8¼" | 6½" | 1½" | 16¼" | 15⅞" | 3⅞" |
| 60 | ⅞" | 8¼" | 6½" | 1½" | 16¼" | 15⅞" | 3⅞" |
| 100 | ⅞" | 8¼" | 6½" | 1½" | 16¼" | 15⅞" | 3⅞" |
| 200 | ⅞" | 12¼" | 9" | 2½" | 26¼" | 24¾" | 5" |
| 400 | ⅞" | 15½" | 12" | 3" | 30½" | 29" | 6" |





Russellstoll[®]

Hazardous Location Applications: Class I, Div. 1/Class II, Div. 1



| | |
|--|---------|
| Hazardous-Duty Plugs, Receptacles and Interlocks | 164-170 |
| Static-Ground Receptacles..... | 171 |
| Safe Ground Indicator System..... | 172-174 |

Hazardous Locations

United States
Tel: 901.252.8000
800.326.5282
Fax: 800.888.0690

Thomas & Betts

www.tnb.com



Hazardous-Duty Applications

Russellstoll Hazardous-Duty Plugs, Receptacles and Interlocks are designed to support a variety of installation needs throughout 20A, 30A, 60A and 100A ranges where Division 1, Class 1 NEC® guidelines require the utmost in safety.

Unique among others, the Russellstoll MaxGard also offers true O-ring sealed waterproof design protection in addition to standard threaded flame-path construction employed elsewhere. In rough service, washdown and outdoor applications, MaxGard® performance goes beyond normal XP ratings.

With coming increases in harmonized designations for classifications between NFPA/NEC® and IEC (International) hazardous area standards, a quick reference classification chart is provided **below**. In all cases, the customer must determine and approve proper area classification standards and degree of harmonized standards acceptance.

| HAZARDOUS MATERIALS ENVIRONMENT | U.S. NEC STANDARDS | EURO IEC STANDARDS |
|---------------------------------|--|----------------------------------|
| Gas or Vapor | Div. 1, Class I Div. 2, Class I | Zone 0 and 1 Zone 2 |
| Dust | Div. 1, Class II Div. 2, Class II | Zone 10 Zone 11 |
| Fibers/Flyings | Div. 1, Class III Div. 2, Class III | Zone 10 Zone 11 |
| GROUP APPLICATIONS | NEC ART. 500 CLASS I: GROUPS | NEC ART. 505 ZONES 0, 1 AND 2 |
| Div. 1 and 2, Class I | A: Acetylene | IIC |
| | B: Hydrogen | IIB |
| | C: Ethylene | IIB |
| | D: Propane | IIA |

The above chart is presented for quick reference only and should only be used in conjunction with noted Articles. Further definition of harmonized standards will be supported by Russellstoll through appropriate specification efforts whenever practical.

Interlocked Switch and Receptacles

Explosion-Proof: Class I, Groups C and D

Dust Ignition-Proof: Class II, Groups G

These receptacles are for use in general Div. 1 classified industrial installations such as chemical plants, oil refineries, bulk stations, distilleries, solvent areas, mills, etc. A higher degree of safety is afforded by interlocking the plug with the switch, making it impossible to insert or withdraw plug under load.

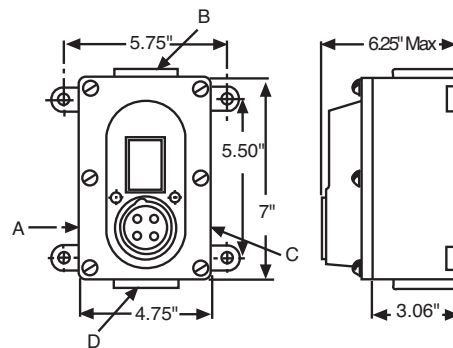
When the polarized plug is inserted into the receptacle and the plug shell is turned clockwise, it turns the switch to the "on" position and vice-versa.

| 20 Amp, 575VAC 30 Amp, 250VAC | | | | |
|----------------------------------|--------------------|------------|-------------|------|
| | DESCRIPTION | FLAP COVER | SCREW COVER | PLUG |
| 2P3W 1 HP 220/575VAC | 4240FC/ F16081A | 4240SC | 4241 | 5/8" |
| 3P4W 2 HP 110/575VAC | 4242FC | 4242SC | 4243 | 3/4" |

Specifications

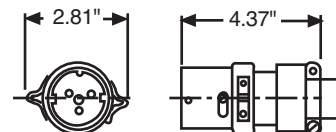
- Receptacle Housings: Cast aluminum; electrostatic epoxy powder coated finish
Plugs: steel, cadmium plated. Furnished with aluminum alloy cable clamp and Neoprene cable bushing
- Outlets: standard 3/4" top, additional or larger outlets available. Maximum 1" four way. See **diagram**, use symbols when ordering
- Cable Bushing: Oil-resistant, Neoprene strain relief cable bushing regularly furnished with hole I.D. size as listed. Other hole sizes available. Consult Technical Services for catalog number
- Two-Gang Style: Consult Technical Services

Dimensions



For 2-gang unit, width is 9 3/4".

Mounting Lugs — C to C 10 1/2" W x 5 1/2" H



Approvals:

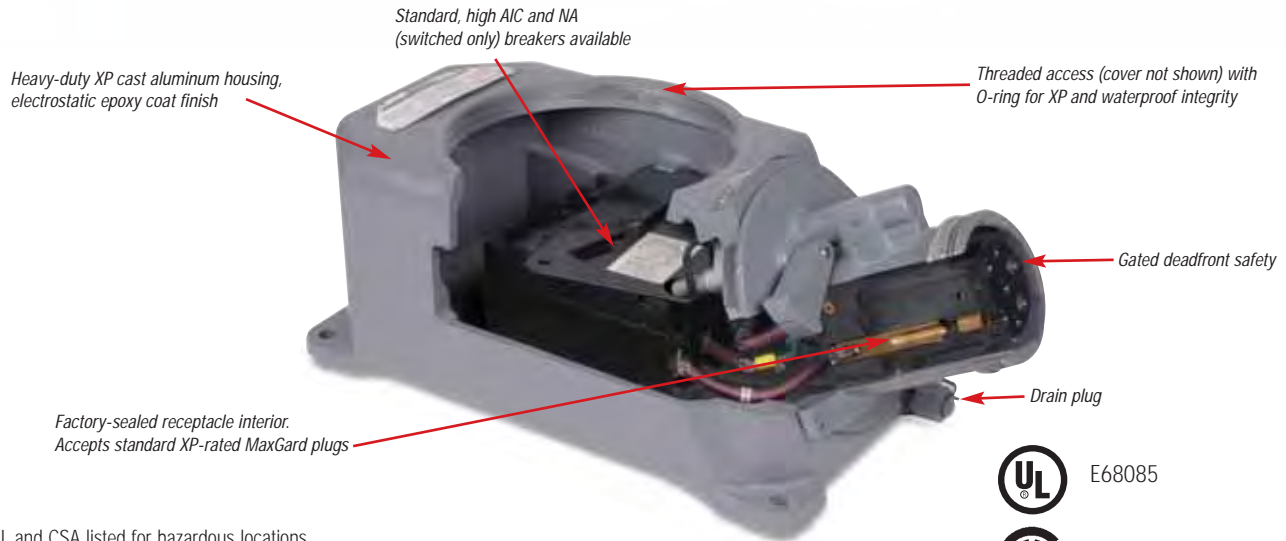


E10919



Explosion-Proof Waterproof Circuit Breaker Interlocked Receptacle

Available in 30, 60 and 100 amp sizes, all polarizations. Division 1, Class I and II.



E68085



UL and CSA listed for hazardous locations

Class I, Division 1, Groups B, C and D
 Class II, Division 1, Groups F and G
 UL File E10919
 NEMA 7, 8, 9
 CSA
 DOT shipboard used above deck "green water"
 NEMA 4X
 USCG approved

MaxGard® DBRE and DSRE Series Interlocks are the only devices certified both explosion-proof and waterproof, along with optional control contacts, and are fully UL listed.

Explosion-Proof Waterproof Circuit Breaker Interlocked Receptacle

Available in 30A 480VAC max., all polarizations

- Factory-sealed interior (no filled conduits)
- Easy low cost installation



E10919

UL and CSA listed for hazardous locations

Class I, Division 1, C and D
 Class II, Division 1, Groups F and G
 UL File E10919
 NEMA 7, 8, 9
 CSA
 D.O.T. shipboard used above deck "green water"
 NEMA 4X
 USCG approved

Hazardous-Duty Plugs, Receptacles and Interlocks

Maximum
600VAC or 250VDC



Explosion-Proof Interlocked Receptacle with Circuit Breaker Class I, Class II



Explosion-Proof Receptacle



Male Plug

| POLES/WIRES | VOLTAGE (VAC) | CAT. NO. | CAT. NO. | CAT. NO. | STD. BUSHING I.D.* |
|----------------|---------------|---------------|------------|-------------|--------------------|
| 30 Amp | | | | | |
| 2P3W | 125 | DBRE310703000 | DSE3107FR0 | DS3107MP000 | 7/8" |
| 2P3W | 250 | DBRE320703000 | DSE3207FR0 | DS3207MP000 | 7/8" |
| 3P4W | 3Ø250 | DBRE330703000 | DSE3307FR0 | DS3307MP000 | 1" |
| 3P4W | 3Ø480 | DBRE340403000 | DSE3404FR0 | DS3404MP000 | 1" |
| 4P5W | 277/480 | DBRE350403000 | DSE3504FR0 | DS3504MP000 | 1 1/8" |
| 60 Amp | | | | | |
| 2P3W | 250 | DBRE620706000 | — | DS6207MP000 | 1 3/8" |
| 3P4W | 3Ø250 | DBRE630706000 | — | DS6307MP000 | 1 3/8" |
| 3P4W | 3Ø480 | DBRE640406000 | — | DS6404MP000 | 1 3/8" |
| 4P5W | 277/480 | DBRE650406000 | — | DS6504MP000 | 1 1/2" |
| 100 Amp | | | | | |
| 2P3W | 250 | DBRE120710000 | — | DS1207MP000 | 1 11/16" |
| 3P4W | 3Ø250 | DBRE130710000 | — | DS1307MP000 | 1 13/16" |
| 3P4W | 3Ø480 | DBRE140410000 | — | DS1404MP000 | 1 13/16" |
| 4P5W | 277/480 | DBRE150410000 | — | DS1504MP000 | 2" |

Boldface figures are for voltage assignment; for different ratings, see page 50.

Notes to Catalog Numbers: Suffixes

* For specification information and additional bushing sizes, see MaxGard section, pages 6–53.

▼ **Control Contacts** (position 12) use "K" example: DBRF6104060K0

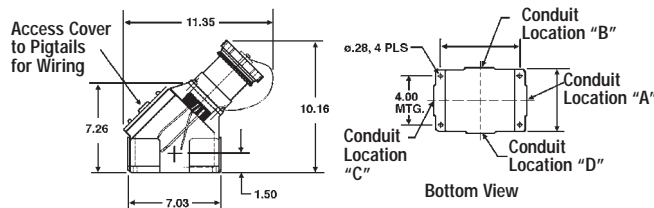
Shunt Trip Breaker (position 13) add "Z" to above: DBRF6104060KZ

Breaker Trip Ratings (positions 9, 10, 11) 30 amp use 030; 50 amp use 050; 60 amp use 060

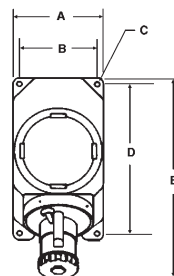
Non-Auto Sw. NAO (repl. "DBRE" with "DSRE")

Dimensions

Explosion-Proof Receptacle



Explosion-Proof Interlocked Receptacle



| Amp | A | B | C | D | E |
|-----|--------|--------|------|---------|-----|
| 30 | 8 3/4" | 7 1/2" | 1/2" | 14 3/4" | 20" |
| 60 | 8 3/4" | 7 1/2" | 1/2" | 14 3/4" | 20" |
| 100 | 8 3/4" | 7 1/2" | 1/2" | 14 3/4" | 20" |

Delayed-Action Receptacles

Explosion-Proof: Div. 1, Class 1, Groups C and D

Circuit-breaking receptacles, plugs and connectors ensure complete circuit breaking under full rated loads. Equipment grounding is provided by means of a separate pole that makes contact before and breaks contact after the circuit poles. The delayed action operation sequence is as follows:

Insert plug, turn left, push in to make electrical contact then turn right to prevent accidental disconnection. To withdraw plug, the reverse procedure is followed, which provides time for extinction of the arc and cooling before the plug can be completely withdrawn.



| RATINGS | POLES/WIRES | SURFACE MOUNT** | | FLUSH MOUNT ▼ | CABLE HOLE DIA. | |
|------------------|-------------|-----------------|--------|---------------|-----------------|--------|
| | | STRAIGHT | ANGLED | | | |
| Type EFS | | | | | | |
| 20 Amp | 2P3W | 4462 | 4464FC | 4445 | 4466 | 5/16" |
| 125VAC or 250VAC | 3P4W | 4463 | 4465FC | 4446 | 4467 | 19/32" |
| Type DA | | | | | | |
| 30 Amp+ | 2P3W | RA4233BC | 4233BC | — | 4237BC | 5/8" |
| 250VAC or 480VAC | 3P4W | RA4234BC | 4234BC | — | 4238BC | 3/4" |
| 60 Amp* | 2P3W | RA4263BC | 4263BC | — | 4267BC | 1 1/4" |
| 480VAC | 3P4W | RA4264BC | 4264BC | — | 4268BC | 1 1/4" |

NOTE:

* Also available for use at 30 Amp, 480VAC.

** Can be furnished with flap or screw cap covers. When so required, add suffix "FC" for flap or suffix "SC" for screw cap to above catalog number. Price on application.

▼ Furnished with plaster gauge plate. Requires wall depth of 4" minimum.

+ 30 Amp Iron-Bodied Plug Family for replacement use only. Not UL listed. (60 Amp carries full listing.)

Delayed-Action Receptacles (EFS and DA)

Specifications

- Receptacle Housings: EFS — Cast copper-free aluminum; DA — Cast iron, corrosion-resisting baked enamel finish
- Plug Housings: 20 Amp — Steel, cadmium plated; 30 Amp — Cast iron; 60 Amp — Steel and aluminum, natural finish. Plugs are furnished with aluminum alloy cable clamp and Neoprene cable bushing
- Connectors: Cast aluminum, natural finish. Furnished with aluminum cable clamp and Neoprene cable bushing
- Flush Plates: Brass, polished chromium finish
- Outlets: Furnished with one outlet top or bottom as follows. 20 Amp — ¾"; 30 Amp — 1"; 60 Amp — 1½". Additional or larger outlets charged extra. Maximum conduit sizes, four ways as follows: 20 Amp — 1"; 30 Amp — 1½"; 60 Amp — 2". Single gang — top and bottom only; two gang — one per gang top and bottom and one on each side. Specify size and location
- Cable Bushing: Oil-resistant, Neoprene strain relief cable bushing regularly furnished with hole size as listed. Other hole sizes available at no extra cost if specified on order. See page 170
- Surface Gang Units: EFS available and can be furnished in 2-gang units or in combination with other like devices
- Approvals: 20 and 60 Amp

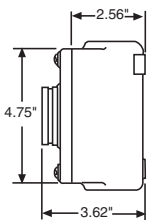
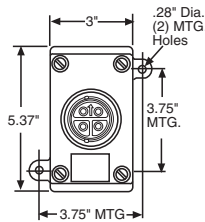
Dimensions



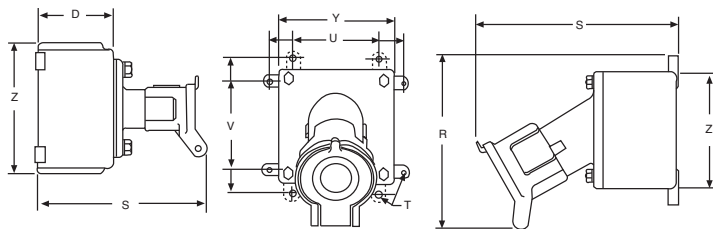
Surface-Mount Receptacles

Flush-Mount Receptacles

Type EFS (20 Amp) Straight

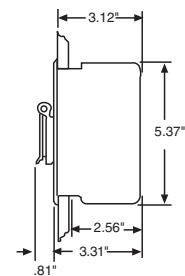
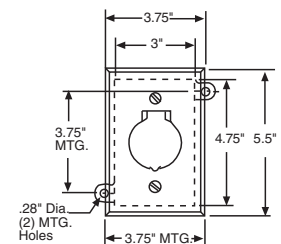


Type DA (30 and 60 Amp) Straight



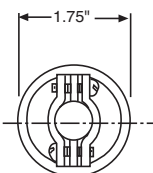
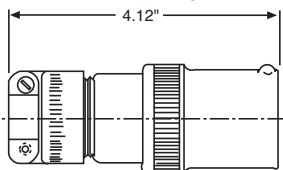
| AMP | | D | R | S | T | U | V | Y | Z |
|-----|----------|-------|-------|-------|------|-------|-------|-------|-------|
| 20 | Angle | 2.56" | — | 6.12" | .28" | 3.75" | 3.75" | 3" | 5.37" |
| 30 | Straight | 3.87" | — | 8.62" | .34" | 6.12" | 5" | 5.25" | 6.75" |
| 30 | Angle | 3.06" | 7.37" | 8.37" | .28" | 3.50" | 5.50" | 4.75" | 4.75" |
| 60 | Straight | 3.87" | — | 9.25" | .34" | 6.12" | 5" | 5.25" | 6.75" |
| 60 | Angle | 3.87" | 9" | 9.25" | .34" | 6.12" | 5" | 5.25" | 6.75" |

Type EFS

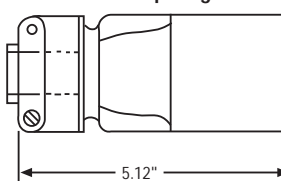


Plug

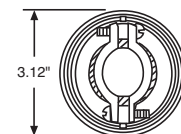
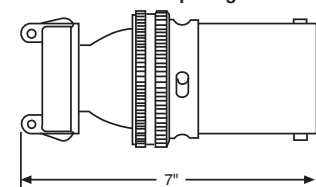
20 Amp Plug



30 Amp Plug



60 Amp Plug



Hazardous-Duty Plugs, Receptacles and Interlocks Accessories

Hazardous Locations

For Explosion-Proof Plugs and Connectors Cable Bushings

To order non-standard bushing, add cable bushing number to end of catalog number. This is furnished at no additional cost at time of order. For 60A devices, see J-line 60A chart on **page 64**.



| CAT. NO. | HOLE DIAMETER FOR CABLE |
|----------|-------------------------|
| SG05 | .312" |
| SG1 | .375" |
| SG15 | .438" |
| SG2 | .500" |
| SG2A | .531" |

| 20A CAT. NO. | HOLE DIAMETER FOR CABLE |
|-----------------|-------------------------|
| SG25 | .563" |
| SG2B | .594" |
| SG3 | .625" |
| SG3A | .687" |
| SG4 | .750" |

NOTE:

Cable outside diameter should be at or slightly less than bushing I.D.

Bushings can compress approx. 10% at installation.

To order, add suffix as example: 4466/SG3.

Material — Oil-Resistant Neoprene.

For 20 Amp Delayed-Action Circuit Receptacles

Flap Cover Assembly

| CAT. NO. | FINISH | USED ON CAT. NO. |
|----------|----------------|------------------|
| F19054C | Chrome Plated | 4445 |
| F19054D | Natural Finish | 4464 |

For 20 Amp Delayed-Action Circuit Plugs — Provides Extra Clamping Protection in Hard Service Applications

Combination Gland Nut and Cable Clamp



| CAT. NO. | USED ON CAT. NO. |
|----------|------------------|
| F24853C | 4466 |
| F24853D | 4467 |

Material — Cast aluminum alloy, natural finish.

Russellstoll®

Static Ground Receptacles



Aerospace/Industrial Static Ground Devices

Static grounding receptacles are used in Airport and Aerospace installations worldwide during fueling, testing and maintenance procedures. Normal mounting is concrete/tarmac floor inset, threaded onto copper ground rod.

Heavy brass construction cup includes optional cover and receptacle's contact pin. Accommodates a wide variety of single-contact (copper on steel wire) static ground wire clamps in service.



F07073
(cover only)

| CAT. NO. | DESCRIPTION |
|----------|---------------------------|
| GCC1 | Ground cup with cover* |
| GC1 | Ground cup without cover* |
| F06146 | Replacement contact tip** |

* Hub is tapped for 3/4"-10.
** Hub is tapped for 1/2"-13.

Hazardous Locations

Russellstoll®

Safe Ground Indicator System

Hazardous Locations

Prevents operation of pumps without a safe ground for static dissipation

Class I, Division 1, Groups C, D, and Zone 1, Groups IIB, IIA;
NEMA 7 Class II, Division 1, Groups E, F, G; NEMA 9

Instant Visual Confirmation of Safe Ground

The Russellstoll® GSUL Safe Ground Indicator System is designed to ensure that a safe ground has been established for dissipating ever-present static electricity from tank vehicles, carriers, drums and other conductive equipment before allowing the transfer of flammable materials. The GSUL indicates the establishment of a safe ground via two parallel-connected green signal lights. Two lights are used for redundancy — if one lamp burns out, visual indication of safe grounding will be maintained by the other.

Intrinsically Safe Circuitry

The GSUL Safe Ground Indicator System features an intrinsically safe, low-energy ground-sensing circuit, which does not carry sufficient electrical energy to cause ignition in classified Hazardous Locations.

In operation, the ground-sensing circuit extends through the grounding clamp and its connection to the ground indicator, the metal portion of the vehicle between the jaw terminals of the clamp and earth ground electrode.

Pumps Won't Operate Until Safe Ground Is Established

A control relay in the GSUL Safe Ground Indicator System provides interlocked control of pump motors at the loading platform. The electronic control circuit will be de-energized while the green lights are off. Attaching the clamps to the tank closes the interlocking contact and energizes the control circuits to the motors.

Applications

Volatile or classified areas such as:

- Tank farms
- PetroChem
- Cosmetics
- Grain mills
- Vehicular or rail transport

Specifications

- Enclosure: Cast copper-free aluminum with epoxy powder-coated finish
- Outlets: Regularly furnished tapped 3/4" NPT
- Relay Contacts: Rated 1/2 HP, 10A, 120VAC; 1/2 HP, 10A, 240VAC
- Certifications: UL Listed, CSA Certified



E33553



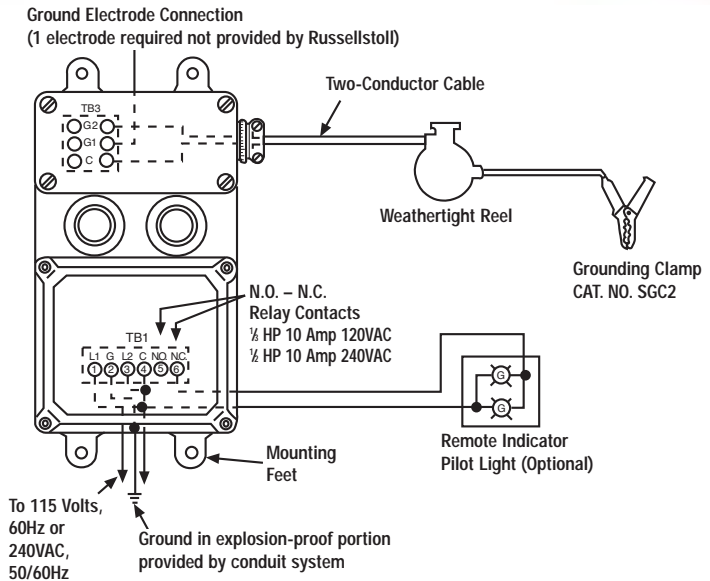
Unit shown with covers removed



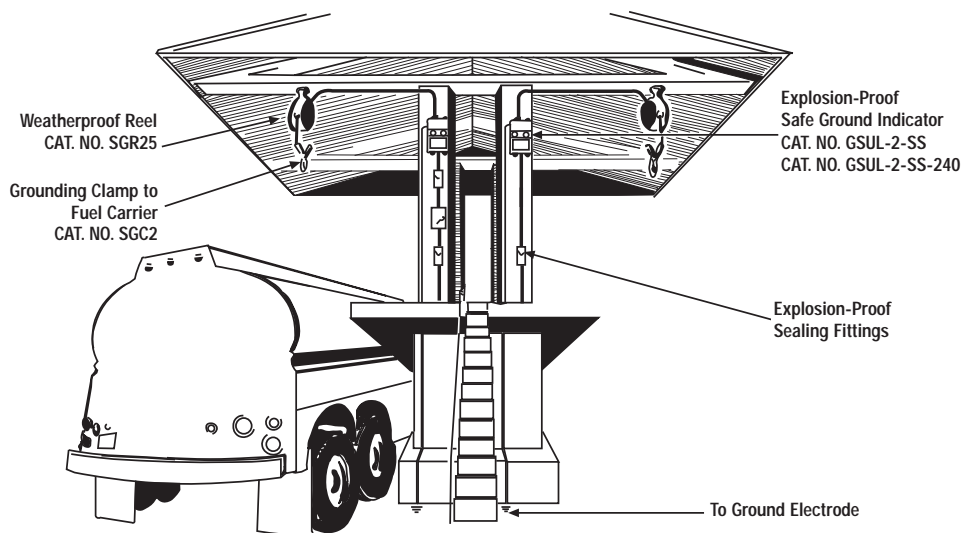
GSUL Safe Operating Features

- Two redundant, parallel green indicator lights glow when safe ground is established
- Lamps offer approximately 20,000 hours of operating life
- Unit may be ordered without lights where remote visual indication is desired
- Intrinsically safe, simplified circuitry
- Integral, intrinsically safe wiring compartment with approved strain-relief fitting for connection of cable from grounding clamp
- Solid-state actuating and control circuits mounted on removable printed circuit board
- Enclosure protects components against moisture
- Control relay provided for interlocked control of pump motor at loading rack
- Grounding clamp (ordered separately) provides dual isolated tip contacts in a heavy-duty cast-aluminum handle design

Wiring Diagram



Typical Installation



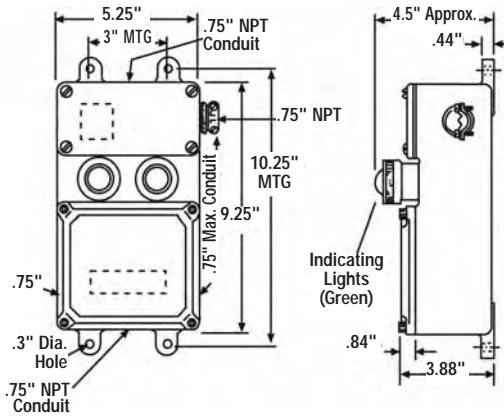
Loading rack illustration suggests a typical installation, which includes an Explosion-Proof Switch, Explosion-Proof Sealing Fittings, Weathertight Reel and the GSUL-2-SS Safe Ground indicator with 2-wire grounding clamp.

Hazardous Locations

Russellstoll® GSUL Safe Ground Indicator System



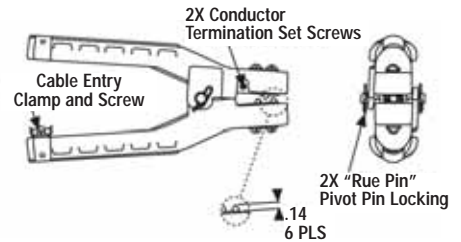
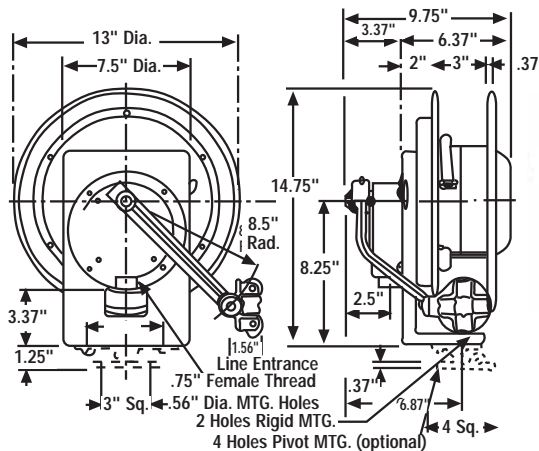
GSUL-2-SS



SGC2



SGR25
SGR50
SGR75



| CAT. NO. | DESCRIPTION |
|-----------------------------------|--|
| GSUL2SS | Safe Ground Indicator with Indicator Lights, 120V, UL/CSA |
| GSUL2SS-240 | Safe Ground Indicator with Indicator Lights, 240V, CSA |
| SGC2 | Safe Ground Static Clamp |
| SGR25 | Weathertight Retracting Reel with 25 ft. of 12/2 SJO-W Cable |
| SGR50 | Weathertight Retracting Reel with 50 ft. of 12/2 SJO-W Cable |
| SGR75 | Weathertight Retracting Reel with 75 ft. of 12/2 SJO-W Cable |
| Replacement Parts for GSUL | |
| C13662 | Printed Circuit Board, 120 Volts (includes relay) |
| 6X24RCB | Printed Circuit Board, 240 Volts (includes relay) |
| F30674 | Control Relay |
| F30602 | Lamp Socket Assembly |
| ELAG | Pilot Light Globe Assembly (green) |
| 310993 | Lamp for GSUL2SS |
| Replacement Parts for SGC2 | |
| GX2TK | Ground Clamp Repair Kit |

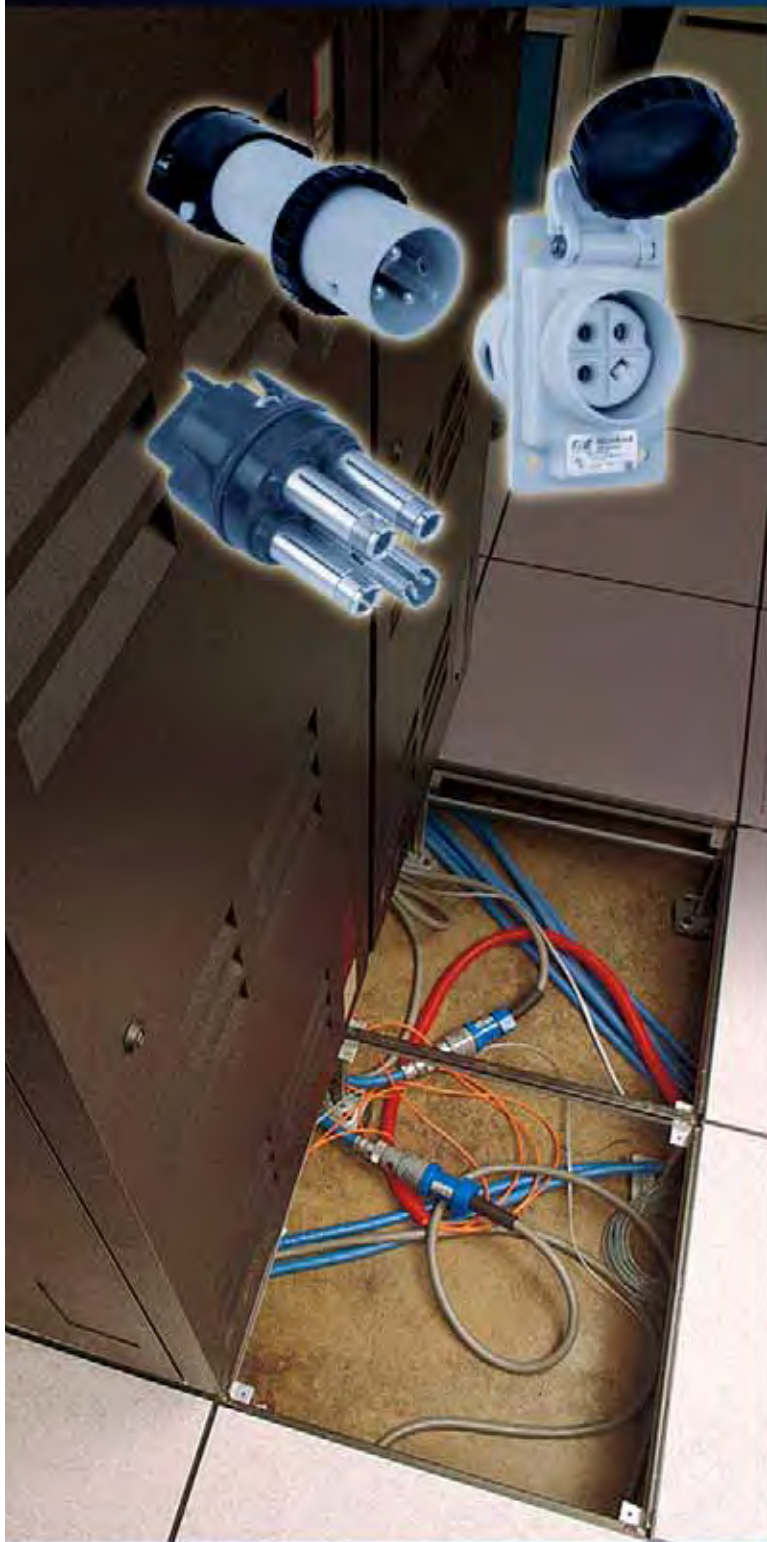


Russellstoll[®]

Computer Systems: Data Center and OEM Products



Computer Systems



| | |
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 800.326.5282
 Fax: 800.888.0690

Thomas&Betts

www.tnb.com

Russellstoll®

Computer System Interconnections

Defined

- Any application where electrical connections must be protected from humidity, water, condensation and/or dust entering the wiring compartment and contacts
- Cable-to-connector sealing and device locking designs are critical
- Thermoplastic connectors preferred: some with aluminum conduit grounded shell
- Connection integrity needs are absolute; data center systems cannot go down
- Underfloor data center applications and wall-mount installations

Russellstoll Line Selections for Outdoor and Indoor Applications

DuraGard® to 4P4W 20A through 60A

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

Spec Grade to 4P4W 20A and 30A

Otherwise similar to the DuraGard®, Spec Grade refers to blue Lexan plugs only made to the same original FS/FD design standards as DuraGard, in UL 94-V0 flame-rated material. Spec Grade features DurOring sealed pins, sleeves and interiors are watertight even unmated. Spec Grade devices have been superseded by DuraGard ratings for OEM use.

FS/FD™ to 3P4W 15A through 30A

The original 15/20/30A computer system connectors, the FS/FD line in aluminum continues in MRO usage. Many installations can also mate directly or convert to DuraGard units. Our large installed base can be supported with any construction and product options. Convert to DuraGard when possible.

Angle Type to 3P4W 60A use

The original 60A main power computer system connector. Angle Type plugs are also available in specialty UL 94-V0 material (Aluminum Connectors). As part of the MRO usage 30–200A Angle Type Line, the 60A connector is still commonly used today. Other lines such as MaxGard should be used for changeout when possible.

MaxGard® 30A to 4P5W

For DP/Computer System Applications, a special MaxGard polarization reflects DP installations. Special thermoplastic housing and back handle are supplied for these applications. Use wherever 4P5W installations are required.

UniGard® to 4P5W 20A to 100A

Thermoplastic International standard 309-2 or CEE-17 type connector lines 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. ratings: 20/16A, 30/32A, 60/63A and 100/125A. IP67 devices have screw collars or flap/screw covers, with catalog number "W" suffixes.



Typical Application Groups

- Telephony Equipment
- Switching Rack Systems
- Power Distribution Units
- Test and Laboratory Equipment
- Mainframes from 30–270A
- Peripherals
- Data Storage Devices
- Military or Critical Power Supplies





Computer System Plugs, Connectors and Receptacles

More than 30 years ago, Russellstoll offered the first pin and sleeve connectors that met the demanding needs of the Data Processing industry, and we've been leading the way ever since.

The expanding technology of the Computer System Industry is creating more sophisticated applications, which require safe, reliable connections that exceed the tough demands of today's applications. Russellstoll's commitment to excellence offers you that and more... Safety, Durability, Reliability and Performance on our complete line of plugs, receptacles and connectors.

Pin and sleeve power connections are chosen for Computer System interconnections because of the absolute performance required in today's mainframe and peripheral installation. Pin and sleeve connections have been proven to be more reliable in service than any bladed device. Data centers stay in service because Russellstoll keeps them connected.

Quick Selection Chart

| |  |  |  |  |
|--|---|---|--|---|
| SERIES* | FS/FD™ AND ANGLE TYPE | SPEC GRADE | DURAGARD® | UNIGARD® |
| Available Ranges (Amp) | 20, 30 and 60* | 20 and 30 | 20, 30, 50 and 60 | 30 (IEC) |
| Safety Grade™ UL Flame-Rated High-Temp Thermoplastic | UL 94-V0 Aluminum | UL94-5VA | UL94-V0 | UL94-V0 |
| Easy-to-Wire Rear-Loaded Interiors | — | ✓ | ✓ | ✓ |
| Single Rated Safety Voltage Polarizations | 20A | 20A 30A | 20A 30A 50A 60A | 30A (9H-IEC) |
| Waterproof O-Ring Seal (Pins, Sleeves and Interiors) | — | ✓ | ✓ | ✓ |
| 2nd Internal Ground Lug (Cable Shielding Alt.) | — | ✓ | (optional) | — |
| External Cable Clamp | ✓ | — | ✓ | ✓ |
| External Gland Nut Lock | — | — | ✓ | ✓ |

* 60A devices are specially designed versions of Russellstoll Angle Type (7328DP).



TüV For TÜV listed devices, contact Technical Services.

Plugs



| | | VOLTAGE | PLUG SAFETY POLARIZATION | STD. CABLE** BUSHING | FS/FD™• ALUMINUM | SPEC GRADE UL 94-5VA | SEE BUSHING CHART DURAGARD® UL 94-V0* | |
|-------|-----------|------------------------------------|--------------------------|--------------------------------------|------------------|---|--|--|
| 2P/3W | 15/20 Amp | Up to 600VAC/ 250VDC | | 0.625" 0.455" 0.405" | 3720 | 3720DP (0.375) 3720DP/0455 3720DP/0405 | 9P23U0 | |
| | | 125VAC | | 0.625" 0.455" 0.405" | 3720U1 | 3720DPU1 (0.375) 3720DPU1/0455 3720DPU1/0405 | 9P23U1 | |
| | | 250VAC | | 0.625" 0.455" 0.405" | 3720U2 | 3720DPU2 (0.375) 3720DPU2/0455 3720DPU2/0405 | 9P23U2 | |
| | 30 Amp | Up to 600VAC | | 0.760" 0.700" 0.625" | 3750 | 3750DP | 9P33U0 | |
| | 60 Amp | Up to 600VAC | | 1.000" 0.925" 0.750" | — | — | 9P53U0 | |
| | | 125VAC | | 1.000" | — | — | 9P63U1 | |
| | | 250VAC | | 1.000" | — | — | 9P63U2 | |
| 3P/4W | 20 Amp | Up to 600VAC/ 250VDC | | 0.688" 0.625" 0.606" | 3730 | — 3730DP/0625 3730DP | — 9P24U0 — | |
| | 30 Amp | Up to 600VAC | | 1.100" 1.000" 0.875" 0.760" | 3760 | 3760DPG/1100 3760DPG/1000 3760DPG/0875 3760DPG0760 | — 9P34U0♦ — — | |
| | 50 Amp | Up to 600VAC 250VDC | | 1.000" 0.925" 0.750" | — | — | 9P54U0 | |
| | 60 Amp | 125/250VAC | | 1.000" | — | — | 9P64U1 | |
| | | 250 3Ø VAC | | 1.000" | — | — | 9P64U2 | |
| | 60 Amp | Special Angle Type Up to 600VAC | Angle Type | 1.375" 1.188" 1.020" 0.750" | 7328-78^ | — — — — | 7328DP/1375 — 7328DP† 7328DP/0750 | |
| 4P/5W | 30 Amp | 3ØY 120/208 VAC | MaxGard | 0.775" | — | — | DS3516MPDP+ | |

NOTE: All 20A devices are compatible. 30A FS/FD™ receptacles and connectors will accept all styles of mating plugs.

* For a more complete listing of UL 94-V0 rated devices, consult DuraGard information on pages 68-85.

** Consult your Thomas & Betts representative for additional cable bushing sizes not listed.

† 7328 DP series thermoplastic can replace 7328 metallic.

● 30A FS/FD™ aluminum plugs may not directly exchange with DuraGard plugs.

Computer System Plugs, Connectors and Receptacles

Connectors



Receptacles



| | FS/FD™ ALUMINUM | DURAGARD® UL94-V0* | FS/FD™ • ALUMINUM | DURAGARD® UL94-V0* |
|--|--------------------|-----------------------|----------------------|-----------------------|
| | 3913 | 9C23U0 | 3743 | 9R23U0W ▼ |
| | 3913U1 | 9C23U1 | 3743U1 | 9R23U1W ▼ |
| | 3913U2 | 9C23U2 | 3743U2 | 9R23U2W ▼ |
| | 3933 ■ | 9C33U0 ■ | 3753 ■ | 9R33U0W ▼ ■ |
| | — | 9C53U0 | — | 9R53U0W ● |
| | — | 9C63U1 | — | 9R63U1 |
| | — | 9C63U2 | — | 9R63U2 |
| | 3914 | 9C24U0 | 3744 | 9R24U0W ▼ |
| | 3934 ■ | 9C34U0 ◆ ■ | 3754 ■ | 9R34U0W ▼ ■ |
| | — | 9C54U0 | — | 9R54U0W ▼ |
| | — | 9C64U1 | — | 9R64U1 |
| | — | 9C64U2 | — | 9R64U2 |
| | 7428-78 ^ | — | — | SCF7324-78 |
| | DS3516FP+ | — | DS3516FR+ | — |

FS/FD metal mating devices must be used.

◆ Standard 0.750 Bushing.

■ DuraGard receptacles and connectors 30/50A will accept only DuraGard or Spec Grade. FS/FD™ Aluminum 30A plugs must be used with FS/FD metal

connectors or receptacles.

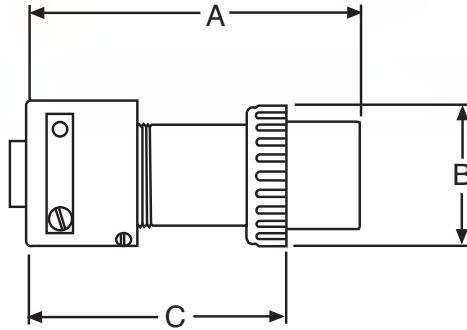
^ Angle Type Line

+ MaxGard Line — for further information, see pages 6–53.

▼ Requires 3711A conduit FD box or 3781A DSFD Box (50A).

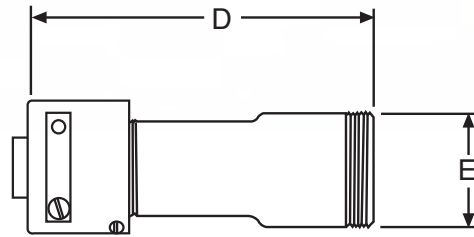
Computer System Plugs, Connectors and Receptacles Dimensions

Plugs



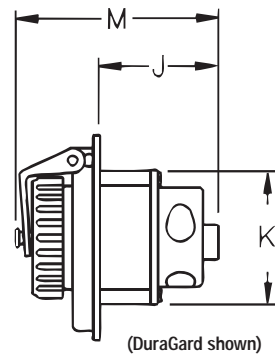
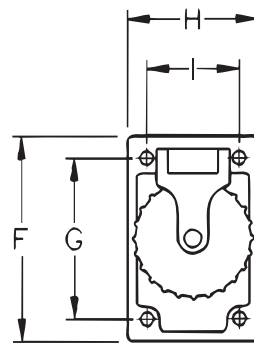
| | RECEPTACLE SIZE | A | B | C |
|-------------------------------|-----------------|--------|--------|--------|
| FS/FD™ | 20 Amp | 3 7/8" | 2" | 2 1/4" |
| | 30 Amp | 3 3/4" | 2 1/4" | 2 5/8" |
| Angle Type DP (Thermoplastic) | 60 Amp | 8" | 2 1/2" | 3 3/4" |
| Spec Grade DuraGard® | 20 Amp | 3 1/4" | 2 7/8" | 2 7/8" |
| | 30 Amp | 5" | 2 7/8" | 3 3/8" |
| | 50 Amp | 5 1/4" | 2 7/8" | 3 3/8" |

Connectors



| | RECEPTACLE SIZE | D | E |
|-----------------------|-----------------|--------|--------|
| FS/FD™ | 20 Amp | 4" | 1 1/8" |
| | 30 Amp | 4 7/8" | 2 1/8" |
| Angle Type (Metallic) | 60 Amp | 9 7/8" | 3 1/2" |
| Spec Grade DuraGard® | 20 Amp | 4 7/8" | 1 1/8" |
| | 30 Amp | 5 5/8" | 2 1/8" |
| | 50 Amp | 5 5/8" | 2 1/8" |

Receptacles

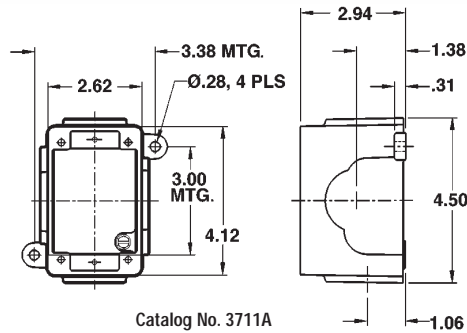


| | RECEPTACLE SIZE | F | G | H | I | J | K | M |
|-----------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|
| FS/FD™ | 20 Amp | 4 1/8" | 3 3/4" | 2 5/8" | 1 1/8" | 1 1/8" | 2 1/4" | 2 1/2" |
| | 30 Amp | 4 7/8" | 3 3/4" | 2 5/8" | 1 1/8" | 1 3/8" | 2 3/4" | 2 5/8" |
| Angle Type (Metallic) | 60 Amp | 3 1/2" | 2 5/8" | 3 1/2" | 2 5/8" | — | 2 1/2" | 6" |
| DuraGard® | 20 Amp | 4 1/8" | 3 3/4" | 2 5/8" | 1 1/8" | 1 1/8" | 2" | 3 3/8" |
| | 30 Amp | 4 7/8" | 3 3/4" | 2 5/8" | 1 1/8" | 2 1/2" | 2 3/4" | 4 1/8" |
| | 50 Amp | 4 7/8" | 3 3/4" | 2 5/8" | 1 1/8" | 2 1/2" | 2 3/4" | 4 1/8" |

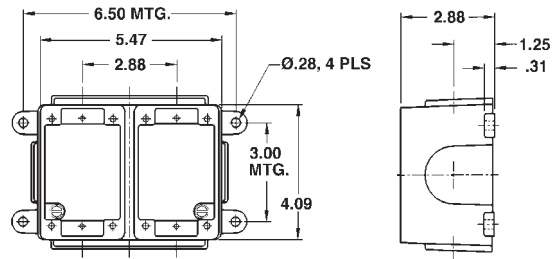
Computer System Plugs, Connectors and Receptacles Accessories

All Conduit Boxes/Angle Adapters are Copper-Free, Cast Aluminum, Epoxy Powder Coat Finish.

Conduit Boxes (for Surface Mounting)



Catalog No. 3711A



Catalog No. 3712A

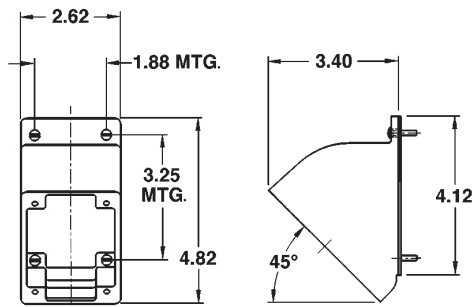


| RECEPTACLE SIZE | CAT. NO. | |
|-------------------|-------------|-------------|
| | SINGLE GANG | DOUBLE GANG |
| 20, 30 and 50 Amp | 3711A | 3712A |
| 60 Amp* | JB6-1 | — |
| 50 Amp | 3781A | 3782 |



* Various mounting options available.
4" deep (not shown)

Angle Adapter



Catalog No. 3678A

| RECEPTACLE SIZE | CAT. NO. | |
|-------------------|----------|----------|
| | 45° | 20° |
| 20, 30 and 50 Amp | 3678A | — |
| 60 Amp* | JAA6-45 | JAA6-AB6 |

Mounts to conduit boxes to angle receptacle downward for easier access, no moisture retention on surfaces and better plug-cable drop bend relief.

* Various mounting options available.

Conduit Adapter

Kit includes gland nuts for plugs or connectors.



| PLUG/ CONNECTOR SIZE | TAPPED HOLE SIZE | CAT. NO. | | |
|----------------------------|---------------------|----------|------------|-----------|
| | | FS/FD | SPEC GRADE | DURAGARD® |
| 20 Amp | 1/2" | FSA11 | — | 9X2C50 |
| | 3/4" | FSA21 | — | 9X2C75 |
| | 1/2" | FSA12 | — | 9X3C50 |
| 30 Amp | 3/4" | FSA22 | — | 9X3C75 |
| | 1" | FSA23 | — | — |
| 50 Amp | 3/4" | — | — | 9X5C75 |
| | 1" | — | — | 9X5C10 |
| 60 Amp Angle Type | 3/4" | JPA62 | — | — |
| | 1" | JPA63 | — | — |
| | 1 1/4" | JPA64 | — | — |
| | 1 1/2" | JPA65 | — | — |



Plug/Connector Replacement Items

| | SPEC GRADE | DURAGARD® | SPEC GRADE | DURAGARD | |
|---|------------|-----------|------------|-----------|-----------|
| Item Color | Blue | Yellow | Blue | Yellow | Black |
| Plug/Connector Amperage | 20A | 20A | 30A | 30A | 50A |
| Gland Nut | C17077C | C17077A | C17076CX | C17076AX | C17076BX |
| Nylon Locking Screw | N/A | NA | B16983 | B16983 | B16983 |
| Bushing, Clamp, Nut and Screw Kit (Inc. Nylon Locking Screw — 30/50A) | B17019CPR | B17019APR | B17018CPR | B17018APR | B17018BPR |
| Bushings | To Spec | To Spec | To Spec | To Spec | To Spec |
| Glide Washer | 863-8 | 863-8 | 500RS | 500RS | 500RS |
| Gland Nut Assembly | B17019CR | B17019AR | B17018CR | B17018AR | B17018BR |

NOTE: Minimum purchase quantities apply.

Replacement Interiors

NOTE: For replacement bushings, see DuraGard section, page 81.

| AMPERAGE | | VOLTAGE POLARIZATION | CAT. NO. | |
|----------|----|------------------------|---|---|
| | | | MALE INTERIOR ASSEMBLY | FEMALE INTERIOR ASSEMBLY |
| — | — | 125VAC |  |  |
| 2P3W | 20 | 250VAC | 9XM23U1 | 9XF23U1 |
| — | — | Through 600VAC/250 VDC | 9XM23U2 | 9XF23U2 |
| 2P3W | 30 | Through 600VAC/250 VDC | 9XM23U0 | 9XF23U0 |
| 2P3W | 50 | Through 600VAC/250 VDC | 9XM33U0 | 9XF33U0 |
| 3P4W | 20 | Through 600VAC/250 VDC | 9XM53U0 | 9XF53U0 |
| 3P4W | 30 | Through 600VAC/250 VDC | 9XM24U0 | 9XF24U0 |
| 3P4W | 30 | Through 600VAC/250 VDC | 9XM34U0 | 9XF34U0 |
| 3P4W | 50 | Through 600VAC/250 VDC | 9XM44U0 | 9XF44U0 |
| 3P4W | 50 | Through 600VAC/250 VDC | 9XM54U0 | 9XF54U0 |

Interiors with ground straps are specials.

Computer System Plugs, Connectors and Receptacles Specifications

Performance — Electrical

| | |
|--|---|
| Dielectric Voltage Withstand | 3000 volts |
| Max. Working Voltage | 6000 volts RMS minimum (creepage distance 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 |
| Shrouded Contacts | Complies with California Code Title 8, Art. 51, S2510.7(b) for devices exceeding 300VAC |
| Horsepower | Per NEC® 430–151 ratings |

Performance — Mechanical

| | |
|--------------------------------|--|
| Impact Resistance | Per UL 1682 Paragraph 34 |
| Cord Accommodation | Round portable service cords per UL Std. 62 and CSA C22.2 No. 49.1 |
| 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 in 30/50A DuraGard® plug complies with OSHA Reg. 29 CFR 1910.147 (VO 30A and 50A plugs only) |

Materials

| | FS/FD | SPEC GRADE | DURAGARD® SAFETY GRADE™ |
|---|---------------------------------------|---|--|
| Contact Carrier Interior | Thermoset/Thermoplastic (20A and 30A) | Arc-resistant UL 94-V0 Phenolic Thermoset | Arc-resistant UL 94-V0 Phenolic Thermoset |
| Housing, Gland Nuts | Cast Aluminum | Lexan® UL 94-5VA | DuraV™ UL 94-V0 |
| Screw Collar Rings | — | High-Impact Thermoplastic | High-Impact Thermoplastic |
| O-Rings | — | Buna-N (Nitrile) | Buna-N (Nitrile) |
| Contacts: Pins and Sleeves | Brass | Brass CDA 360 | Brass CDA 360 |
| Hinge Pins (Receptacle) | Stainless Steel | — | Stainless Steel |
| Terminals | Brass | Stainless Steel | Stainless Steel |
| All Hardware | Stainless Steel | Stainless Steel | Stainless Steel |
| Gland Glide Washer (or Internal Cable Grip) | Brass | Nylon | 20 Amp — Nylon 30 and 50 Amp — Aluminum |
| Cable Clamp Bushing | Neoprene | Neoprene | Neoprene |

Lexan® is a registered trademark of GE.

Performance — Environmental

| | |
|----------------------------|--|
| Moisture Resistance | Per UL 1682 Paragraph 49. Watertight flap screw cover on receptacle, O-Rings on all VO/5VA pins and sleeves (excludes 60A) |
| Flammability | VO/5A per UL 94 (DuraV® also 5VA in some applications) |

| | VO* | 5VA | METAL* |
|-------------------------------|-----------------|-----------------|-----------------|
| Operating Temperatures | | | |
| Maximum Continuous | 95° C (230° F) | 130° C (266° F) | 130° C (266° F) |
| Minimum without Impact | -40° C (-40° F) | -29° C (-20° F) | -40° C (-40° F) |

| | |
|------------------|--|
| Chemicals | Resists standard industrial hydrocarbons, acids, bases and solvents (DuraV® and Metal) |
|------------------|--|

Approvals



TÜV

Conforms to NEMA 4, 4X and 6 (DuraGard and Spec Grade)
Contact Technical Services

Custom Products

Interlocked Branch Distribution Centers

Utilize an existing higher amperage service and split it into multiple lower current service outlets. The outlets are individually interlocked with circuit breaker protection. Branch Distribution Centers are UL and CSA Listed and can be configured for many inlet/outlet combinations.

Standard Dual Configuration

- 60A male inlet
- 2–30A individually interlocked female outlets, each circuit breaker protected
- Heavy-duty NEMA 4 welded, gasketed enclosure



Benefits

- **Saves rewiring costs** in a facility when installing small-sized, lower-current machines using existing electrical service
- **Quickest and most cost-effective** way to expand or reconfigure a single service with multiple service outlet combinations possible at every power drop
- **Safest way to operate:** UL Listed 22kA interrupt capacity interlocked circuit breaker protection for each branch outlet receptacle, in a NEMA 4 enclosure

Applications

- **Data Processing:** CPU/disk arrays/peripherals new, smaller multiple units
- **Industrial/Manufacturing Lines:** Reorganization, process reconfiguration
- **Portable Power:** Machinery, tools, test and diagnostic equipment

Electrical and Safety Features

- One: 250VAC, 3P4W, 60 amps, male inlet feeding; Two: 250VAC, 3P4W, 30 amps, IEC 309-2 (9h Blue) female receptacle outlets, each protected by 22kA IC circuit breaker; each mechanically interlocked
- Power is manually energized only after plug is inserted; externally visible trip indicator handles on each interlock
- Automatic Shut Off when plug is removed before contacts disengage; ground sleeves "Make First, Break Last"
- Patented "Trip-Free" Safety Mechanism where outlets are not powered unless plug is inserted
- Full NEMA rated UL 489 listed 22kA Circuit Breakers, available to 480V at 30 amps. 60 amp and other options available

Mechanical and Safety Features

- All internal wiring is complete: a Drop-In, Plug-In specified device
- DP Underfloor (Horizontal) installation standard; vertical or other mounting conventions optional
- Electrostatic epoxy powder coat gray finish over 14-gauge steel, NEMA 4 welded enclosure with gasketed access cover
- Screw cover protects outlet receptacles (flap cap option)
- Long-life stainless steel and nylon external hardware, copper-free aluminum castings, O-ring seals (to device spec) and brass electrical contacts

| CAT. NO. | INLET SIDE | | OUTLET SIDE* | |
|----------|------------------------|------------------|-------------------------------|-------------|
| | 250VAC, 60A MALE INLET | MATING CONNECTOR | 250VAC, 30A OUTLET RECEPTACLE | MATING PLUG |
| ER206M39 | 7528 Spl. | 7428-78 | RS430MM9W (x2) | RS430P9WV0 |

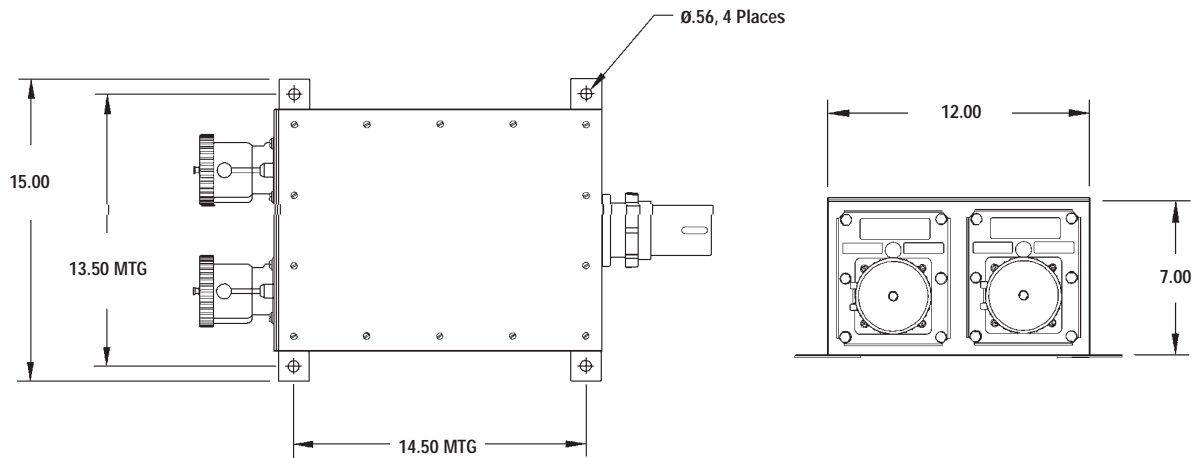
* IEC 309-2 configuration, 9h, 3P4W.

NOTE:

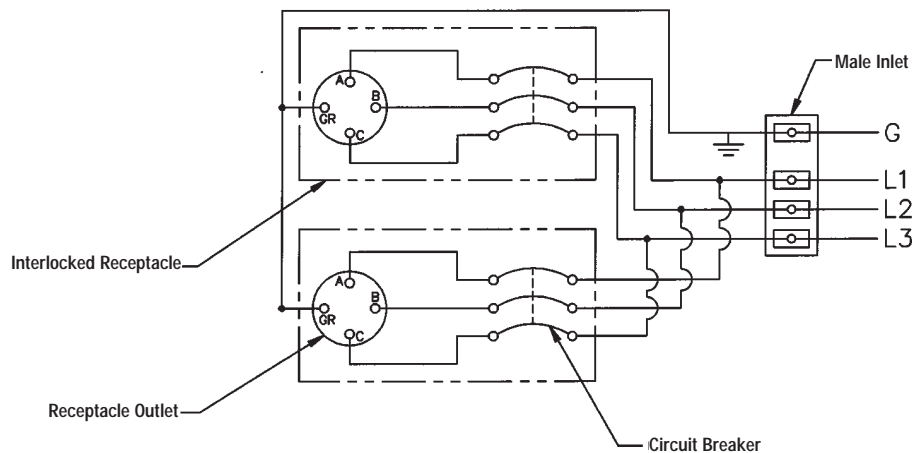
External mating plugs and connectors sold separately.

Other configurations available. Consult factory or your Thomas & Betts representative.

Outline Dimensions



Schematic Diagram



Russellstoll®

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