EID 200A & 400A disconnect

EATON CROUSE-HINDS SERIES

Installation & maintenance information

IF 1697

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

EID disconnect switches are suited for Class I, Divisions 1 & 2, Groups B, C, D; Class II, Division 1, Groups E, F, G; Class II, Division 2, Groups F, G; Class III; and Class I, Zones 1 & 2, Groups IIB+H_2, as defined by the National Electrical Code® as well as in damp, wet or corrosive locations.

Additionally, this series is suitable for NEMA 3, 4, 4X applications.

EID disconnects 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 product installation and maintenance. Failure to comply can result in damage to equipment or injury to personnel.

1. Select a mounting location that will provide suitable strength and rigidity for supporting the EID product. Weights and dimensions are listed below.

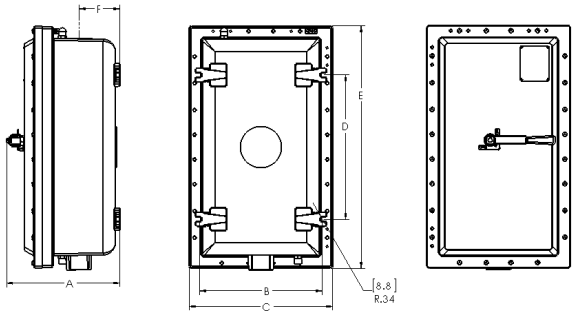

Figure 1

Table 1

Series	A		B		C		D		E		F		WEIGHT	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	Kg
EIDC/ EIDC3200	13.19	335	14.94	380	17.44	443	17.50	445	29.44	748	5.00	127	167	76
EIDCF/EID-CF3200	13.19	335	14.94	380	17.44	443	17.50	445	29.44	748	5.00	127	180	81
EIDD/ EIDD3400	13.49	343	14.94	380	17.19	437	29.50	749	41.22	1047	5.00	127	258	117
EIDDF/ EIDDF3400	13.49	343	14.94	380	17.19	437	29.50	749	41.22	1047	5.00	127	271	123

2. Securely fasten enclosure to the mounting location, and then attach enclosure into conduit system. Install approved conduit or cable sealing fittings in all conduit entries within 18 inches (46cm) of enclosure per the National Electrical Code requirements.

⚠ CAUTION

To avoid the risk of explosion, hazardous location information specifying Class and Group listing of each device is marked on the nameplate of each enclosure. Class and Group list for any device penetrating the enclosure must be suitable for the classification of location in which the enclosure is installed. Conduit sealing fittings MUST be installed in each attached conduit run within 18 inches of the enclosure per the National Electrical Code.

3. For EID enclosures furnished with disconnect switch, please see Step 4. For EID enclosures furnished without disconnect switch, select appropriate disconnect switches from Table 2 below (ordered separately).

Table 2

Series	Amperage	Manufacturer	Mfr.'s part #
EIDC/EIDCF3200	200A	Socomec	27003021
EIDCF/EIDCF3200	200A	Socomec	38613020
EIDD/EIDD3400	400A	Socomec	27003041
EIDDF/EIDDF3400	400A	Socomec	38513038

a. Using hardware provided, securely mount disconnect switch on mounting plate with line terminals on top and load terminals on bottom. Use existing holes in mounting plate; please refer to mounting plate drawing below. Be sure to tighten screws to 3 ft.-lbs. (0.4 Kg.-m).

Mounting plate drawing

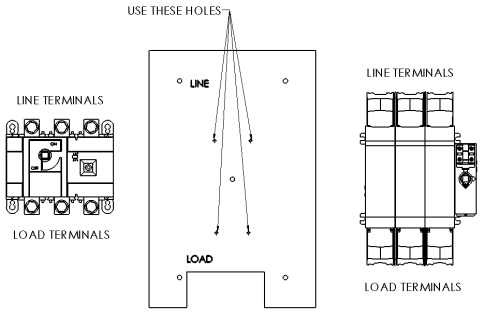

Figure 2

b. Rating for each switch is observed in Table 3.

Table 3 – Fusible and non-fusible switches, 3-pole, 600 VAC max., 250 VDC max.

Mfr. part number	Ampere rating (A)	Fuse type	Maximum HP rating					Short circuit
			220-240 VAC	440-480 VAC	600 VAC	125 VDC	250 VDC	
27003021	200	N/A	75	150	200	15	15	200 kA
27003041	400		125	250	350	20	50	
38613020	200	Class J	60	125	150	15	40	
38513038	400		125	250	350	20	50	

⚠CAUTION

To avoid the risk of explosion or electrical shock, 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.

⚠CAUTION

To avoid the risk of explosion, do not use cover bolts as a means to lift the enclosure. Excessive force on the partially retracted cover bolts may damage the bolt/spring assembly. Use appropriate lifting method for safety.

4. Ensure the operator is in the OFF position and then remove the cover bolts while securing cover. Carefully open the cover fully to prevent damage to the machined joint flame path and cover gasket.
5. Pull wires into enclosure, making sure they are long enough to make the required electrical connections. Install the proper wire clamps or other approved devices to hold the wires securely in place. Install the ground, line and load wires. Tighten the wire binding screws to torque values shown on Table 4.

Note:

a. The internal grounding terminal shall be used as equipment grounding means. The external terminal is only a supplemental bonding connection.

Table 4			Terminal torque value	
Series	**Ampere rating**	**Max. wire size**	**ft.-lb.**	**N-m**
EIDC/EIDC3200	200A	3/0 - 250 kcmil	26	35
EIDCF/EIDCF3200	200A	3/0 - 250 kcmil	26	35
EIDD/EIDD3400	400A	(2) 3/0 - 300 kcmil	33	45
EIDDF/EIDDF3400	400A	(2) 3/0 - 300 kcmil	33	45

c. Maximum wire sizes are recommended based on NEC minimum wire bending space at each terminal per designated enclosure. Select wire gauge per the NEC standard.

d. Table 4 lists maximum wire range suitable for 30°C to 55°C ambient temperature.

i. Use temperature rating of conductor at 90°C for 400A disconnect.
ii. Use copper or aluminum wire rated at 75/90°C.
iii. 400A disconnect utilized dual rated conductors.

6. For fusible disconnects, install Class J fuses. Contact Eaton's Bussmann Division for more fuse information.
7. Test wiring for good connection by performing a continuity check. Also, check for unwanted grounds with an insulation resistance tester.

⚠CAUTION

To avoid the risk of explosion, 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 explosionproof joint.

8. Make sure that operator and fork are in the OFF position.

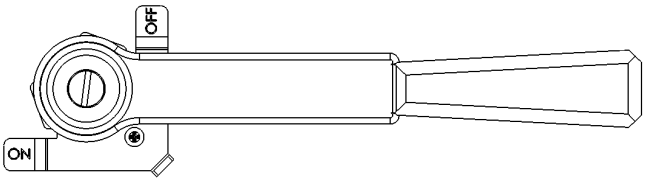

Figure 3

9. Fully tighten all cover bolts. See Table 5.

Table 5		Torque value	
Series	**Cover screw**	**ft.-lb.**	**N-m**
EIDC3200	1/2"-13	40-45	54-61
EIDCF3200	1/2"-13	40-45	54-61
EIDD3400	1/2"-13	40-45	54-61
EIDDF3400	1/2"-13	40-45	54-61

⚠CAUTION

To avoid the risk of explosion, all unused conduit openings must be closed properly with an approved plug, drain or breather such as the Crouse-Hinds series PLG plugs or ECD breather/drains. NO CONDUIT OPENINGS ARE PERMISSIBLE TO BE ADDED IN THE FIELD.

MAINTENANCE:

⚠WARNING

To avoid electrical shock and personal injury; always disconnect primary power source before opening enclosure for inspection or service and lock them out.

1. Electrical and mechanical inspections must be done on a regular basis. It is recommended that inspections 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 opening cover. Area must be free of flammable gases and vapor before opening cover.
3. Perform visual check for undue heating evidenced by discoloration of wires or other components, damage or worn parts, or leakage evidenced by water or corrosion in the interior.
4. Electrically check to make sure that all connections are clean and tight and that contacts in the components make and break as required.
5. Mechanically check that all parts are properly assembled and operating mechanisms move freely.

Eaton's Crouse-Hinds Business recommends an Electrical Preventative Maintenance Program as described in the National Fire Protection Association Bulletin NFPA 70B.

⚠CAUTION

To properly lock out device, put operating handle on OFF position. Press the silver lockout plate tab on the handle inward (note spring resistance). Place an OSHA approved lock or hasp through any of the three (3) holes of the handle and secure the device.

When it is safe to do so, verify that the handle cannot be moved to the ON position.

EATON CROUSE-HINDS SERIES

Eaton's Crouse-Hinds Division
1201 Wolf Street Syracuse, New York 13208 • U.S.A.

IF 1697
Revision 2
Revised 03/17
Supersedes 07/14