



SRG and SRD Dead Front Interlocked Receptacles and Switches; SP Plugs

SAVE THESE INSTRUCTIONS
FOR FUTURE REFERENCE

IF308

Installation & Maintenance Information

APPLICATION

SRG and SRD dead front interlocked receptacles and switches and SP plugs are designed to provide connection and distribution of secondary electrical power (480 VAC or less) between a power source and portable or stationary electrical equipment. SRG and SRD receptacles and SP plug combinations are designed to provide for making or breaking of the circuit at full rated load through a built-in rotary switch that is operated automatically by a helical blade in the center of the plug when the plug is inserted or withdrawn. The plug and receptacle contacts do not make or break under load. When the plug is inserted, the plug and receptacle contacts engage before the switch closes. When the plug is withdrawn, the switch opens before the plug and receptacle contacts disengage.

SRD series receptacles are suitable for use in Class I, Group D; Class II, Groups F, G; and Class III hazardous (classified) areas as defined by the National Electrical Code® and in damp, wet, or corrosive locations; indoors or outdoors. SRD receptacles are supplied in 30 and 60 ampere ratings in 2-wire, 3-pole; 3-wire, 4-pole; and 4-wire, 5-pole arrangements.

CAUTION

To reduce the risk of ignition of hazardous atmospheres, do not use in Class II, Group F locations that contain electrically conductive dusts.

SRG and SRD receptacles and SP plugs should be installed, inspected, maintained and operated by qualified and competent personnel.

RECEPTACLE INSTALLATION

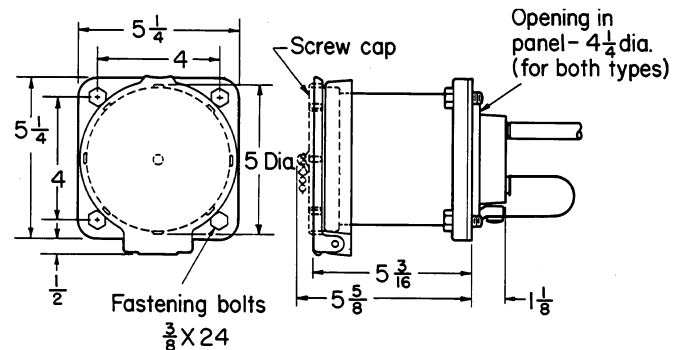
WARNING

Electrical power must be turned **off** before and during installation or maintenance.

1. Select a mounting location that will provide suitable strength and rigidity for supporting the receptacle and attached plug.
2. **SRG Receptacles:**

- Prepare panel opening following dimensions in Figure 1, then attach to panel with four fastening bolts.

SRG series receptacles are mounted on sheet metal panels or cabinets and installed indoors or outdoors in nonhazardous industrial areas. SRG series receptacles are supplied in 30, 60 and 100 ampere ratings in 2-wire, 3-pole; 3-wire, 4-pole; and 4-wire, 5-pole arrangements. The 30 and 60 ampere rated receptacles can be used with a Crouse-Hinds CESD42 back box, if desired.



NOTE: Dotted lines indicate screw cap type cover

Figure 1
SRG Receptacle Mounting Dimensions (in.)

- When mounting 30 or 60 ampere SRG receptacles to a CESD42 back box, always locate receptacle in a vertical position with the contacts pointing downward.

Note: The recommended mounting height from ground or floor level to the bottom of the receptacle is 42 to 52 inches.



3. SRD Receptacles:

CAUTION

- Hazardous location information specifying class and group listing of each device is located on the nameplate.
- Conduit sealing fittings are required to be installed in each attached conduit run to comply with the latest edition of *National Electrical Code*; Sections 501-5 or 502-5, plus any other applicable standards.

- Attach SRD receptacle to the mounting surface with two bolts or lag screws in the mounting holes located at each side of the receptacle as shown in Figure 2.

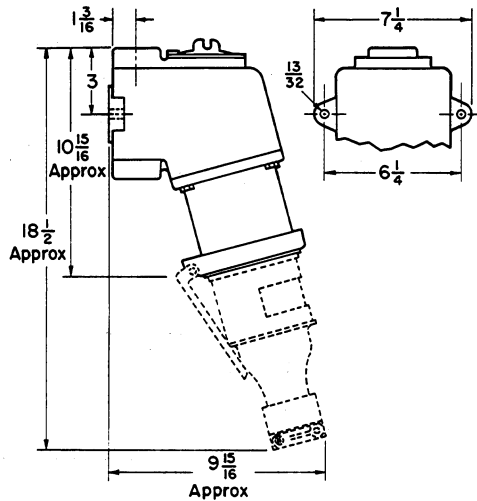


Figure 2
SRD Receptacle Mounting Dimensions (in.)

Note: The recommended mounting arrangement is in a vertical position with the contacts pointing downward and the bottom of the receptacle between 42 and 52 inches above ground or floor level.

4. Thread conduit into sealing fittings of SRD receptacles or back box of SRG receptacles (where used).
5. Remove threaded cover from receptacle back box (where used) and pull all wires through conduit into receptacle housing.
6. Make the electrical connections to the flexible leads in the receptacle following methods that comply with the National Electrical Code and all local codes.

WARNING

A wiring pattern must be established for your system. Locations having different voltages, frequencies or types of current (AC or DC) **must not** have interchangeable attachment plugs per Section 210-7 of the *National Electrical Code*. For each system the same colored wire must be connected to the same numbered contact on all plugs and receptacles in that system. This will assure correct system polarity and eliminate the possibility of equipment damage and/or personal injury due to misphasing or shorts. **Always test before energizing.**

Markings on the receptacle leads are the same as the markings on the front face of the receptacle insert.

Grounding: SRG and SRD receptacles and SP plugs are provided with an extra grounding pole. In addition, direct connection is provided between the plug and receptacle housings and the grounding pole. The receptacle is then grounded through the conduit system. In the plugs, the equipment grounding wire is attached to grounding pole.

7. After making electrical connections, place wires into the housing and replace the threaded cover and tighten it securely.
8. Pour CHICO® sealing compound into sealing fittings (when installed) in accordance with the instructions supplied with the sealing compound and the CHICO X fiber.

PLUG INSTALLATION

1. Disassemble SP plug by loosening the set screw located at the middle of the plug assembly below the nameplate.
2. Unscrew handle assembly, then remove rear insulator and plug contacts.

NOTE

The front insulator is not removable. It is permanently polarized at the factory to conform with the values indicated on the electrical data nameplate.

3. Reassemble by sliding clamping nut and slip washer over cord, then the appropriate cord bushing that fits snugly over cord jacket (from selection supplied with plug) and then the handle body.
4. Strip outer cord jacket back 5 inches and each individual conductors' insulation back one inch.

CAUTION

Do not cut into the individual conductor insulation when removing the outer cord jacket. Do not damage the conductor when removing its insulation.

5. Insert each conductor through the rear insulator, making certain that they follow the polarity pattern established for your system.
6. Loosen the pressure connector screws in the contacts and insert each conductor into the contact recesses until conductor bottoms in recess. Tighten the screws securely to 30 in. lbs. torque capturing each conductor and the rear insulator.
7. Insert the contacts into the proper cavities of the front insert making certain that the screw lugs face outward radially and are seated firmly on the front insulator before the rear insert is pushed down over the contacts.
8. Rethread the handle body onto front contact assembly and secure with set screw.
9. Slide the cord bushing into the handle body recess and then tighten the cord clamping nut securely, tightening all set screws in the clamp assembly to 30 in. lbs. torque.

ELECTRICAL TESTING

Do not connect to power until the following electrical tests have been performed.

- Make continuity checks of wiring to verify correct phasing and grounding connections.
- Check insulation resistance to be sure system does not have any short circuits or unwanted grounds.

PLUG AND RECEPTACLE OPERATION

1. Insert plug into receptacle with a single inward thrust.
2. If provided, tighten plug clamping ring nut onto receptacle to assure a raintight connection.
3. Remove plug by loosening clamping ring nut (when provided) then disconnect plug from receptacle with a single downward pull.

SP RECEPTACLE INSERT ASSEMBLY REPLACEMENT

CAUTION

The receptacle insert assembly is polarized for specific voltage and current values shown on the electrical data nameplate. Replace assembly with a new assembly rated at the same specific voltage and current only.

1. Turn off all electrical power to receptacle, then remove threaded cover and disconnect flexible leads from receptacle insert assembly to supply wire. Disconnect grounding strap from receptacle housing.
2. Remove the electrical data nameplate (red, yellow, or blue) to uncover the insert assembly polarizing set screw.
3. Remove the set screw.
4. Rotate the insert assembly counterclockwise to remove.

CAUTION

Do not damage the threads when removing insert assembly.

5. Install replacement assembly, tightening it by turning clockwise. Stop when the face of the assembly is approximately even with the outside face of the housing.
6. Align the set screw hole in the insert assembly with the hole in the housing then replace and securely tighten set screw.
7. Replace electrical data nameplate.
8. Reconnect the flexible leads to the supply wires following the wire pattern established for your system and in compliance with the *National Electrical Code* and all local codes. Reconnect grounding strap to receptacle housing.
9. Replace and securely tighten screw cover.

ELECTRICAL RATING

Maximum Voltages: 600 VAC @50-400 Hz, 250 VDC

Maximum Continuous Current:
30, 60, or 100 Amperes: SRG Series
30 or 60 Amperes: SRD Series

MAINTENANCE

Electrical and mechanical inspection of all components must be performed on a regular schedule determined by the environment and frequency of use. It is recommended that inspection be performed a minimum of once a year.

WARNING

If any parts of the plug or receptacle appear to be missing, broken, or shows signs of damage,

DISCONTINUE USE IMMEDIATELY.

Replace with the proper replacement part(s) before continuing service.

1. Inspect all contact wire terminals for tightness. Discoloration due to excessive heat is an indicator of a possible problem and should be thoroughly investigated and repaired as necessary.
2. Check grounding and bonding for correct installation and secure connection.
3. Check gaskets for deterioration and replace if necessary.
4. Clean exterior surfaces making sure nameplates remain legible.
5. Inspect cord clamping nut tightness to ensure proper cord gripping.
6. Check tightness of all screws before using.
7. Inspect housings and replace those which are broken.
8. Check contacts for signs of excessive arcing or burning and replace if necessary.

In addition to these required maintenance procedures, we recommend an Electrical Preventive Maintenance program as described in the National Fire Protection Association Bulletin NFPA No. 70B.

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Crouse-Hinds "Terms and Conditions of Sale", and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection herewith.



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