DET-TRONICS

INSTRUCTIONS

Flange Mount Assembly for X3301 and X3302 Flame Detectors Model Q1130A1001

DESCRIPTION

The Q1130 Flange Mount Assembly is designed specifically for Det-Tronics X3301 and X3302 Flame Detectors, and allows the detector to be mounted directly to a wall or panel in order to monitor an enclosed process or geodome tank.

FEATURES

- Complete cone of vision of the detector is maintained
- **oi** testing of the detector is unaffected by use of Flange Mount Assembly
- O-ring gasket for a leak free seal around the detector
- E-coated copper-free aluminum
- Mounting studs eliminate parts dropping into the process
- FM approved for use with the X3301 / X3302
- Vibration resistance meets Factory Mutual requirements
- Single bolt for easy removal of detector for cleaning

INSTALLATION

NOTE

The use of flexible conduit is required to allow easy removal of the detector for maintenance purposes.

1. Determine the proper location for mounting the detector. For proper detector orientation, refer to Figure 1.

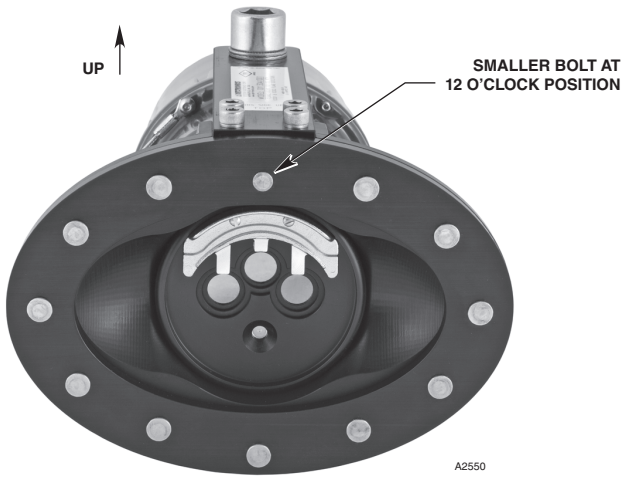

Figure 1—Correct Orientation of X3301 Detector Faceplate

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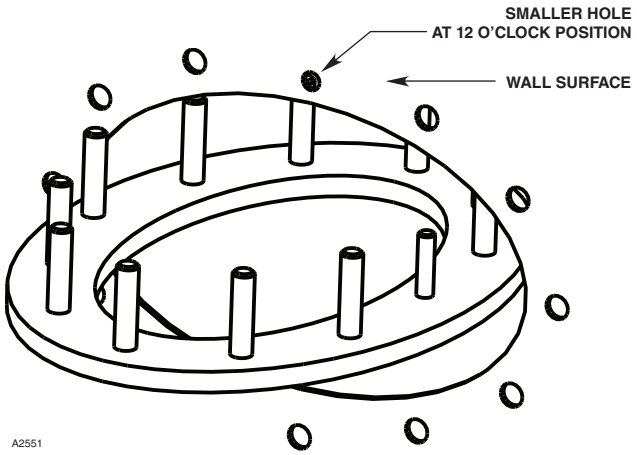

Figure 2—Mounting Plate Attaches to Back Side of Wall

2. Attach the template (provided) to the wall noting the correct location and orientation. It is important to note that maximum wall thickness is 0.5". Greater thickness will reduce the detector's field of view.

IMPORTANT

One of the twelve mounting bolts is slightly smaller than the others. The template ***must*** *be oriented with this bolt at the twelve o'clock position to ensure proper detector orientation.*

3. Carefully cut out the mounting hole and drill the twelve bolt holes. Again note that the bolt at the twelve o'clock position is smaller tha the others.

4. The flange mount assembly consists of two mounting plates, that are installed on opposite sides of the wall. Place the plate with the bolts through the hole as shown in Figure 2, then maneuver it into position so that the mounting bolts protrude through their respective holes in the wall as shown in Figure 3.

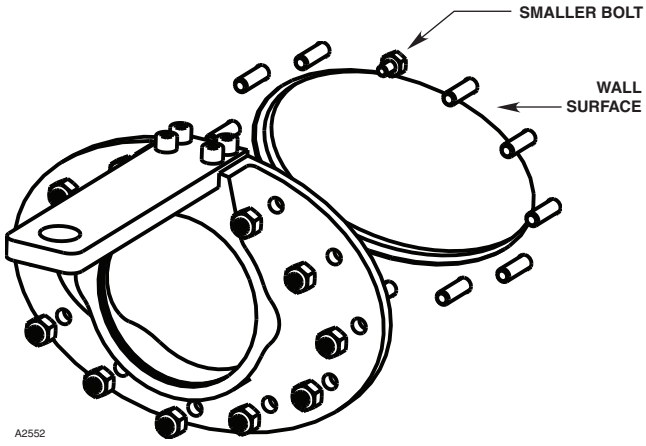

Figure 4—Location of Mounting Plates Relative to Wall

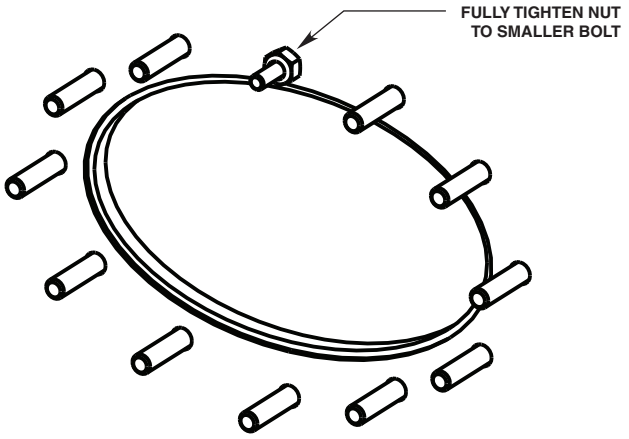

Figure 3—Mounting Plate is Secured by Nut on Smaller Bolt

NOTE

A rubber or neoprene gasket or a bead of caulk (not provided) can be placed between the plate and mounting surface if needed to ensure a leak-free seal.

5. Secure the plate by placing the nut (10-32) on the smaller bolt and tightening to 18 in-lbs. See Figure 3. Install no other nuts at this time.

6. Place the other plate over the bolts as shown in Figure 4. Secure with 1/4-20 nuts (11 total) and tighten to 30 in-lbs.

7. Ensure that the flame detector's optics are clean prior to installation.

8. Insert the detector into the hole of the flange mount assembly. If needed, lubricate the flange mount O-ring with a silicone-free grease. Do not twist the detector when installing it into the mount as this could damage the electronics in the sensor module. Line up the bolt hole on the detector with the hole in the top bar on the flange mount assembly. See Figure 5.

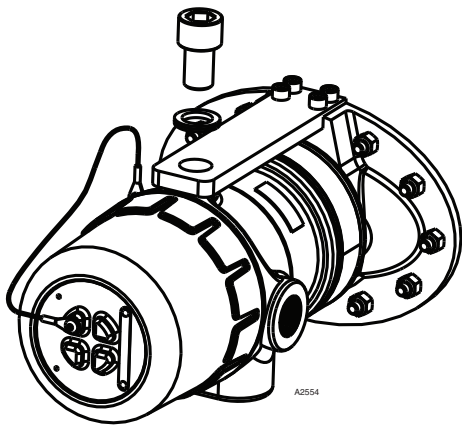

Figure 5—Attach Detector to Flange Mount Assembly Using Bolt and Washer Provided

9. Secure the detector to the flange mount assembly using the bolt and wedge lock washers provided. Ensure that the washer pair is installed with the angled teeth together on the inside. Tighten with M14 hex wrench.

10. Apply power to the detection system and verify proper operation following the commissioning procedure described in the detector manual.

MAINTENANCE

DETECTOR WINDOWS AND oi PLATE

If the detector indicates an **oi** fault, the detector windows and **oi** plate must be cleaned. The following procedure is recommended for cleaning the detector viewing windows and **oi** plate.

1. **Disable any extinguishing equipment that is connected to the unit.**

2. Remove the bolt from the detector, then remove the detector from the flange mount assembly. Do not twist the detector when removing it from the flange mount as the torque could damage the sensor module's electronics.

3. Clean the detector optics with the reflector plate in place. Since multispectrum IR detectors are less affected by contamination than other detectors, removal of the **oi** plate is needed only under extreme conditions. In addition, it is not necessary to achieve perfect cleanliness, because IR is not significantly absorbed by slight films of oil, salt, etc.

4. Clean all three viewing windows and reflector surfaces thoroughly. Use a clean cloth, cotton swab or tissue and Det-Tronics window cleaning solution or isopropyl alcohol.

5. Inspect the o-ring on the flange mount assembly to ensure that it is in good condition. See Figure 6. If it appears dry, apply a thin coating of silicone-free grease to ease installation of the flame detector.

6. Re-install the detector into the flange mount assembly. Re-install and tighten the bolt.

7. Return the system to normal operation.

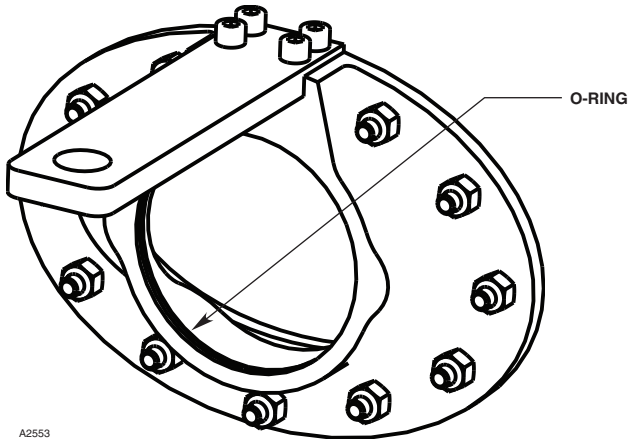

Figure 6—Location of O-Ring on Flange Mount Assembly

RECOMMENDED SPARE PARTS

Part Number	Description
107427-053	O-ring for Flange Mount Assembly
007307-001	Replacement **oi** reflector plate for X3301 with Black plate
010830-001	Replacement **oi** reflector plate for X3301 with Stainless Steel plate
007307-003	Replacement **oi** reflector plate for X3302 with Black plate
010830-002	Replacement **oi** reflector plate for X3302 with Stainless Steel plate
001680-001	Window cleaner
012549-001	PTFE O-Ring Lubricant, 1 oz.

ORDERING INFORMATION

For assistance in ordering a system to meet the needs of a specific application, please contact:

Detector Electronics Corporation
6901 West 110th Street
Minneapolis, Minnesota 55438 USA
Operator: (952) 941-5665 or (800) 765-FIRE
Customer Service: (952) 946-6491
Fax: (952) 829-8750
Web site: www.det-tronics.com
E-mail: det-tronics@det-tronics.com

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Det-Tronics manufacturing system is certified to ISO 9001—
the world's most recognized quality management standard.

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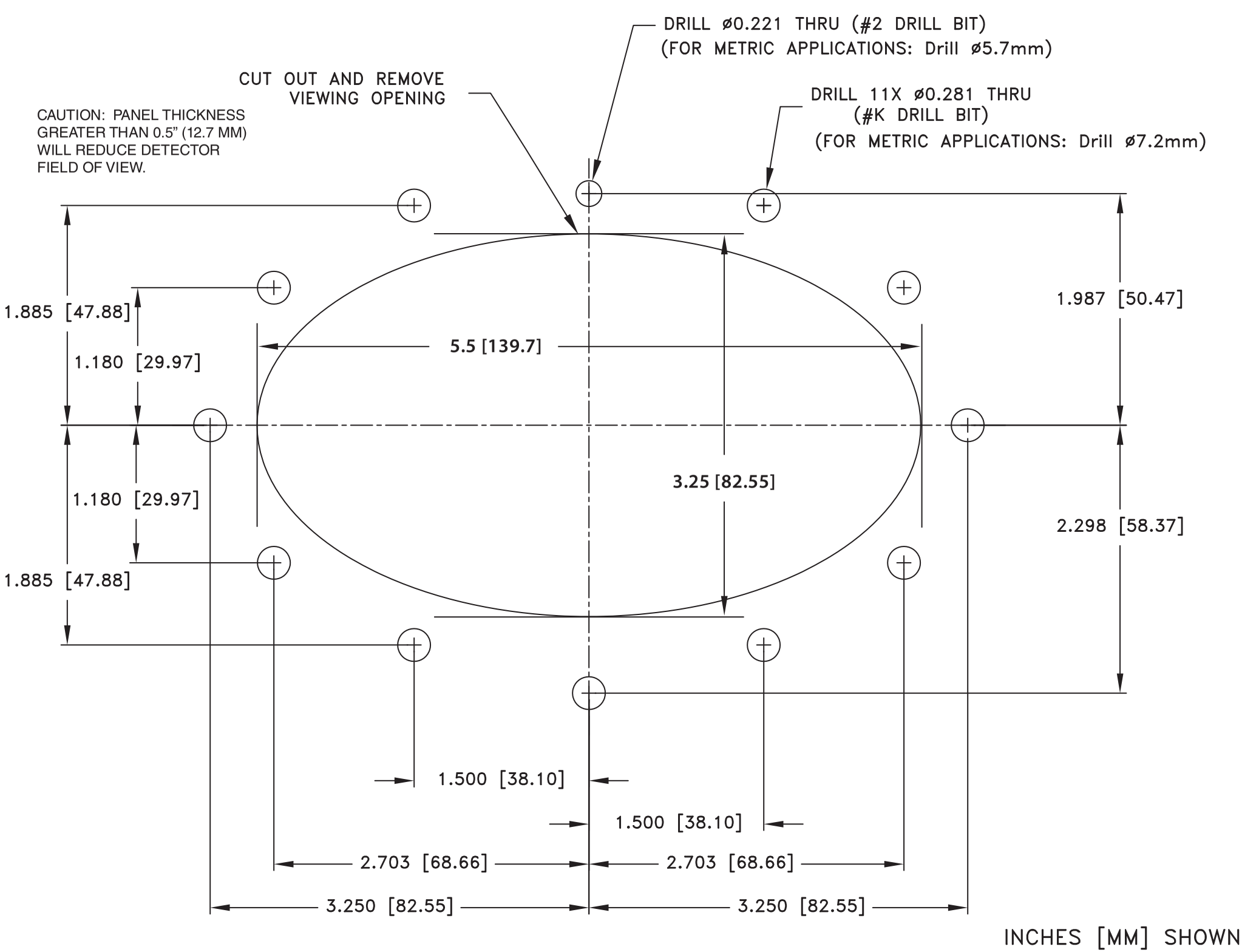
DRILL ø0.221 THRU (#2 DRILL BIT)
(FOR METRIC APPLICATIONS: Drill ø5.7mm)
CUT OUT AND REMOVE
VIEWING OPENING
DRILL 11X ø0.281 THRU
(#K DRILL BIT)
(FOR METRIC APPLICATIONS: Drill ø7.2mm)
CAUTION: PANEL THICKNESS
GREATER THAN 0.5" (12.7 MM)
WILL REDUCE DETECTOR
FIELD OF VIEW.
1.885 [47.88]
1.180 [29.97]
1.180 [29.97]
1.885 [47.88]
5.5 [139.7]
3.25 [82.55]
1.987 [50.47]
2.298 [58.37]
1.500 [38.10]
1.500 [38.10]
2.703 [68.66]
2.703 [68.66]
3.250 [82.55]
3.250 [82.55]
INCHES [MM] SHOWN