INSULGRIP® PIN & SLEEVE PLUG, CONNECTOR & RECEPTACLE 200 Amp • Style 1 & 2

English

INSTALLATION OPERATION MAINTENANCE

GENERAL INFORMATION

1. **CAUTION:RISK OF ELECTRIC SHOCK. Disconnect power before installation or maintenance.**
2. **NOTICE**: For installation only by a qualified electrician in accordance with national and local electrical codes and the following instructions.
3. **CAUTION: USE COPPER CONDUCTORS ONLY. Use stranded conductors only.**
4. Check that the device's type and rating are suitable for the application.
5. Select the conductor size from National Electrical Code® Table 400-5B or Canadian Electrical Code Table 12A.
   Rated for use with Type G, W portable cords or equivalent with COPPER conductors only.
6. The plug is rated Type 3,4, and 4X when connected to an equivalently rated connector or receptacle when using the locking ring. The receptacle and connector are rated Type 3,4, and 4X when the cap is in the closed position or connected to an equivalently rated plug when using the locking ring.

ELECTRICAL RATING: Max. Voltages: 600 VAC, 250 VDC.

PLUG, CONNECTOR & RECEPTACLE INSTALLATION

1. Check the rating on the label to insure that it is correct for the installation.
2. Select cable of suitable ampacity and temperature rating (see Table 1).
3. Select cord end with proper conductor color orientation that matches terminal location. Shear cord cleanly. Do not strip away cord jacket or remove conductor insulation at this time.

TABLE 1

DEVICE TYPE	AWG/ COND	CORD O.D. RANGE (in)
200 Amp Style 2:2P+G	1/3 to 250 kcmil/3	1.00 - 2.50
200 Amp Style 1:3P Style 2:3P+G	1/4 to 250 kcmil/4	1.00 - 2.50
200 Amp Style 1:4P	1/5 to 250 kcmil/5	1.00 - 2.50

4. **To disassemble Plug (see figure 1)**
   - Remove ground screw (12).
   - Remove retaining ring(1) and interior assembly(2) from plug body(3).
   - Loosen clamp guide set screw(4) and turn clamp guide assembly(5) to remove from plug body.

   To disassemble Connector (see figure 2)
   - Remove adapter set screw(12) and connector adapter(13) from connector nose(17).
   - Remove mounting screws(16), ground strap(14), keying ring(15) and interior assembly(2).
   - Loosen clamp guide set screw(4) and turn clamp guide assembly(5) to remove from adapter(13).

   To disassemble Recept acle (see figure 3)
   - Remove mounting screws(16), ground strap(14) w/screw (for Style 2), keying ring(15) and interior assembly(2).
   - Slide keying ring(15) over power cable.

Do not disassemble interior assembly.

***For plugs & connectors**

*5. Slide clamp guide(5) with cable clamps(6) (see figure 4 for proper inserts) and one grommet washer(7) over power cable. (Select proper grommet washer with respect to cable size).
*6. See figure 5 for cable gaging strip to determine how many "inner layers" of the onion skin grommet(8) are to REMAIN or remove "inner layers" until the grommet slips over power cable. Remove one layer at a time by pushing through and tearing off.
*7. Place onion skin grommet(8) over power cable. For plugs place plug body(3) with locking ring(9) and for connectors, place keying ring(15) over power cable.
8. Strip cable jacket 4" and each conductor 1 1/4".
9. Twist wire strands together on each conductor. **DO NOT TIN CONDUCTORS.**
10. **NOTE: Crossing one ungrounded conductor (Line) over the grounded conductor (Neutral) may be necessary with five-wire devices.**

CAUTION

A wire pattern MUST be used so that the same color insulated conductor is put into the same numbere contact opening in all plugs, receptacles & cable connectors in the system. This requirement provides correct polarity for the system to avoid causing personal injury and/or equipment damage.

11. Insert conductors into the proper terminals according to the established wiring pattern. The grounding terminal (earthing) is indicated by a green marking, a "G" or the earthing symbol. The neutral terminal (grounded) is to be marked with PERMANENT white coloration by installer in accordance with National Electrical Code® Section 200-9. See figure 6 for Style 1 and Style 2 wiring.
12. Tighten terminal screws to a torque of 17 lb•ft.
13. **TAKE CAUTION THAT THERE ARE NO STRAY WIRE STRANDS.**
14. **To reassemble Plug (see figure 1)**
    - Slide interior assembly into(2) into plug body(3) aligning the internal plug body key and insulator key slot. Place retaining ring(1) into the plug body slot.
    - Install ground screw (12). Torque to 24 lb.-in.

    To reassemble Connector (see figure 2)
    - Slide interior assembly(2) into connector nose(17), align keying ring(15) with interior key slot, and align mounting holes of ring with connector nose.
    - Install mounting screws(16) and ground strap(14). Screw adapter(13) onto connector nose(17) and torque adapter set screw (12) to 15 to 20 lb•in.

    To reassemble recept acle (see figure 3)
    - Slide interior assembly(2) into receptacle housing. Place and align keying ring(15) with the key slot in the interior and align mounting holes with receptacle.
    - Install mounting screws and ground strap with screw (for Style 2).

***For Plugs & Connectors**

*15. Slide onion skin grommet(8) down power cable into plug body(3). Place grommet washer in clamp guide and screw clamp guide onto plug body. Torque clamp guide set screw(4) to 15 to 20 lb•in.
*16. Torque cable clamp screws (11) to a minimum of 50 lb•in, alternating sides to prevent binding.

CAUTION

DO NOT connect to power before conducting the following Electrical Tests:
- **Test continuity of wiring to verify correct phasing and grounding connections.**
- **Measure insulation resistance to be sure the system does not have any short circuits or unwanted grounds.**

For Receptacle

Mount with gasket(18) using bolts(20) and torque to 30 to 40 lb•in. There must be a tight seal between housing and back box to assure a weatherproof, oil tight and hosedown water tight fit.

CAUTION

The equipment grounding path between the receptacle housing and back box must be established and verified. Star washers are included for use under the mounting bolt heads to help achieve ground continuity.

HUBBELL®

MAINTENANCE

Electrical and mechanical inspection of all components must be performed regularly. It is recommended that inspection be performed monthly . Lubricate threads periodically .

CAUTION

Electrical power supply MUST BE OFF before and during installation or maintenance. DISCONNECT primary power source and LOCK OUT. Installation and maintenance procedure must be performed by a trained and competent electrician.

- Inspect all contact wire terminals for tightness. Discoloration due to excessive heat is an indicator of possible problems and should be thoroughly investigated and rep aired as necessary.
- Check grounding and bonding for correct installation and secure connection.
- Check gaskets for deterioration.
- Clean exterior surfaces making sure nameplates remain legible.
- Inspect clamp guide assembly and cable grip tightness to ensure proper cable gripping.
- Inspect interior parts and replace those which are broken or excessively worn.
- Check all contacts for signs of excessive arcing or burning.

WARNING

If any parts of the plug, receptacle or connector appear to be missing, broken or show signs of damage, DISCONTINUE USE IMMEDIATELY! Do not modify these devices in any way. Replace with new device. Failure to do so could cause serious personal injury and/or equipment damage.

An Electrical Preventive Maintenance Program as described in the National Fire Protection Association Bulletin NFPA No. 70B is recommended in addition to these required maintenance procedures.

FIGURE 1 • PLUG

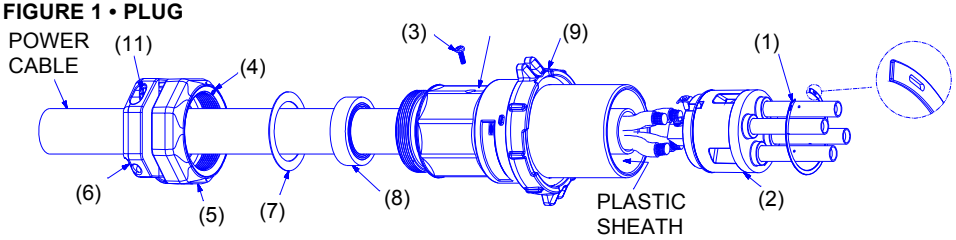


FIGURE 2 • CONNECTOR

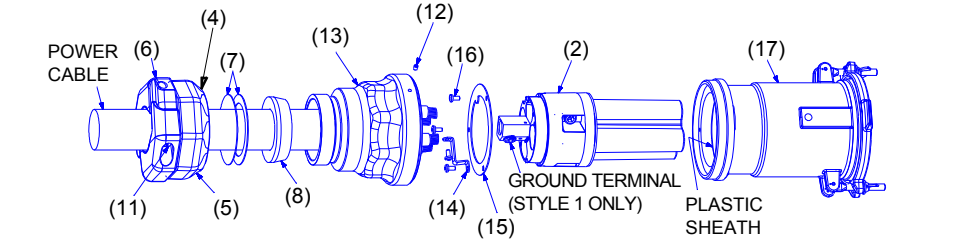


FIGURE 3 • RECEPTACLE

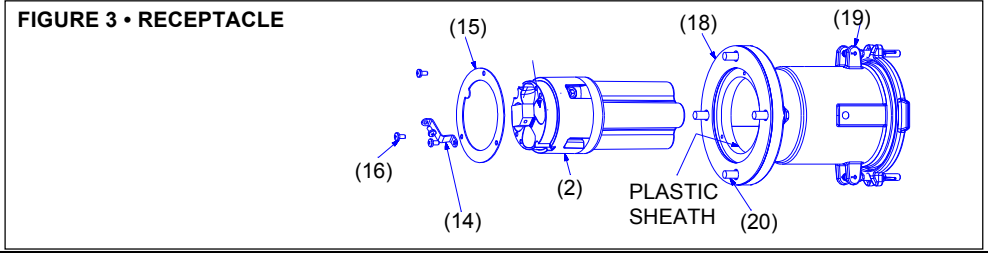
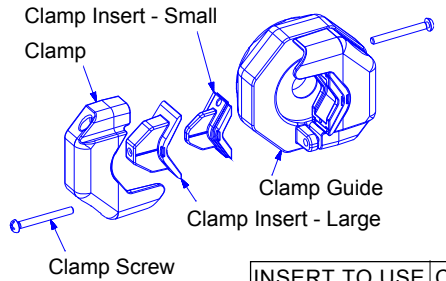
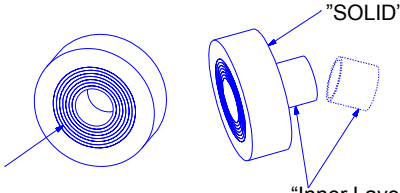


FIGURE 4



INSERT TO USE	CABLE DIA. RANGE (IN.)
Small & Large	1.00-1.50
Large Only	1.50-2.00
Neither	2.00-2.50

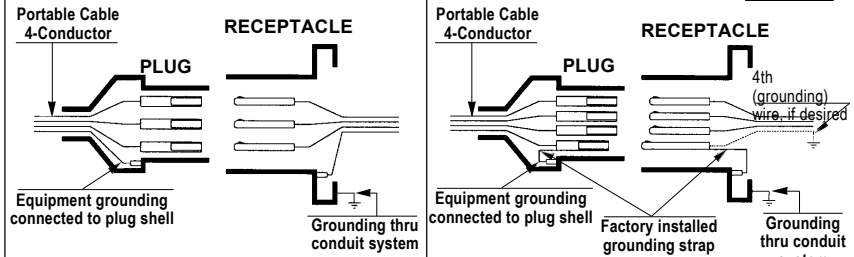
FIGURE 5



CABLE DIAMETER RANGE FOR 200 AMP PLUGS & CABLE CONNECTORS

AMPERES	CABLE DIA. RANGE (IN.)
200	1.00-2.50

FIGURE 6



STYLE 1 units ground the portable device and the plug via the grounding conductor and the plug shroud to the receptacle detent spring clips and housing. The receptacle is grounded by virtue of its being an integral part of the conduit system. All contacts are current carrying.

STYLE 2 units have an extra (grounding) contact which forms a parallel circuit with the circuit formed by the plug shroud and receptacle detent spring clips.