

ARKTITE® Plugs CPP Series, 20 Amperes Installation & Maintenance Information



SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

ARKTITE CPP Series Plugs are used where power is to be supplied to portable equipment such as compressors, conveyors, portable tools, lighting systems, and similar equipment in damp, corrosive, or hazardous locations.

CPP Series Plugs are compatible with CPS Series Receptacles and CPR Series Cable Connectors (nonhazardous locations) with the same electrical ratings.

CPP Series Plugs are rated at 20 amperes at either 125 or 250 VAC, 60 to 400 Hertz or 18 volts DC. CPP Series Plugs are provided in a 2-wire, 3-pole design with a provision for attachment of the grounding wire to the grounding pole and direct connection between plug and receptacle housings and grounding pole.

Actual operation must comply with the information stipulated on the plug nameplate. CPP Series Plugs should be installed, inspected, and maintained by qualified and competent personnel.



Type CPP512 Plug
Molded Composition
Housing



Type CPP516 Plug
Metallic Housing

INSTALLATION

WARNING

Electrical power must be OFF before and during installation and maintenance.

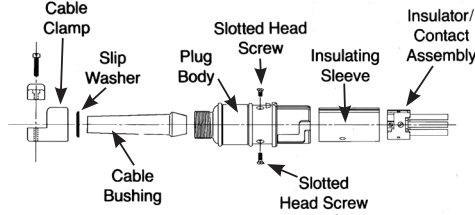


Figure 1. CPP Plug Assembly (Type CPP516 shown.)

1. Unscrew cable clamp assembly then remove slipwasher and cable bushing.
2. Remove slotted head screws from side of plug body (2 screws on Type CPP516, 1 screw on Type CPP512). Then remove insulator contact assembly and insulating sleeve.
3. Select the bushing with the closest sliding fit to the cord you are using.

NOTE: Use #12 or #14 AWG Type S, SO, ST or STO Cord with range of .312 to .625 inches diameter. Do not use cord with diameter less than .312".

CPP Series Plug		
Cable Diameter (in.)	Aluminum Handle	Molded Composition Handle
0.312 to 0.625	CPP516	CPP512

4. Loosen cable clamp screws and pass cord through cable clamp assembly, clamp end first. Pass cord through slipwasher, then through cable bushing and plug body.

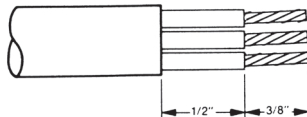


Figure 2. Cable Insulation

5. Strip outer cord jacket and then conductor insulation to dimensions shown in Figure 2.

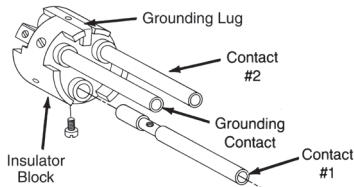


Figure 3. Insulator/Contact Assembly

6. Remove contacts #1 and #2 from insulator by removing slotted head screws in sides of contacts (see Figure 3).

CAUTION

Conductors are identified by the color of insulation on each conductor. These colors agree with those given in Section 210-5 of the National Electrical Code for multi-wire branch circuits; an additional wire in the cable, uninsulated or identified green, is for grounding and complies with the National Electrical Code. If conductors are not identified with exactly these colors, these colors may be assumed in making proper connections. Test electrically to verify proper conductor identification.

7. Solder conductors (except grounding conductor) into each contact wire well following established system wiring pattern (see Table 2). When soldering contacts:
 - Tin conductor ends first.
 - Heat and pre-tin wire well.
 - Use 60/40 rosin core solder.
 - Insert conductor into contact wire well, then solder by melting on conductor until well fills. Remove heat and hold rigid until solder solidifies.
8. Replace contacts in numbered contact recesses in insulator block observing correct polarity as shown in Table 2.
9. Attach green ground conductor to green ground lug labeled "G". Back out set screw part way. Insert conductor between ground stud and "V" shaped end of green ground lug (see Figure 4). Do not put conductor under pressure set screw. Tighten pressure set screw to 12-14 in./lb.

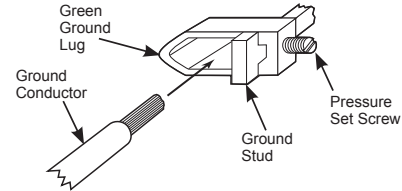


Figure 4. Ground Wire Connection

Color of Wire in Cable	Numbers on Insulator Body
White*	Contact #2
Black	Contact #1
Green	Grounding Contact (G)

*White wire or terminal must not be used for grounding. If portable cable contains an uninsulated wire, or one identified green, this wire is for grounding the portable device. If no green or bare wire is in the portable cable, another wire may be connected through plug and receptacle connections to conduit or some other non-current-carrying conductor permanently grounded in accordance with the National Electrical Code.

NOTE: All installations must be electrically tested to assure proper polarity of conductors between plugs, receptacles, and connectors.

IMPORTANT: Check insulation resistance to be sure system does not have any short circuits or uninsulated grounds.

10. Reassemble Type CPP516 Plugs as follows:
 - Insert insulating sleeve into plug body flush with inner shoulder. Align screw hole and slot of insulating sleeve with screw holes in plug body.
 - Place insulator/contact assembly into plug body with grounding lug (see Figure 3), align with slot in insulating sleeve and polarizing slot on exterior of plug body.
 - Replace slotted head screw through hole in plug body and into grounding lug on contact assembly.
 - Replace slotted head screw through hole in plug body and into insulator block.
11. Reassemble Type CPP512 Plugs as follows:
 - Place insulator/contact assembly into plug body so that the slot in insulator body drops over rib inside body. For ease in assembly, align slot with red arrow on exterior of plug body.
 - Replace slotted head screw through hole in plug body and into insulator block.
12. Slide cable clamp assembly over cable bushing and thread onto plug body assembly. Press cord firmly into plug body to relieve strain on conductor/contact connections and tighten cable clamp assembly securely to plug body.
13. Tighten the cable clamp screws to complete assembly of the plug.

ARKTITE plugs and receptacles are polarized so plug enters receptacle only one way. This assures proper polarity of conductors through plug and receptacle or cable connector.

MAINTENANCE

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

CPS Receptacle			CPP Plug		
Single Gang Assembly Cat. No.	Two Gang Assembly Cat. No.	Receptacle Unit Only Cat. No.	Alum. Handle Cat. No.	High Impact Molded Composition Handle Cat. No.	Cable Dia. (in.)
CPS152-101 CPS152-201 CPS152-301	CPS152-102 CPS152-202 CPS152-302	CPS152R	CPP516	CPP512	.312 to .625
CPS152-111 CPS152-211 CPS152-311	CPS152-112 CPS152-212 CPS152-312				

WARNING

If any parts of the plug or receptacle appear to be missing, broken, or show signs of damage, DISCONTINUE USE IMMEDIATELY. Replace with the proper replacement part(s) before continuing use.

WARNING

Electrical power supply must be OFF before and during installation and maintenance. 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 a possible problem and should be thoroughly investigated and repaired as necessary.
- Clean exterior surfaces making sure nameplates remain legible.
- Check tightness of all screws before using.
- Inspect housings and replace those which are broken.
- Check contacts for signs of excessive burning or arcing and replace if necessary.
- Make sure cable clamp is intact and tight.

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