

EGL Grounding Indicator with Automatic Pump Control and Ground Verification System

Installation & Maintenance Information

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

EGL Grounding Indicators are connected to tank vehicles, drums, or other containers before beginning transfer of combustible materials. While connected, the EGL grounds static electricity and continuously verifies the presence of a static grounding system. The EGL can be installed to actuate remote devices (lights, horns) to announce that a safe static ground has been established, or to send an alarm when the ground is interrupted. An EGL Grounding Indicator can be used in the control circuit of a pump to prevent it from being started until the static grounding circuit is completed, and to shut down the pump automatically if the static grounding circuit is disconnected.

EGL Grounding Indicators are suitable for use in Class I, Groups B, C, D; Class II, Groups F, G and Class III hazardous (classified) areas as defined by the National Electrical Code (NEC).

EGL Grounding Indicators should be installed, inspected, and serviced by qualified and competent personnel.

Read all instructions before starting installation of this product.

Contact your Crouse-Hinds sales representative, Customer Service, or your Crouse-Hinds distributor if you have any questions.

INSTALLATION

⚠ WARNING

To provide protection against fire or shock hazard, the electrical power must be OFF before and during installation and maintenance.

⚠ CAUTION

To ensure proper operation of the EGL210, two separate ground leads from the electrical supply panel must be provided: one to terminal #3 and the other to the green ground lug on the enclosure interior. This provides a continuity check to verify the EGL210 is grounded.

1. Select a mounting location that will provide suitable strength and rigidity for supporting the enclosure, all contained wiring and control devices. Figure 1 shows mounting dimensions.

⚠ CAUTION

- Hazardous location information specifying Class and Group listing is marked on the enclosure nameplate.
- **Conduit sealing fittings must be installed** in accordance with Section 501-5 of the National Electrical Code. An appropriate seal shall be installed within 18" of the enclosure for Groups B.
- All unused conduit openings must be plugged. Plug must engage a minimum of five full threads and be a minimum of 1/8 inch thick.

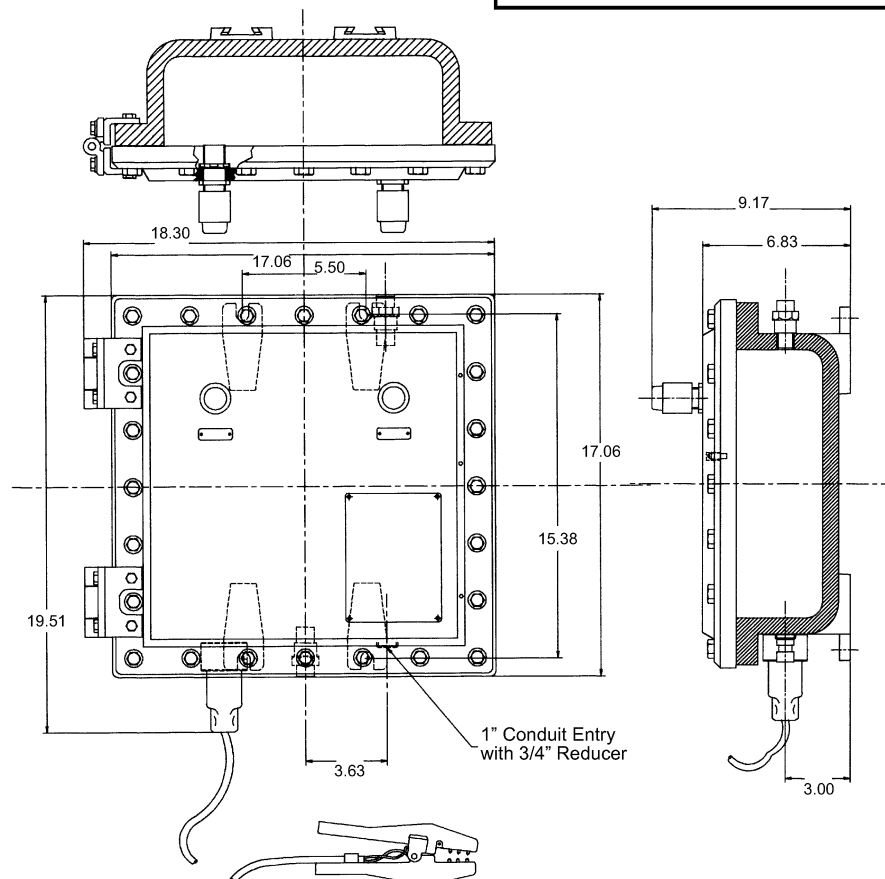


FIGURE 1 - DIMENSIONS

- Securely fasten enclosure to the mounting location, then attach into conduit system.
- If remote indicating systems are used, be sure they comply with NEC requirements, ensure grounding continuity, and are within electrical ratings listed on the Field Wiring Diagram.

CAUTION

Do not use cover bolts as a means to lift the enclosure. Excessive force on the fully retracted cover bolts may damage the bolt/spring assembly.

- Loosen all cover bolts until each bolt is fully retracted into the cover by the stainless steel spring under the bolt head.

CAUTION

Hammers or prying tools must not be allowed to damage the flat ground-joint surfaces or cover gasket.

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 seat fully against each other to provide a proper explosionproof seal.

- Open cover for access to terminal block. Attach field wiring to terminal block and to **additional** green ground lug, following the wiring pattern established for your system and the Field Wiring information contained in this instruction sheet.
- Check wiring for correctness with continuity tester and for unwanted grounds with insulation resistance tester.
- Close cover and tighten all cover bolts, torque to 40-45 ft. lbs.

CAUTION

- Before assembling any mating threads make certain that there is no dirt or other foreign material on, or in, either set of threads.
- Conduit(s), and any plug(s) threads **must** be engaged properly with their mating threads and **securely** tightened.
- All threaded joints in the enclosure have been treated at the factory with Crouse-Hinds STL screw thread lubricant which acts as a lubricant and anti-seize agent. Whenever any threaded joint(s) are disassembled, the threads should be re-treated with STL and care **must** be exercised in mating threads **properly**, and **securely** tightening the threaded joints.

BREATHER AND DRAIN

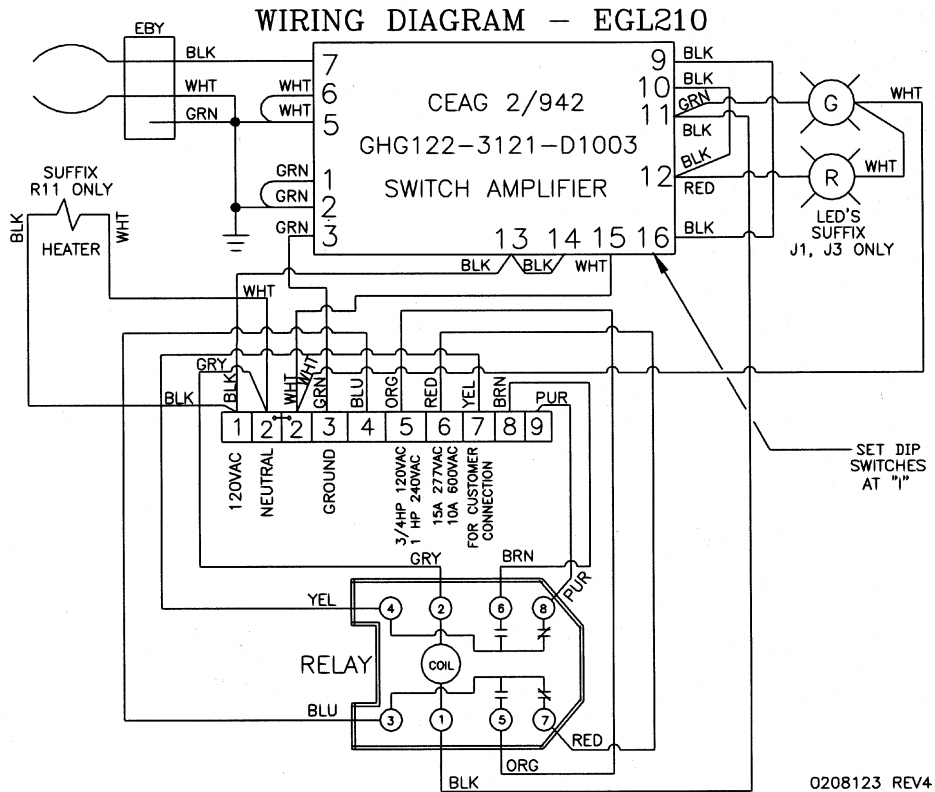
Junction boxes installed with breather and/or drains must be protected during hosedown operations. The junction box is watertight but the breather and drain are not.

CAUTION

Check breather and/or drain or their carton label to be certain that they are suitable for the hazardous location (class and group) in which they are being installed.

NOTES:

- For standard 120V supply voltage, connect leads directly to terminals: "1" for power, "2" for neutral, "3" for ground. The additional ground wire must be attached to the green wire lug, which is factory installed in the enclosure. For 240 or 480 volt control voltages (suffixes - FT502 and FT504 respectively) connect leads directly to the transformer as marked.



**EGL210 GROUND INDICATOR FIELD WIRING
FIGURE 2 - WIRING DIAGRAM**

2. Terminals 4, 5, 6, 7, 8, and 9 on the terminal block are connected to the control relay's contacts and are to be used for connections to remote indicators or control circuits. The electrical ratings for the relays contacts are given on the field wiring diagram. Terminals 4 & 5 and 7 & 8 are normally open. Terminals 4 & 6 and 7 & 9 are normally closed.
3. When the grounding clamp is connected to a dispensing or receiving vessel and the ground circuit is completed, auxiliary contacts between terminal block positions 4 & 6 and 7 & 9 will be OPEN. Contacts between terminal block positions 4 & 5 and 7 & 8 will be CLOSED. Remote signals connected between terminal block positions 4 & 5 and 7 & 8 will indicate completion of the grounding circuit. Signals connected between terminal block 4 & 6 and 7 & 9 will indicate interruption of the grounding circuit.

⚠ WARNING

The ground connector clamp must be attached to a metal surface which is clean and free of rust, dirt, paint or other insulating films or finishes. **THE CLAMP MUST BE ATTACHED TO THE TANKER OR OTHER DEVICE WHICH IS DISPENSING OR RECEIVING THE COMBUSTIBLE MATERIAL. DO NOT PLACE ANY OTHER METAL BETWEEN THE CLAMP'S JAW SINCE THIS WOULD DEFEAT THE GROUND VERIFICATION SYSTEM.** Failure to follow these instructions could result in an EXPLOSION !

⚠ WARNING

EGL housing must be grounded. This unit is designed so that it will not operate if second ground lead is broken or omitted. **DO NOT USE OTHER MEANS TO DEFEAT NEED TO RUN AN ADDITIONAL GROUND LEAD.** The two ground leads should be connected back at the electrical supply panel. If one of the ground leads is damaged, broken or defective, turn OFF power and replace immediately.

MAINTENANCE

⚠ WARNING

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

1. Frequent inspection should be made. The total grounding indicator installation should be visually checked for physical damage prior to each usage. A schedule for maintenance checks should be governed by the environment and frequency of use. It is recommended that it should be performed at least once a year.

⚠ WARNING

If any part of the grounding indicator or total installation appears to be broken or damaged, **DISCONTINUE USE IMMEDIATELY.** Replace, or properly repair, the item before continuing use.

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.
 - Mechanically check that all parts are properly assembled.
 - Visually inspect ground path and connections for signs of deterioration which could affect grounding continuity.

INSTALLATION OF EGLK1 REPLACEMENT CLAMP ASSEMBLY

1. Remove the old clamp assembly if applicable.
2. Individually terminate each wire on to a ring terminal.
3. Attach the ring terminal to the jaw assembly using the screw provided. Repeat for the second ring terminal on the opposing jaw assembly. Ensure that each ring terminal is not touching the cast handle. A connection to the cast handle will create an electrical short and give a false reading on the grounding indicator.
4. Place the jacketed cable in the strain relief on the interior of the cast handle assembly. Secure the cable by bending the strain relief around the jacket.

REPLACEMENT PARTS

- Clamp - catalog number EGL K1
- Pilot Light catalog numbers:
 - EMP009 JI-LED (Red)
 - EMP009 J3-LED (Green)
- Switch amplifier catalog number: GHG122-3121-D-1003.
- Power Relay - catalog number EGL K4 (For Model M4)
- Interior replacement kit-catalog number EGL210-R1-M4
- Ground clamp assembly includes 25' cord, connector and clamp-catalog number 20109B

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