

Russellstoll®

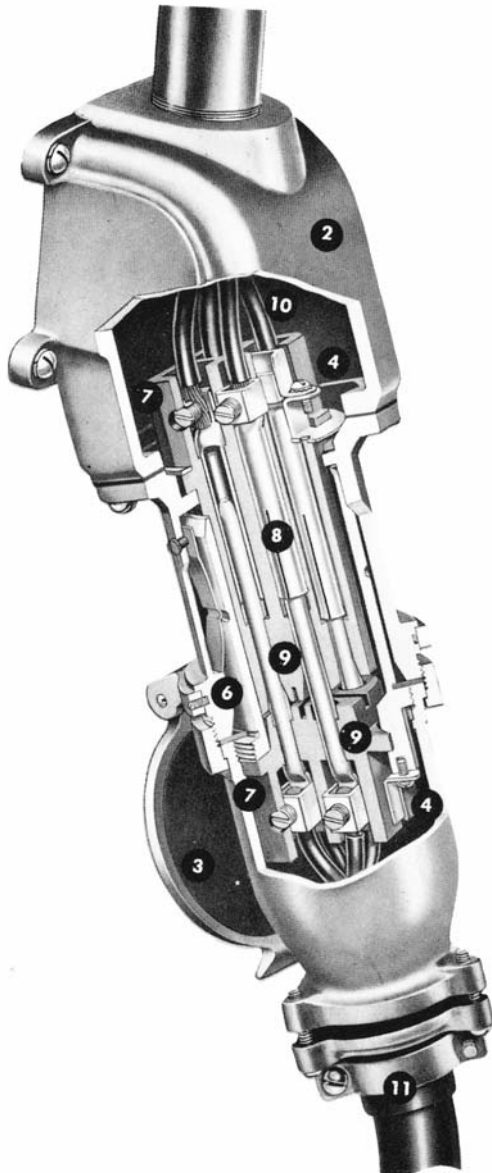
J-Line Interconnection Systems

30-200/270 Amp, (30-200A Load Breaking) Maximum 600 VAC/250 VDC

Load Breaking Receptacles, Plugs, Connectors & Inlets

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 Volts, A.C. 250 Volts, D.C. (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.

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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!



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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.

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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.

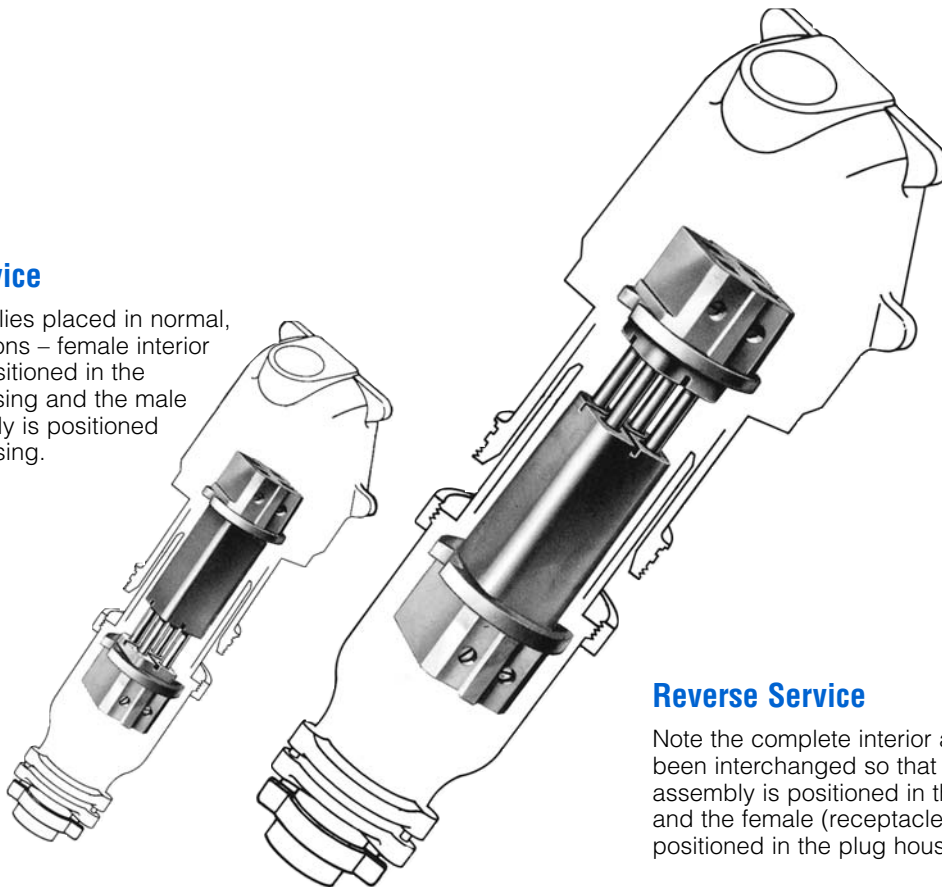
Example: JRFA334HR

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.

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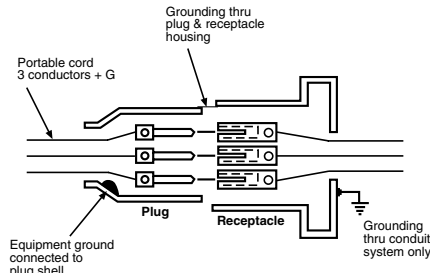
Load Breaking Receptacles, Plugs, Connectors & Inlets

Grounding Data

Effective grounding of portable electric 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:**

Style 1 – Typical 3P3W Plug & Receptacle



STYLE 1

4P4W (or 3P3W)

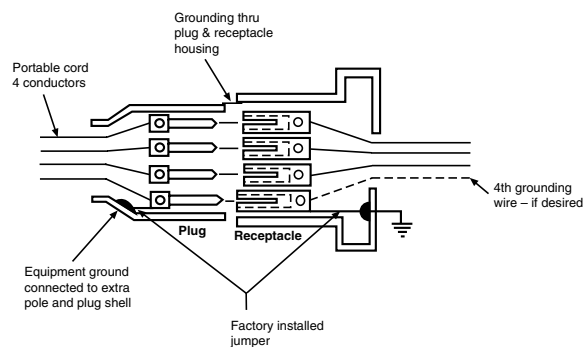
Through Metal Housings of Plug and Receptacle

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.

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

Style 2 – Typical 3P4W Plug & Receptacle



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 system number one.

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.

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.

Thomas & Betts

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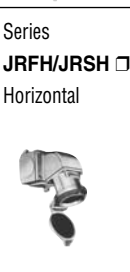
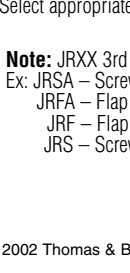
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Receptacle Mounting Options – J-Line Construction

Progressive Assembly

Mounting Style	To Order Use:	Current Rating			
		30 Amp	60 Amp	100/150 Amps	200/270 Amps
Standard Series JRFA/JRSA <input type="checkbox"/> 	Receptacle + Vertical or Square Mount Box + Angle Adapter	Basic Receptacle* + JB3 1" Std. Conduit Size + JAA3 (20°) or JAA3-45 (45°)	Basic Receptacle* + JB6 1½" Std. Conduit Size + JAA6-AB6 (20°) or JAA6-45 (45°)	Basic Receptacle* + JB10 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 <input type="checkbox"/> Straight 	Receptacle + Vertical Mount Box + Straight Adapter	Basic Receptacle* + JB3 1" Std. Conduit Size + JRA3	Basic Receptacle* + JB6 1½" Std. Conduit Size + JRA6-AB6	Basic Receptacle* + JB10 2" Std. Conduit Size + JRA10	Basic Receptacle* + JB20 3" Std. Conduit Size + JRA20
Series JRFB/JRSB <input type="checkbox"/> 	Receptacle + 30° Angle Adapter	Basic Receptacle* + JAAB3	Basic Receptacle* + JAAB6	Basic Receptacle* + JAAB10	Basic Receptacle* + JAAB20
Series JRFE/JRSE <input type="checkbox"/> 	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 <input type="checkbox"/> Horizontal 	Receptacle + Horizontal Mount Box + Angle Adapter	Basic Receptacle* + JB3 1" Std. Conduit Size + JHA3 (20°)	N/A	N/A	N/A

* Select appropriate receptacle by rating, configuration and voltage on Page H37.

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