

EIB Series Circuit Breakers and Enclosures

Installation & Maintenance Information

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

EIB Series circuit breakers and enclosures are used to provide service entrance, feeder or branch circuit protection for lighting, heating, appliance and motor circuits.

EIB Series circuit breakers and enclosures provide disconnect means, short circuit protection and thermal time delay overload protection.

EIB Series circuit breakers and enclosures are suitable for use in Class I, Groups B, C, D; Class II, Groups E, F, G; Class III; and Zone 1 and 2, Group IIB+H hazardous (classified) locations, as defined by the National Electrical Code® as well as in damp, wet, or corrosive locations. They are suitable for NEMA Type 3, 4, 4X applications.

EIB Series circuit breakers and enclosures should be installed, inspected, maintained and operated by qualified and competent personnel only.



INSTALLATION

⚠ WARNING

To avoid risk of electrical shock, electrical power must be OFF before and during installation and maintenance.

1. Select a mounting location that will provide suitable strength and rigidity for supporting the circuit breaker enclosure, all contained wiring, and devices. Figure 1 shows the mounting dimensions of the EIB Series enclosures.

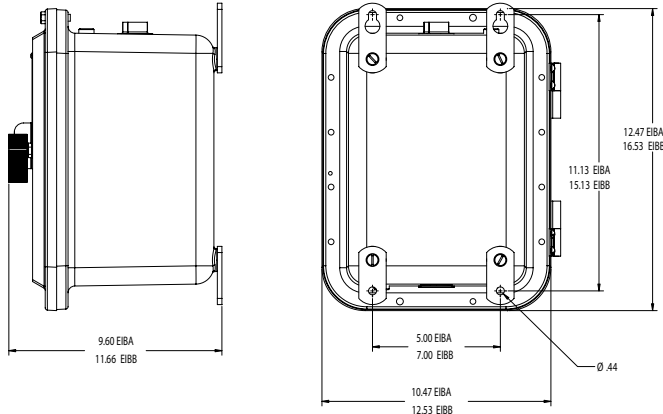


FIGURE 1

2. Remove cover bolts securing cover. Carefully open cover fully to prevent damage to the machined joint and cover gasket. Remove circuit breaker cover (applicable to EIB Enclosure furnished without circuit breaker) and mounting kit from inside enclosure.
3. Install mounting feet.
Use (4) 5/16-18 screws supplied to attach mounting feet to pre-drilled holes on back wall of enclosure
4. Securely fasten enclosure to the mounting location, then attach into conduit system. Install approved conduit or cable sealing fittings in all conduit entries within 18 inches of enclosure.

⚠ CAUTION

To avoid risk of ignition: Hazardous location information indicating class and group listing of each device is marked on the nameplate of each enclosure. Any device penetrating the enclosure must maintain the explosionproof integrity of the enclosure.

⚠ CAUTION

To avoid risk of ignition: Hammers or prying tools must not be allowed to damage the flat machined-joint surfaces or cover gasket. Do not handle covers roughly, or place them on surfaces that might damage or scratch the flat-machined joint surfaces.

5. EIB Enclosure furnished with Circuit Breaker:

A. To remove circuit breaker and mounting plate from enclosure, loosen four (4) 1/4-20 x 1/2" screws that secure the circuit breaker mounting plate to the enclosure. Lift out the mounting plate and circuit breaker.

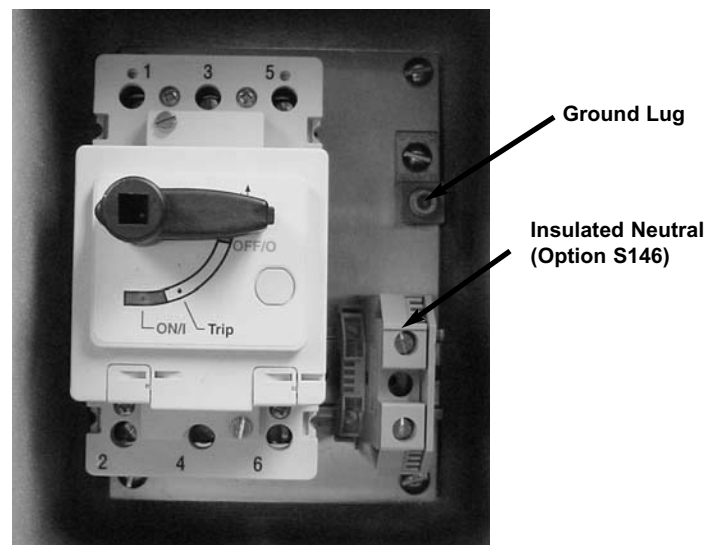


FIGURE 2

C. Carefully pull wires in the enclosure making sure they are long enough to make the required connections. Strip away enough insulation from the end of each wire to make the required connections.

D. Reinstall mounting plate and circuit breaker into the enclosure so that the circuit breaker load terminals are on the bottom. Tighten the four (4) mounting plate screws to provide a good ground connection between the mounting plate and the enclosure. Now go to step #7.

6. For EIB Enclosures furnished without circuit breaker: Select circuit breaker from Table 1 (ordered separately).

A. Remove mounting plate from enclosure by loosening four (4) 1/4-20 x 1/2 screws that secure the mounting plate to the enclosure, and lift out.

B. Carefully pull wires in the enclosure making sure they are long enough to make the required connections. Strip away enough insulation from the end of each wire to make the required connections.

C. Assemble circuit breaker to mounting plate using the proper holes indicated on the mounting plate. Attach the circuit breaker cover (included with the EIB empty enclosure) to the circuit breaker. Mounting hardware is provided in sealed plastic bag.

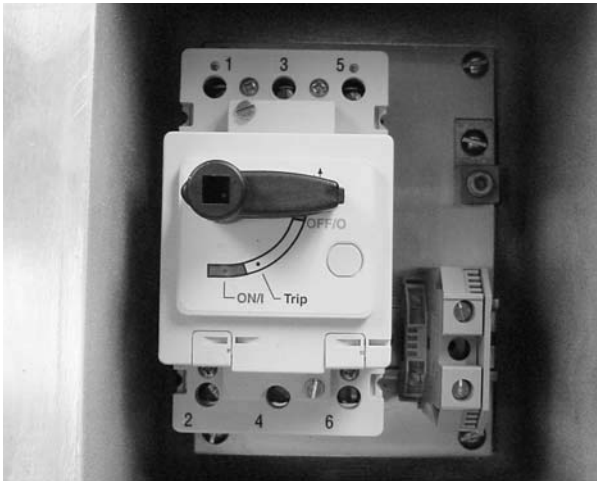


FIGURE 3

D. Reinstall mounting plate and circuit breaker into the enclosure so that the circuit breaker load terminals are on the bottom. Tighten the four (4) mounting plate screws to provide a good ground connection between the mounting plate and the enclosure.

7. Make electrical connections utilizing the wiring scheme established for the circuit breaker. See Table 2. Connect green equipment grounding conductor to the ground lug on the mounting plate.

8. Test wiring for correctness by performing a continuity check and check for unwanted grounds with an insulation resistance tester.

CAUTION

To avoid risk of ignition: Clean both machined-joint surfaces of body and cover before closing. Dirt or foreign material must not accumulate on flat machined-joint surfaces. Surfaces must seat fully against each other to provide a proper explosion-proof joint.

9. Make sure cover and body machined joint surfaces are clean and not scratched. Make sure the operator and fork are in the OFF position. Make sure circuit breaker is in off position. Close cover to approximate position, and line up bolt holes of cover with body. Cover and body bolt holes must match up. Hand-start the corner bolts. Fully tighten all cover bolts in the cover. See Table 1. Check operation of circuit breaker operator.

TABLE 1

Enclosure	Cover Screw	Required Torque (ft.-lbs)
EIBA	5/16-18	20 – 25
EIBB	3/8-16	35 - 40

10. Pour sealing compound into sealing fittings in accordance with the instructions supplied with each of the approved fittings and sealing compound package labels.

CAUTION

Hazardous location information specifying class and group listing of each device is marked on the nameplate of each enclosure. Conduit sealing fittings **MUST** be installed in each attached conduit run (within 18 inches of the enclosure) to comply with the National Electrical Code® plus any other applicable standards, as required. All unused conduit openings must be closed with an approved plug such as Cooper Crouse-Hinds PLG Series. Plug must engage a minimum of five full threads and be a minimum of 1/8 inch thick. **NO CONDUIT OPENINGS ARE TO BE ADDED IN THE FIELD.**

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TABLE 2

MAXIMUM WIRE SIZE	
EIBA	10 AWG
EIBB	3 AWG
RECOMMENDED TORQUE VALUE	
Wire Size (AWG)	Torque (In-Lb)
14-10	35
8	40
6-4	45
3	50

MAINTENANCE

WARNING

Always disconnect primary source of electrical power before opening enclosure.

1. 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.
2. If necessary to open enclosure for inspection or service, always disconnect primary power source and refer to cautionary statement or nameplate before removing cover.
3. 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 and break as required.

Mechanically check that all parts are properly assembled and operating mechanisms move freely.

4. EIB gasketed Classified Enclosures: do not attempt field replacement or repair of cover gasket. Instead, remove damaged gasket and continue to use cover without gasket. This will assure safety for use in Class I and Class II hazardous (classified) locations. However, the enclosure will not be watertight.

CAUTION

To avoid risk of ignition: Clean both machined-joint surfaces of body and cover before closing. Dirt or foreign material must not accumulate on flat machined-joint surfaces. Surfaces must seat fully against each other to provide a proper explosion-proof joint.

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

EIB CIRCUIT BREAKER SELECTION TABLE

EIBA ENCLOSURE

Amperage	Manufacturer	Breaker Catalog #
15	Cutler-Hammer	EGE3015FFG
20	Cutler-Hammer	EGE3020FFG
25	Cutler-Hammer	EGE3025FFG
30	Cutler-Hammer	EGE3030FFG
35	Cutler-Hammer	EGE3035FFG

EIBB ENCLOSURE

Amperage	Manufacturer	Breaker Catalog #
40	Cutler-Hammer	EGE3040FFG
45	Cutler-Hammer	EGE3045FFG
50	Cutler-Hammer	EGE3050FFG
60	Cutler-Hammer	EGE3060FFG
70	Cutler-Hammer	EGE3070FFG
80	Cutler-Hammer	EGE3080FFG
90	Cutler-Hammer	EGE3090FFG
100	Cutler-Hammer	EGE3100FFG

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 Cooper 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.