EIH/EIHT Instrument Enclosure
Installation & Maintenance Information

APPLICATION
EIH and EIHT Instrument Enclosures are designed to house instrumentation and control equipment as well as act as a conduit outlet body in hazardous, abusive, and wet locations.

The EIH and EIHT enclosure is approved by Underwriters Laboratories Inc., Canadian Standards Association and Factory Mutual, for use in Class I, Group B, C, D, Class II, Groups E, F, G, and Class III hazardous (classified) locations as defined by the National Electrical Code and Canadian Electrical Code. It is also NEMA/UL/CSA Type 4X and IP66 rated for watertight applications.

*With conduit seals installed within 18 inches (46 cm) of enclosure. For ATEX, a seal is required at the enclosure wall.

DIMENSIONS

1. Prepare a template or mark the position of the device mounting holes on the mounting pads in the bottom of the enclosure.

2. Holes can be drilled and tapped in the mounting pads.

WARNING

If a heat producing instrument or device is mounted in the enclosure, do not install in any classified location where the operating temperature of the enclosure exceeds the ignition temperature of the hazard present.

INSTALLATION

1. EIH Instrument Enclosures are furnished with 3/4” NPT offset throughfeed cast hubs for conduit entries. EIHT Instrument Enclosures are supplied with 3/4” NPT offset throughfeed cast hubs on the power side and one (1) 3/4” NPT hub on the instrument side for conduit entries. (Use Cooper Crouse-Hinds RE21-SA to reduce to 1/2” hubs).

2. Secure the enclosure to the conduit system. If the enclosure has mounting feet, select a mounting location that will provide sufficient strength and rigidity to support the enclosure as well as the enclosed device and wiring.

3. Install Cooper Crouse-Hinds EYS Sealing Fittings required by Section 501-5 and/or 502-5 of the National Electrical Code and Section 18 of the Canadian Electrical Code as well as any other applicable local codes and when enclosure is installed in Class I, Group B hazardous locations. (For CSA Group C applications, unsealed conduit lengths must not exceed 5 ft. or 152 cm).

4. Unthread instrument (and power side) covers and carefully set aside to prevent damage to the cover threads and glass lens (when glass lens cover is used).

5. Pull wires into enclosure, making certain they are long enough to make the required connections and to remove the instrument or power supply if servicing is required. Install instrument and a power supply, if applicable, and make all electrical connections. (If installing an EIHT and connections need to be made between the top halves of the EIHT enclosure, see DRILLING BETWEEN ENCLOSURE WALL section of instruction sheet).

NOTE: When installing device, be sure to check instrument dimensions to avoid interference with clamping ring on glass lens units and the cover on standard units.

6. Test wiring for correctness by checking continuity and also check for unwanted grounds with insulation resistance tester. Make sure test equipment being used will not damage instrument to be housed in the EIH or EIHT instrument enclosure.

7. Carefully rethread cover to enclosure housing. Tighten cover until cover flange contacts body face.

DRILL & TAP INTERNAL MOUNTING PADS (EIH only)

1. Prepare a template or mark the position of the device mounting holes on the mounting pads in the bottom of the enclosure. See Figure 1.

2. Holes can be drilled and tapped in the mounting pads. See Figure 2.

Figure 1. Internal Mounting Pad Dimensions
Figure 2. Mounting Pad and Back Wall Dimensions
DRILL & TAPPING FOR CONDUIT ENTRIES (EIH Only)
The external pad has a wall thickness suitable for drilling and tapping an additional 3/4” or 1/2” conduit entry.

NOTE: The conduit entrance must lie within the shaded area outlined in Figure 3.

WARNING: The size of the pad only allows for either one (1) 3/4” or one (1) 1/2” NPT conduit entry. DO NOT attempt to drill and tap two conduit entries or an entry larger than 3/4”.

Figure 3. Dimensions Suitable For Drilling and Tapping of External Pad

Figure 4. Internal Usable Space

*For EIH21 and 23, determine usable volume based on diameter and height of the instrument to be enclosed. At least 20% of the cross-sectional area shall remain free to permit an unimpeded gas flow.

TABLE 1

<table>
<thead>
<tr>
<th>Trade Size of Conduit (Inch)</th>
<th>Number of Threads Per Inch</th>
<th>Maximum Number of Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>3/4</td>
<td>14</td>
<td>7</td>
</tr>
</tbody>
</table>

DRILL & TAPPING FOR CONDUIT ENTRIES (EIH Only) Continued

Female conduit entries must be taper tapped with the thread form and taper (3/4 in. per ft.) conforming to NPT. A standard NPT male gage must enter the tapped opening 1-1/2 turns past the gage notch. The opening is tapped deeper than standard NPT gage to ensure a minimum of five (5) full threads engagement with standard NPT threaded conduit (refer to current NEMA FB-1).

For ATEX, NPT threads may not have a deeper tapping than flush to +2 turns large. For ATEX, with a flanged joint glass gap of .04mm and width of 15mm, the threaded cover must have 9.6 engaged threads.

Opening may be tapped to accept listed reducers that provide an integral conduit stop or openings may be tapped and counterbored 1/16 to 1/8 inch larger than conduit O.D. to a depth that will still provide a tapped surface of sufficient length for the number of threads within the limits shown in Table 1. This will allow assembly of a conduit bushing to the end of the conduit protruding through the wall.

DRILLING BETWEEN ENCLOSURE WALL (EIHT Only)

Up to six (6) 1/4” holes can be drilled between the wall of the two sides of the EIHT enclosure for pass throughs. The minimum spacing between holes must be 0.187 inches.

1. Remove both threaded covers before attempting to drill holes through the EIHT wall.
2. See Figure 5 for defined area for pass throughs.

MAINTENANCE

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 the device is operating properly.

WARNING

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

CAUTION

Sealing fittings must be installed with access allowing the dams to be made and the sealing compound to be properly poured.

Figure 5

WARNING

The size of the pad only allows for either one (1) 3/4” or one (1) 1/2” NPT conduit entry. DO NOT attempt to drill and tap two conduit entries or an entry larger than 3/4”.

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Sealing fittings must be installed with access allowing the dams to be made and the sealing compound to be properly poured.

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.