3. Connect grounding conductor to lug provided. Pull all phase conductors into enclosure and make connections as shown in breaker manufacturer's instructions. All electrical connections should be tightened to torque values specified in manufacturers literature and comply with the National Electrical Code and any local codes.

4. Test wiring for correct phase relationships with continuity checks and also for unwanted grounds with an insulation resistance check.

**CLOSING COVER**

**CAUTION**

Clean both ground joint surfaces of body and cover before closing. Dirt or foreign material must not accumulate on flat ground joint surfaces. Surfaces must be flush against each other to provide a proper explosionproof joint.

**RETRACTED COVER BOLTS**

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.

**GROUND JOINT SURFACES**

WARNING

Always disconnect primary power source before opening enclosure for inspection or service.

1. Frequent inspection should be made. A schedule for maintenance checks should be determined by the environment and frequency of use. It is recommended that it should be at least once a year.

2. Perform visual, electrical, and mechanical checks on all components on a regular basis.
   - Visually check for undue heating evidenced by discoloration of wires or other components, damaged or worn parts, or leakage evidenced by water or corrosion in the interior.
   - Electrically check to make sure that all connections are clean and tight and that contacts in the components make or break as required.
   - Mechanically check that all parts are properly assembled, and operating mechanisms move freely.

3. Make sure all cover bolts are fully retracted into cover before closing cover on body. Close cover and start cover bolt threads by hand. Torque all cover bolts securely to 40-45 ft. lbs.

**SEALS**

Pour sealing compound into sealing fittings in accordance with the approved fittings and sealing compound.

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 therewith.

**EBBR Explosionproof Bolted Construction Interlocked Receptacle**

**APPLICATION**

EBBR interlocked receptacles with circuit breakers are used as a service outlet for portable equipment. The interlocked receptacles with circuit breakers are mechanically interlocked to provide a disconnect means and short circuit protection. The receptacle contacts cannot be made or broken under load. The circuit breaker cannot be closed until the plug is fully inserted and the plug cannot be withdrawn until the breaker is open.

1. EBBR receptacles are available in 30, 60, and 100 ampere, 3 wire 4 pole (style 2) configurations.
   - EBBR receptacles should be installed, inspected, and serviced only by qualified, competent personnel.

2. Select a mounting location that will provide suitable strength and rigidity for supporting the enclosure, all contained wiring and control devices. Be sure to provide adequate space below receptacle for insertion and removal of plug. See Figure 1 for mounting dimensions.

3. Install two (2) 1/2” diameter mounting bolts in the lower positions on mounting surface.

4. Install detachable mounting feet while enclosure is on the floor or work bench.
   - Insert four (4) wedge shaped mounting feet into dovetail slots in enclosure body.
   - Tap each foot with hammer to securely tighten into slot. See Figure 2.

**ENCLOSURE INSTALLATION**

Before installing an EBBR interlocked receptacle, 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 as stated in Paragraph 210-7F of the National Electrical Code.

The electrical power must be OFF before and during installation and maintenance.

1. It is not necessary nor recommended to remove the cover during enclosure installation. If it becomes necessary, see Re-moving and Reinstalling Cover on page 2 of this IF.

2. Position enclosure on surface with mounting feet on the lower two (2) mounting bolts. Continue to support the enclosure in position. Install the top two (2) bolts. Tighten all four (4) mounting bolts securely in place.

3. Connect enclosure into conduit system. Install conduit sealing fittings as required by NEC and any other local codes. Use Crouse-Hinds® PE series explosionproof reducers for conduit sizes smaller than tapped openings in enclosure.
REMOVING AND REINSTALLING COVER

Covers and bodies are matched and inspected as a pair at the factory. If more than one enclosure is being installed, take care not to mix covers and bodies. Replace the cover on the body as shipped from the factory. If necessary, mark covers and bodies before disassembling to keep them properly matched.

Cover removal is not necessary for installation but may be accomplished as follows:

1. Place the enclosure on a flat horizontal surface. Loosen all cover bolts until each bolt is fully retracted into the cover by the stainless-steel spring under the bolt head.
2. Remove the two (2) 5/16-18 bolts that attach each hinge to the cover. Do NOT remove the two (2) 5/16-18 bolts that attach hinge to body. Grasp the cover under opposite edges and carefully lift from body.

GROUNDING AND BONDING

Grounding and bonding of the conduit and equipment is required by the National Electrical Code. Receptacles and attachment plugs must be the type providing for connection to the grounding conductor.

WARNING

EBBR interlocked receptacles must be securely attached into a permanently grounded system in accordance with Article 501-16, 502-16 of the National Electrical Code.

INSTALLATION OF INTERNAL COMPONENTS

If enclosure only (without circuit breaker) is supplied, the internal operating mechanism (ball assembly) for the circuit breaker must be removed prior to circuit breaker installation. (See Figure 4)

NOTE: Removal of the interior equipment mounting panel is not necessary for circuit breaker installation. The mounting panel may be removed to make installation of the circuit breaker easier. Before removing mounting panel, follow step #1 of Circuit Breaker Installation for removing the linkage between operating mechanisms and the enclosure.

5. After circuit breaker is installed, reattach the connecting arms with shoulder screw and stop nut removed in Step 1. Check printed label on the longer connecting arm for hole alignment with the particular breaker manufacturer being used. (See Figure 5)

6. Reposition ball assembly over toggle arm of circuit breaker. At the same time side ball brackets under the top two (2) 1/4-20 screws in the mounting plate.

7. Align ball assembly mounting holes (bottom two (2) 1/4-20 screws) over the holes in the equipment panel labeled for the manufacturer's circuit breaker you are installing.

8. Securely fasten all four (4) 1/4-20 screws on the ball assembly.

9. Visually inspect for proper alignment and actuate mechanism for correct operation. If necessary (to prevent over/under toggle travel and allow resetting of tripped breaker) adjust the circuit breaker stops as follows: (See Figure 6)

   • Locate adjustable stop buttons in the appropriate holes for the specific breaker manufacturer to be used as charted below. (See Figure 6)

   • Move breaker handle to the extreme "OFF" (Reset) position and adjust stop button so that it just touches the handle.

   • Manually trip the breaker and check that toggle travel will allow resetting.

   • Move breaker handle to the "ON" position and adjust stop button so that it just touches the handle.

   • Move breaker handle "ON" then "OFF" checking operation.

WIRING CONNECTIONS

1. Establish a wiring pattern for your system.

WARNING

Before installing an EBBR interlocked receptacle, 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 as stated in Paragraph 210-77 of the National Electrical Code.

2. Before pulling any wires into enclosure, reinstall equipment panel (if previously removed). Connect receptacle leads to load side of breaker (if shipped without breaker).
REMOVING AND REINSTALLING COVER

Covers and bodies are matched and inspected as a pair at the factory. If more than one enclosure is being installed, take care not to mix covers and bodies. Replace the cover on the body as shipped from the factory. If necessary, mark covers and bodies before disassembling to keep them properly matched.

Cover removal is not necessary for installation but may be accomplished as follows:
1. Place the enclosure on a flat horizontal surface. Loosen all cover bolts until each bolt is fully retracted into the cover by the stainless-steel spring under the bolt head.
2. Remove the two (2) 5/16-18 bolts that attach each hinge to the cover. Do NOT remove the two (2) 5/16-18 bolts that attach hinge to body. Grasp the cover under opposite edges and carefully lift from body.

GROUNDING AND BONDING

Grounding and bonding of the conduit and equipment is required by the National Electrical Code. Receptacles and attachment plugs must be the type providing for connection to the grounding conductor.

WARNING

EBBR interlocked receptacles, must be securely attached into a permanently grounded system in accordance with Article 501-16, 502-16 of the National Electrical Code.

INSTALLATION OF INTERNAL COMPONENTS

If enclosure only (without circuit breaker) is supplied, the internal operating mechanism (ball assembly) for the circuit breaker must be removed prior to circuit breaker installation. (See Figure 4)

NOTE: Removal of the interior equipment mounting panel is not necessary for circuit breaker installation. The mounting panel may be removed to make installation of the circuit breaker easier. Before removing mounting panel, follow step #1 of Circuit Breaker Installation for removing the linkage between operating mechanisms and the enclosure.

CIRCUIT BREAKER INSTALLATION

Consult instructions from circuit breaker manufacturer before beginning installation.

The mounting plate and operating mechanism will accommodate General Electric, Square D, and Westinghouse circuit breakers.

NOTE: To install circuit breaker, ball assembly must be loosened, but not removed.

1. To loosen ball assembly, unfasten stop nut (see figure 5) from shoulder screw that joins the connecting arms together. Slide the longer connecting arm off the shoulder screw. (Do not remove hex nut that secures the shorter connecting arm to the threaded shaft.)
2. Loosen but do not remove the top two (2) 1/4-20 round head screws, which secure the ball brackets to the mounting plate. (See Figure 5)
3. Unthread the bottom two (2) 1/4-20 round head screws from the equipment mounting panel.

NOTE: The bottom two (2) screws are held captive in the ball brackets. Do not attempt to remove them.

Move the ball assembly towards the receptacle until the bracket slots are clear of the top two (2) screws.

4. Install circuit breaker with line side towards the top of the enclosure by lifting ball assembly and sliding the circuit breaker underneath the ball assembly. LINE/LOAD sides are indicated on the mounting plate template.

To facilitate circuit breaker installation, select the correct manufacturer mounting holes (those that agree with breaker being installed) on equipment panel, and punch template holes, before positioning circuit breaker on equipment panel. Secure breaker to equipment panel with screws provided from circuit breaker manufacturer.

WARNING

Before installing an EBBR interlocked receptacle, 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 as stated in Paragraph 270-77 of the National Electrical Code.

1. Establish a wiring pattern for your system.

2. Before pulling any wires into enclosure, reinstall equipment panel (if previously removed). Connect receptacle leads to load side of breaker (if shipped without breaker).

ADJUSTABLE STOP BUTTONS

Move breaker handle to the extreme "OFF" (Reset) position and adjust stop button so that it just touches the handle.

Manually trip the breaker and check to see that toggle travel will allow resetting.

Move breaker handle to the "ON" position and adjust stop button so that it just touches the handle.

Move breaker handle "ON" then "OFF" checking operation.

WIRING CONNECTIONS

Figure 6
3. Connect grounding conductor to lug provided. Pull all phase conductors into enclosure and make connections as shown in breaker manufacturer’s instructions. All electrical connections should be tightened to torque values specified in manufacturers literature and comply with the National Electrical Code and any local codes.

4. Test wiring for correct phase relationships with continuity checks and also for unwanted grounds with an insulation resistance check.

**CLOSING COVER**

**CAUTION**
Clean both ground joint surfaces of body and cover before closing. Dirt or foreign material must not accumulate on flat ground joint surfaces. Surfaces must seal fully against each other to provide a proper explosionproof joint.

**RETRACTED COVER BOLTS**

[Figure 7]

When cover is closed, push cover bolts into body and start thread engagement. Start all threads by hand before wrenching any bolts tight. Torque to 40-45 ft-lbs. Use ONLY bolts supplied with the enclosure. These are special threaded bolts (marked EBM-1) and substitutes for them will impair the explosionproof safety of the enclosure.

**GROUND JOINT SURFACES**

**MAINTENANCE**

**WARNING**
Always disconnect primary power source before opening enclosure for inspection or service.

1. Frequent inspection should be made. A schedule for maintenance checks should be determined by the environment and frequency of use. It is recommended that it should be at least once a year.

2. Perform visual, electrical and mechanical checks on all components on a regular basis.
   - Visually check for undue heating evidenced by discoloration of wires or other components, damaged or worn parts, or leakage evidenced by water or corrosion in the interior.
   - Electrically check to make sure that all connections are clean and tight and that contacts in the components make or break as required.
   - Mechanically check that all parts are properly assembled, and operating mechanisms move freely.

**CAUTION**
Before closing cover, be certain all bolts are retracted fully into the cover flange and do not project beyond the ground joint surface. This is important to prevent damage to the ground joint surface by the bolts as the cover is being closed. (See Figure 7). When closing cover be sure wiring is not pinched between body and cover flanges.

3. Make sure all cover bolts are fully retracted into cover before closing cover on body. Close cover and start cover bolt threads by hand. Torque all cover bolts securely to 40-45 ft-lbs.

**SEALS**
Pour sealing compound into seating fittings in accordance with the approved fittings and sealing compound.

**ENCLOSURE INSTALLATION**

**WARNING**
Before installing an EBBR interlocked receptacle, 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 as stated in Paragraph 210-7F of the National Electrical Code.

**WARNING**
The electrical power must be OFF before and during installation and maintenance.

1. It is NOT necessary nor recommended to remove the cover during enclosure installation. If it becomes necessary, see Re-moving and Reinstalling Cover on page 2 of this IF.

**APPLICATION**
EBBR interlocked receptacles with circuit breakers are used as a service outlet for portable equipment. The interlocked receptacles with circuit breakers are mechanically interlocked to provide line disconnect means and short circuit protection. The receptacle contacts cannot be made or broken under load. The circuit breaker cannot be closed until the plug is fully inserted and the plug cannot be withdrawn until the breaker is open.

EBBR receptacles are suitable for use in Class I, Groups B, C, D; Class II, Groups F, G, and Class III hazardous (classified) locations as defined by the National Electrical Code.

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

EBBR receptacles are available in 30, 60, and 100 amphere, 3 wire 4 pole (style 2) configurations.

EBBR receptacles should be installed, inspected, and serviced only by qualified, competent personnel.

**TAP HERE TO ATTACH**

**TAP HERE TO REMOVE**

**EBBR**

**EBBR I-AM**

**EBBR II-AM**

**RECPT CTL AMP**

**EABBA**

**EABBD**

**EABBC**

**EABBD**

**IF1224**

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Crouse-Hinds Division

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