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GAI-TRONICS®
A HUBBELL COMPANY

Intrinsically-Safe Microphone Barrier Kit

Model 10438-101

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General Information

The Model 10438-101 Intrinsically-Safe Microphone Barrier Kit is designed for exclusive connection to a GAI-Tronics Model 400-003 or 400-004 Rigcom Zone 1 Station to utilize a remote gooseneck microphone in a hazardous area. This kit provides an intrinsically safe barrier. This allows using the microphone at a location other than the station to which it is connected. The enclosure must be used in applications where the microphone is mounted remotely from the station.

The Model 10438-101 Microphone Intrinsically-Safe Barrier Kit includes the following components:

Qty	Description
1	No. 12801-002 Gooseneck Microphone Assembly with Mounting Flange
1	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.

⚠ **CAUTION** ⚠ —Where multiple circuits extend from the same piece of associated apparatus, they must be installed in separate cables or in one cable having suitable insulation in accordance with the requirements of BS EN 60079-25 / IEC 60079-25.

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

Mounting

Mount the enclosure using the four 0.28-inch (7-mm) diameter holes located on the mounting flanges with 5/16-inch (M6) hardware. One M20 thru hole is provided for conduit entry on the left and right sides of the enclosure.

The suggested mounting height for the enclosure is 48 inches (1219 mm) to the center of the bottom mounting holes of the enclosure (see Figure 1 for mounting dimensions).

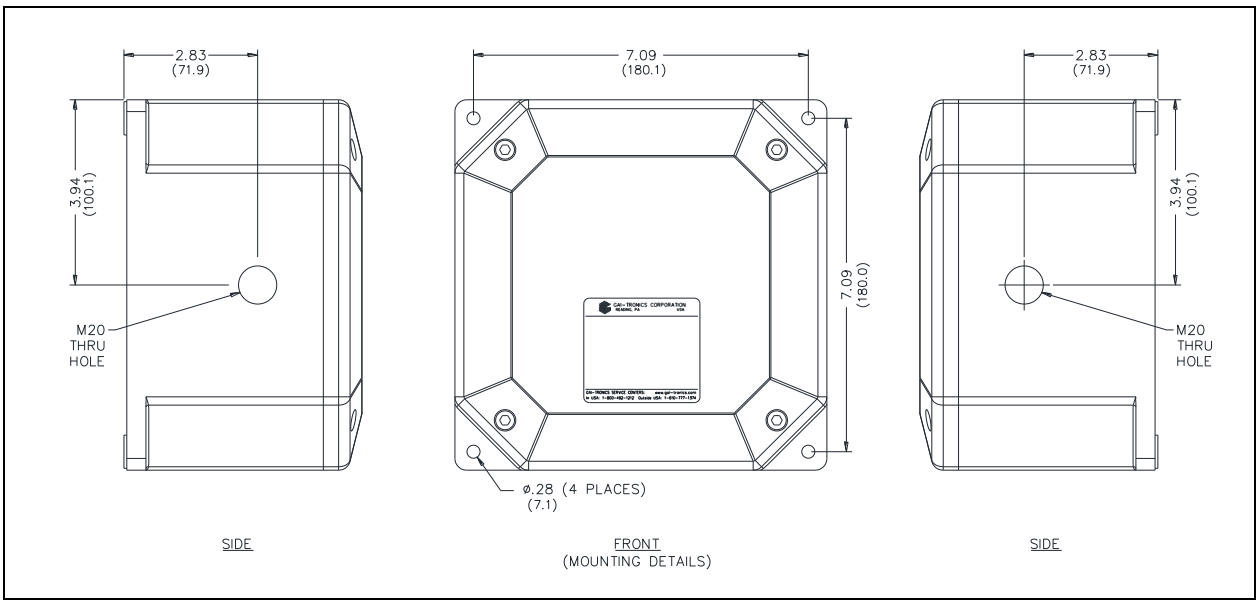

Figure 1. Model 10438-101 Microphone I.S. Barrier Kit Mounting Details

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

After all wiring and cable connections are complete:

1. Place the front cover on the rear enclosure.

   Be careful not to pinch any cables.

2. Secure the front cover using the four screws and washers provided.
3. Torque the screws to 50 in·lb (5.65 N·m).

Enclosure Configuration

The Model 10438-101 I.S. barrier enclosure contains a single No 69544-001 PCBA. Make all customer connections to this PCBA:

1. Properly lug all connections.
2. Use one conductor (0.50–1.5 mm^2) per screw terminal.
3. Torque wire binding screws to 1.35 N·m.
4. Torque wire clamps to 2.36 N·m.

   The front cover of the enclosure contains all applicable approval labeling.

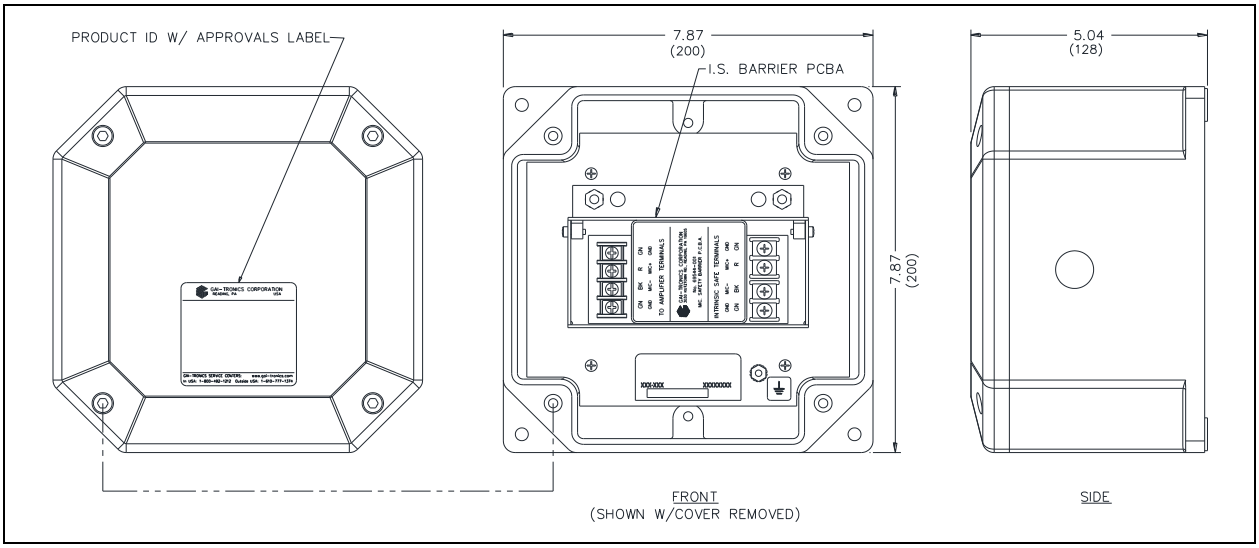

Figure 2. Model 10438-101 Microphone I.S. Barrier Outline Drawing

Gooseneck Microphone

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

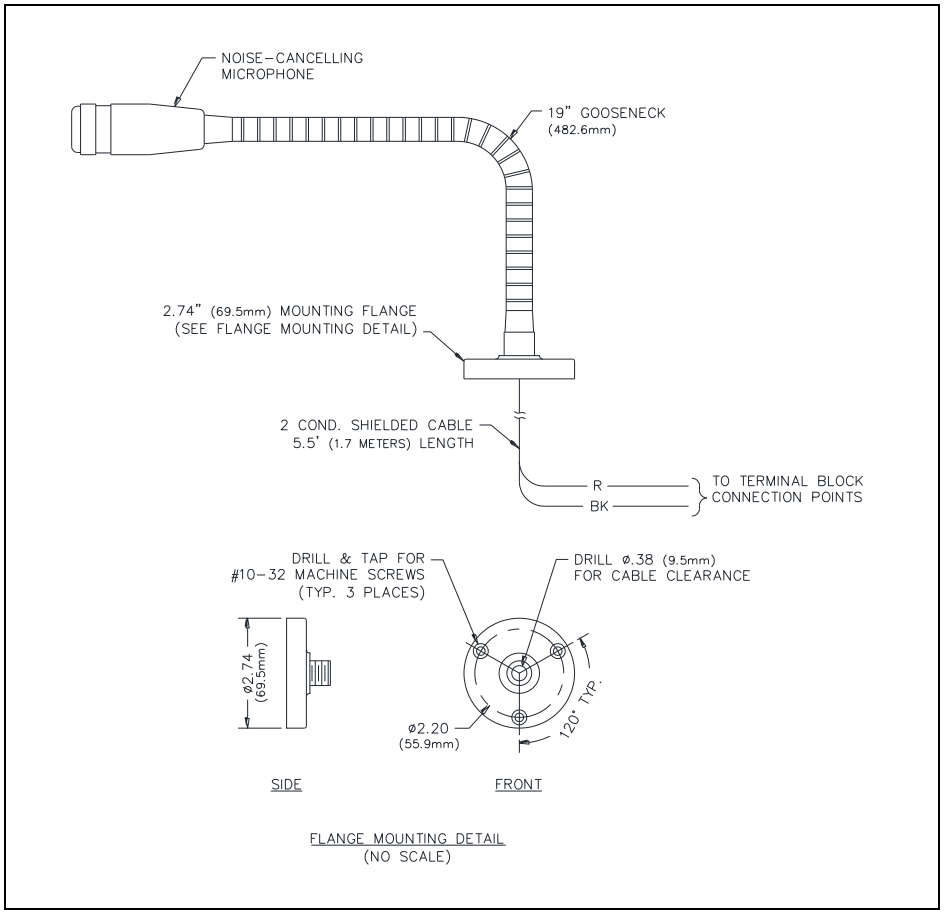

Figure 3. Model 12801-002 Microphone Assembly

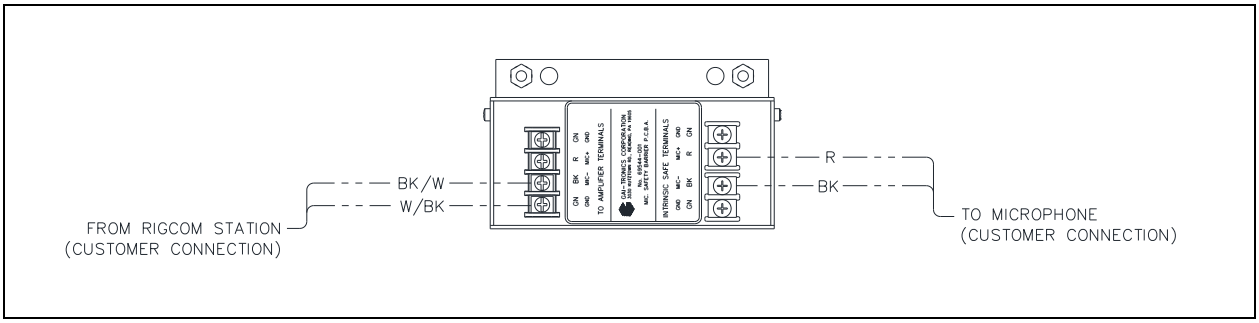

Figure 4. IS Barrier Kit Wiring

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 applicable electrical codes.

NOTE: The path between the Model 400-003 or 400-004 Zone 1 RigCom Station and the Model 10438-101 IS Barrier Enclosure must have type "d" flameproof cable gland. The path between the IS barrier enclosure and the microphone must have a type "e" increased safety cable gland (see Figure 5 for a typical installation).

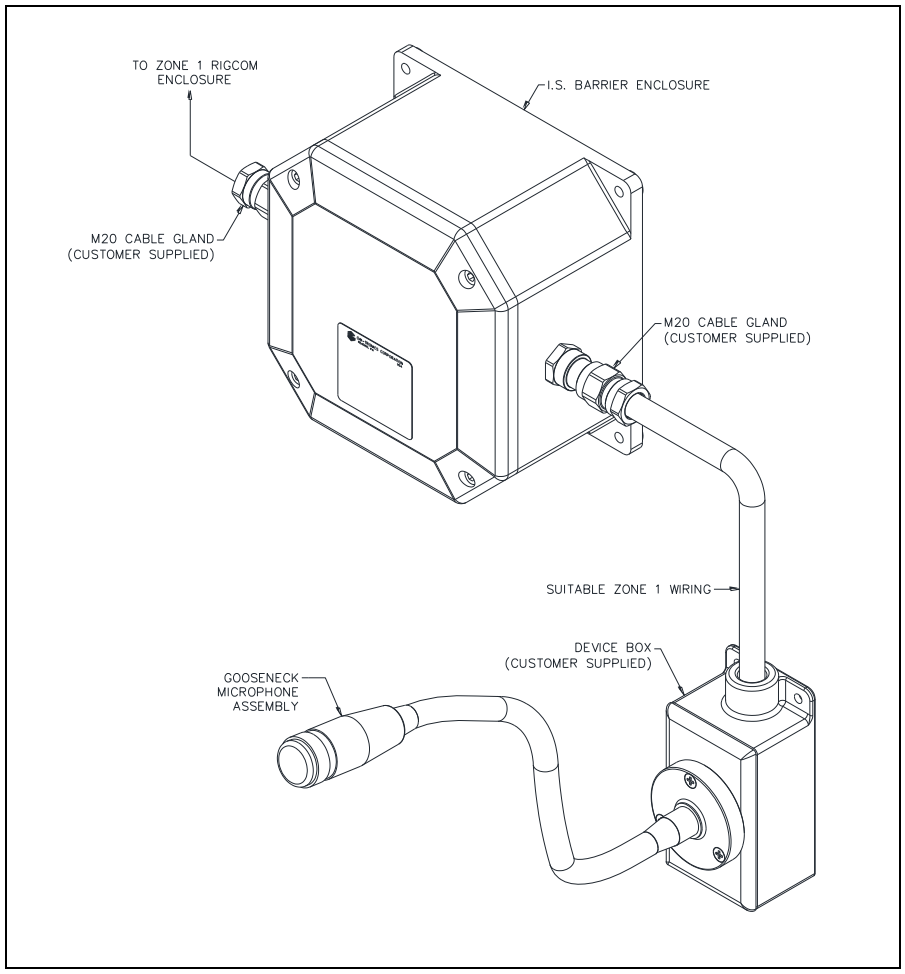

Figure 5. Typical Installation

Specifications

Enclosure

Construction/finish.....black, carbon loaded glass-reinforced polyester
Mounting..... wall or column, four 0.28-inch (7-mm) mounting holes
Conduit entries..... one M20 thru hole on two opposite sides
Dimensions ..... 7.87 H × 7.87 W × 5.04 D in (200 H × 200 W × 128 D mm)
Shipping weight ..... 6.5 lb (2.9 kg)
Temperature range (operating and storage) .....−4 ºF to +140 ºF (−20 ºC to +60 ºC)

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

CE Mark

Certificate No.
Notified Body ID No. 0539
UL International DEMKO A/S
Lyskear 8
DL-2730 Herlev
Denmark

DEMKO 12 ATEX 1116051 ..... II 2 G Ex e [ia] IIB + H_2 T6 Gb
IECEx UL 12.0012 .....Ex e [ia] IIB + H_2 T6 Gb