GAI-TRONICS®
A HUBBELL COMPANY

Intrinsically-Safe Microphone Barrier Kit

Model 10438-002

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General Information

The Model 10438-002 Intrinsically-Safe Microphone Barrier Kit is designed for use with a remote gooseneck microphone in a Class I, Division 1, Group D, hazardous area. The kit provides an intrinsically safe barrier. This allows the use of the microphone at a location other than the station that it is connected to. The enclosure is approved for Class I, Div. 1, Group D areas and must be used in applications where the microphone is mounted remotely from a station. Examples include the GAI-Tronics Model 400-001 and 400-002NS Rigcom Stations.

The Model 10438-002 Intrinsically-Safe Microphone Barrier Kit includes the following components:

Qty	Description
1	Gooseneck Microphone Assembly with Mounting Flange
1	Class I, Div.1, Group D Enclosure with I.S. Barrier PCBA

Installation

This enclosure must be installed by trained, qualified and competent personnel. Installation must comply with state and national regulations, as well as safety practices for this type of equipment.

The Model 10438-002 must be installed in accordance with GAI-Tronics Pub. 42004-381, Control Drawing # 73214.

⚠️**CAUTION**⚠️ —Do not install this equipment in hazardous areas other than those indicated on the approval listing in the Approvals section of this manual. Such installation may cause a safety hazard and consequent injury or property damage.

⚠️**WARNING**⚠️ —To reduce the risk of fire or electrical shock, do not expose this apparatus to rain or moisture.

Mounting

NOTE: The mounting location must be flat and provide proper clearance, rigidity, and strength to support the enclosure and all contained devices (see the Specifications section for the unit's weight and dimensions).

Securely fasten the enclosure with (customer supplied) 1/2-inch diameter steel mounting bolts and washers, or washer head bolts (see Figure 1 for mounting dimensions).

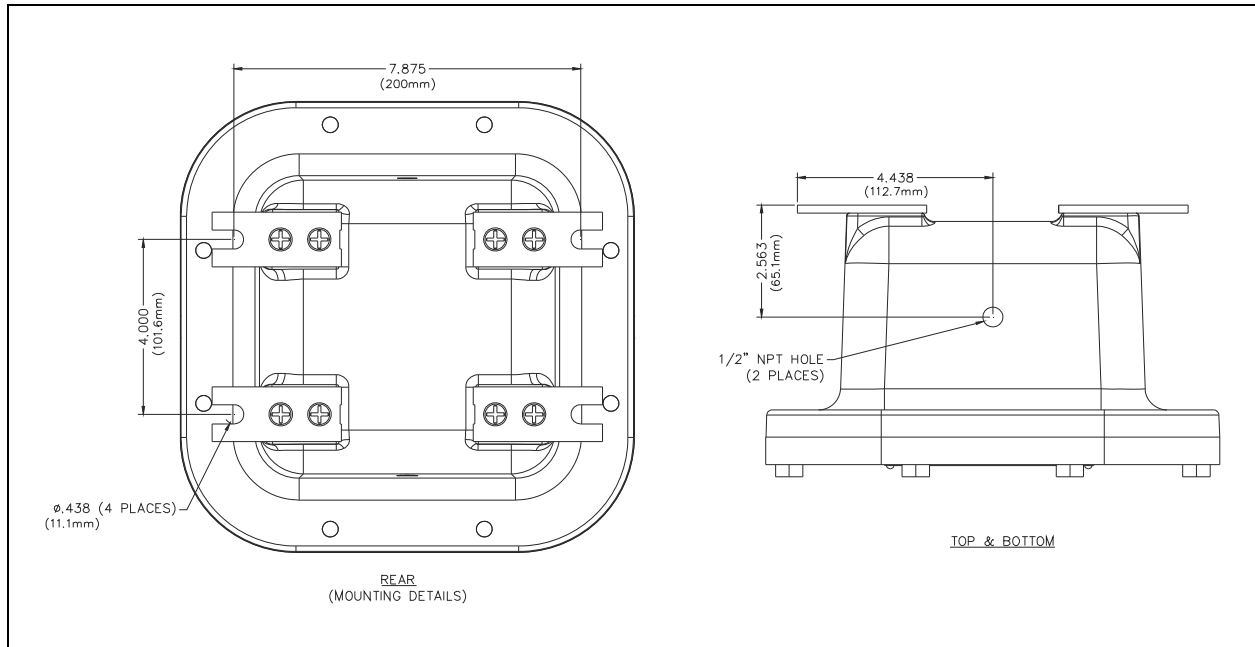**NOTE:** Stainless steel hardware is recommended in corrosive environments.

Figure 1. Model 10438-002 Microphone I.S. Barrier Kit Mounting Details and Conduit Entries

⚠**WARNING**⚠ —**Insure proper grounding to protective earthing.
Do not disconnect equipment while energized.**

1. Inspect and clean the machined flange flame joint surfaces of both the cover and box.

    Surfaces must be smooth, free of nicks, scratches, dirt, or any foreign particle build-up that may prevent a proper seal. Surfaces must seat fully against each other to provide a proper explosion-proof joint.

2. Clean the machined flange surfaces by wiping with a clean lint-free cloth.

    Do **NOT** omit any cover bolts. Use only the bolts supplied with the enclosure.

NOTE: The recommended torque setting for tightening the cover bolts is 30 ft·lb (40.7 N·m)

Enclosure Configuration

The Model 10438-002 I.S. barrier enclosure contains a single PCBA. Make all customer connections to this PCBA. The barrier bracket covers the intrinsically-safe terminals:

1. Remove the bracket before connecting the I.S. wires to the PCBA.

2. Properly lug all connections.

3. Reattach the bracket after wiring.

   The bracket must be tight against the bottom of the enclosure.

The enclosure has eight cover mounting bolts around the perimeter. The cover of the enclosure contains all applicable approval labeling.
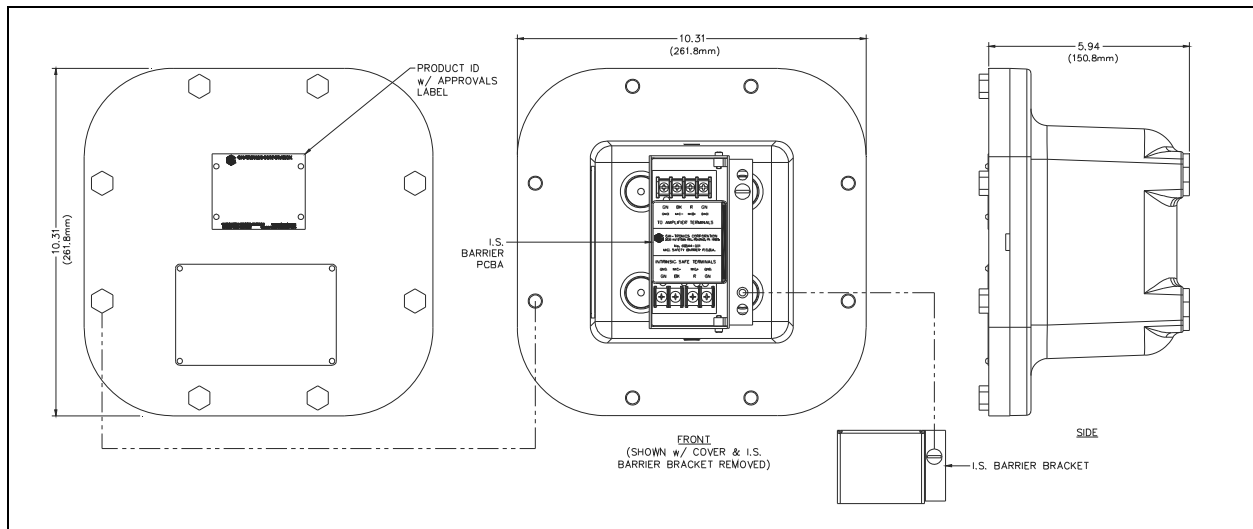
Figure 2. Model 10438-002 Microphone I.S. Barrier Kit Mounting Details and Conduit Entries

Gooseneck Microphone

The microphone is mounted to a 19-inch gooseneck with a mounting flange and is equipped with a 5.5-foot cord.

Figure 3. Model 12801-002 Microphone Assembly

Mounting the Gooseneck Microphone Assembly

1. Mount the gooseneck microphone assembly using the supplied mounting flange.

    A device box can be used to mount the microphone assembly.

2. Mount the gooseneck in accordance with all applicable electrical codes (see Figure 4 for a typical installation).

Figure 4. Typical Installation

Specifications

Enclosure

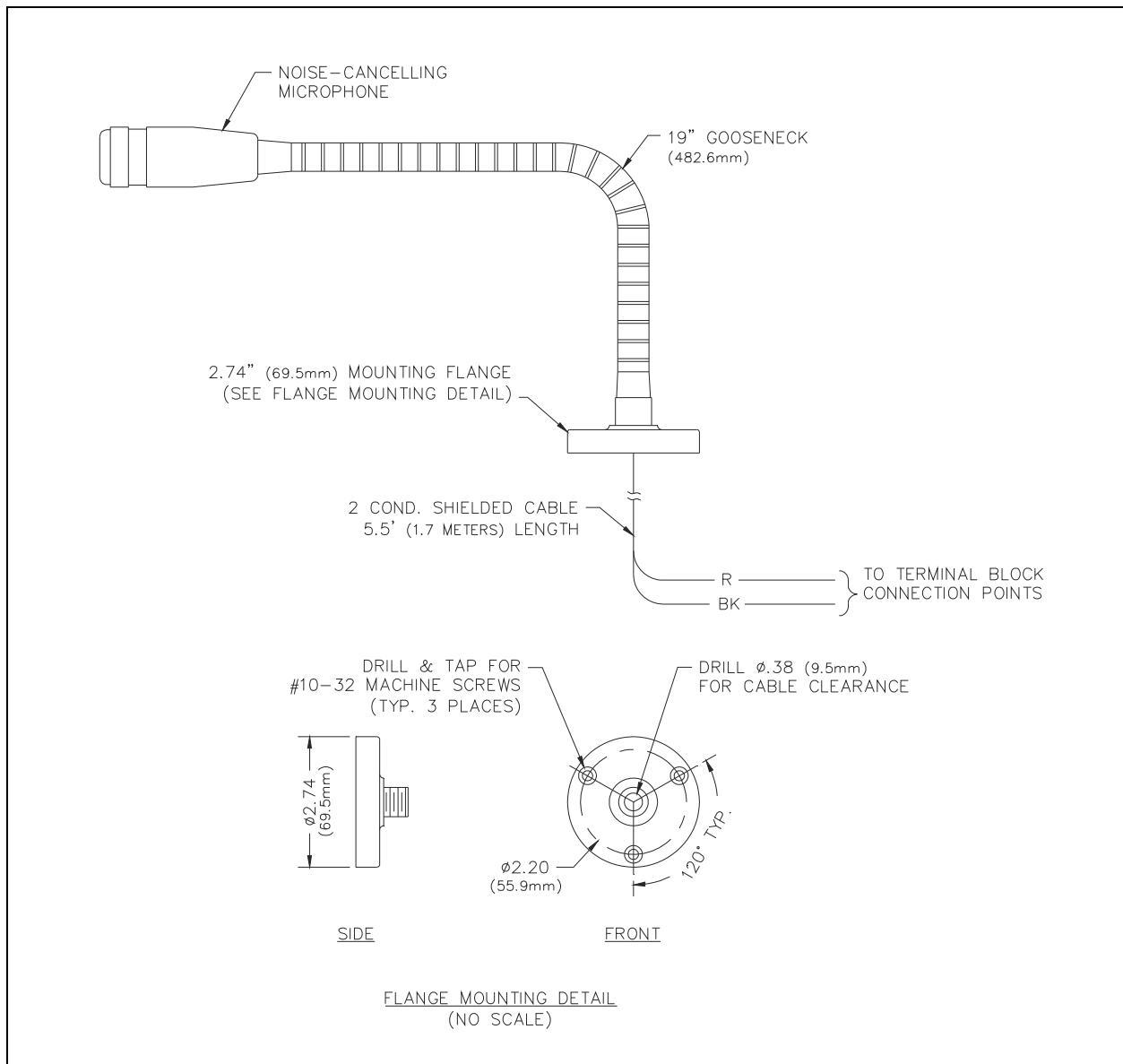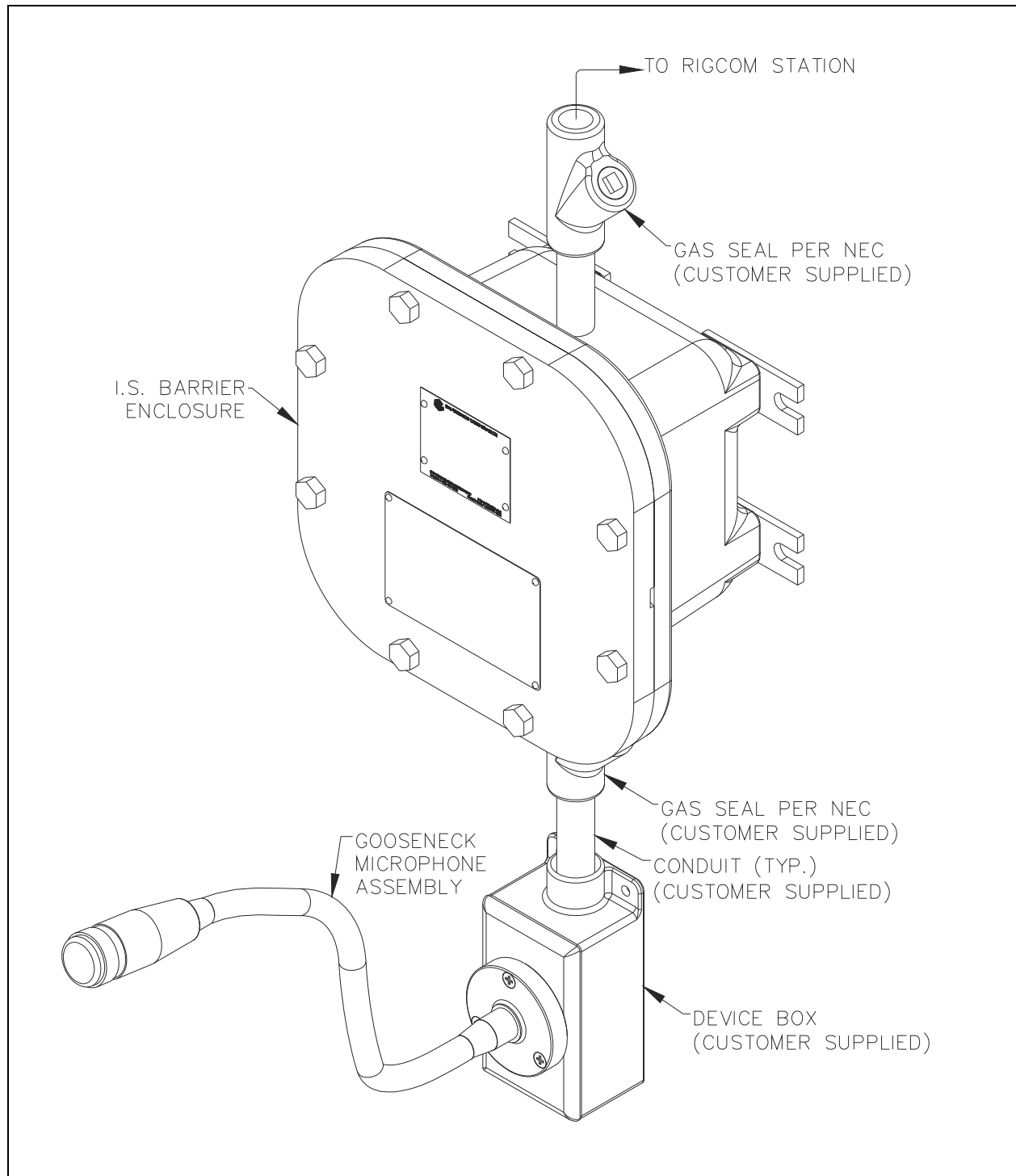Construction/finish.. cast aluminum/gray enamel

Mounting...wall or column, four 7/16-inch mounting feet with slots

Conduit entries ....top: one 1/2 in NPT

bottom: one 1/2 in NPT

Dimensions .... 10.31 H × 10.31 W × 5.94 D in (261.8 × 261.8 × 150.8 mm)

Shipping weight .... 18 lb (8.2 kg)

Temperature range (operating and storage) ....−4 ℉ to +140 ℉ (−20 ℃ to +60 ℃)

Microphone

Element:

       Type .... noise-canceling, dynamic

       Impedance .... 500 Ω, nominal

Construction/finish.. die cast zinc/chrome

Connections...stripped wires

Dimensions .... 19 in (482.6 mm) gooseneck

Supplied cable length ....5.5 ft

Shipping weight .... 0.75 lb (0.34 kg)

Approvals

NRTL listed (USA)..Hazardous locations Class I, Div. 1, Group D
when installed in accordance with GAI-Tronics Pub. 42004-381, Control Drawing # 73214