

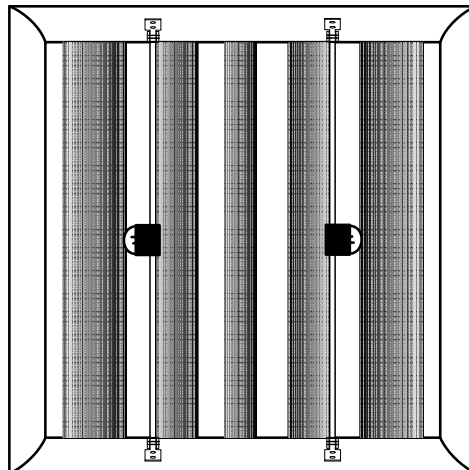
# Fan Inlet Sensor with Flare Mount

## Installation Guide

### -F Fan Inlet Sensors

with Flare Mount Brackets (Part number 700-60xx)  
For use with Gold Series GF2 Fan Inlet Sensors

*Document Name: IG\_F\_FLARE\_R1A*



Typical Flare Mount Dual Fan Inlet Sensor Application

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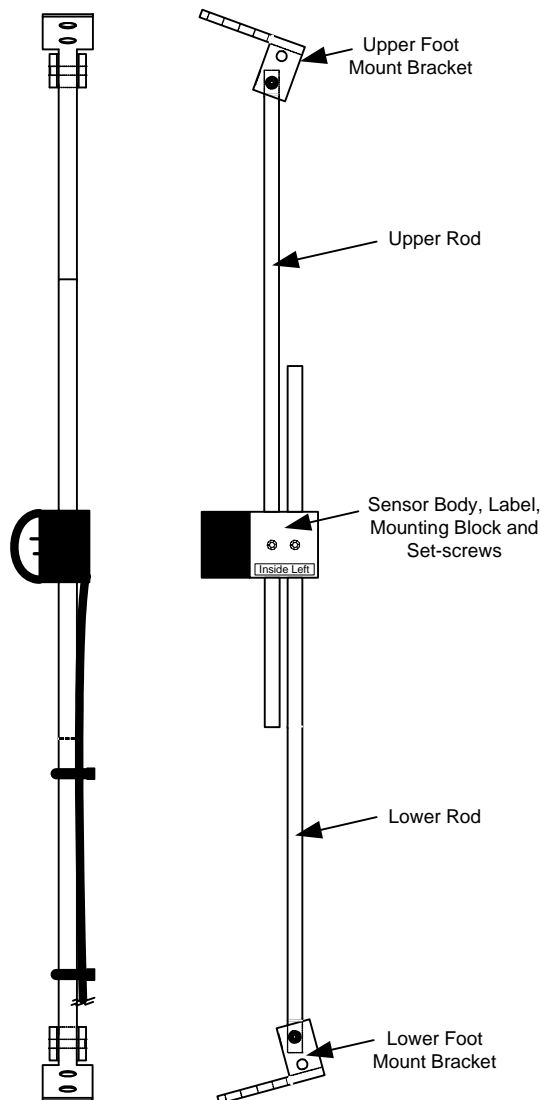
## 1 OVERVIEW

This document provides the instructions necessary to install Fan Inlet Sensors (P.N. 610-18xx) for fan arrays when supplied with the Flare Mount Bracket kit (P.N. 700-60xx) shown in Figures 1 through 3. ***Flare Mount Fan Array Fan Sensors are factory designed for the specific application with either single or dual sensors at the flare opening.*** Rod packs are provided for either single sensor or dual sensor per inlet configurations as shown in Table 1. All rods are straight (no bends) with brackets for mounting on the flare edge of the fan inlet damper as shown in Figures 2 and 3.

**Table 1. Flare Mount Standard Sizes**

Standard Size Code	Inlet Flare Width				Single Fan Inlet Sensor Rod Pack Part Number (2 rods per pack)	Dual Fan Inlet Sensors Rod Pack Part Number (4 rods per pack)
	is greater than or equal to:		and is less than:			
	inches	mm	inches	mm		
0	6	152.4	9	228.6	700-6054	700-6154
1	8	203.2	11	279.4	700-6055	700-6155
2	10	254.0	15	381.0	700-6056	700-6156
3	12	304.8	20	508.0	700-6057	700-6157
4	16	406.4	27	685.8	700-6058	700-6158
5	21	533.4	38	965.2	700-6059	700-6159
6	31	787.4	57	1447.8	700-6060	700-6160

"D" Inlet Face Diameter - Measure Across Flat Face at Flare Edge



**Figure 1. Fan Inlet Sensor with Flare Mount Kit Components (Left Side Detail View)**

## 2 PREPARATION FOR INSTALLATION

- a. Determine the specified location for the Flare Mount Fan Inlet Airflow Sensors as indicated on the engineer's plans. Ensure that the cable supplied with the sensors is of sufficient length to reach the planned transmitter installation site. It is recommended that the sensors be installed first to ensure that the included cable will reach the planned transmitter site after routing and securing the cable.
- b. Carefully open the Fan Inlet Sensors and Flare Mount Installation Kit packages and inspect for damage. If damage is noted, immediately file a claim with carrier.
- c. Fan Inlet sensors for Flare mount are supplied with straight rods and brackets for mounting on the flare edge of the fan inlet damper as shown in Figures 2 and 3. Verify that the proper rods have been supplied for the intended application before proceeding with installation using Table 1.



### CAUTIONS/WARNINGS

Select suitable hardware for the installation and ensure that the hardware will not interfere with any moving parts of the fan or dampers. Failure to properly secure the fan inlet sensor can result in personal injury and damage to sensors and fan.

Setting the specified rod length is essential for proper installation and sensor performance.

The cable ordered must be of sufficient length for the distance between the transmitter and the furthest sensor probe as well as any necessary cable routing at the site.

Improper or excessive lubrication of the fan bearings can result in lubricant carry over and build up of foreign material on the sensor.

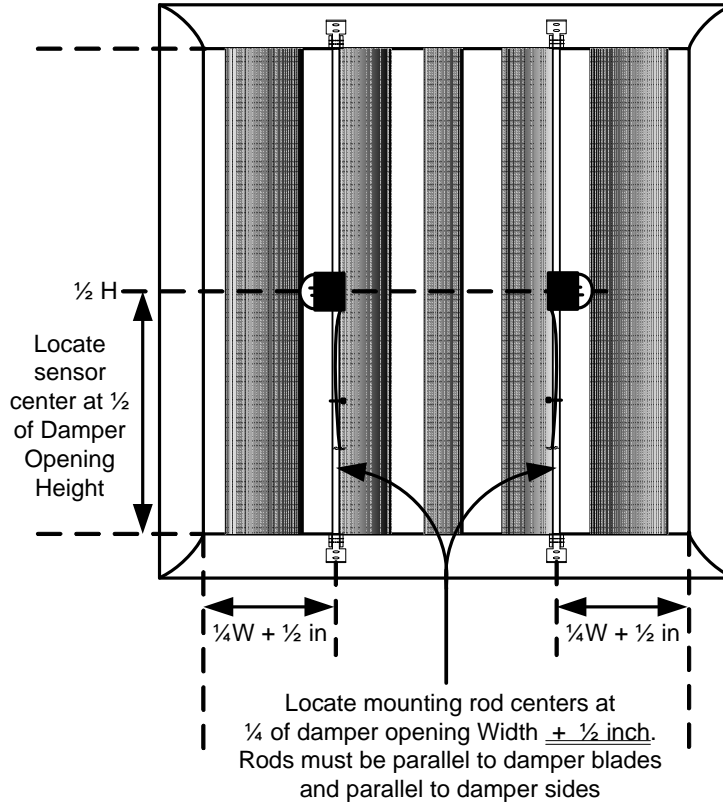
Avoid placement in the absorption area of humidifiers which will adversely affect performance.

Failure to properly install, set up and/or secure the Fan Inlet sensor assembly can result in sensor and/or fan damage.

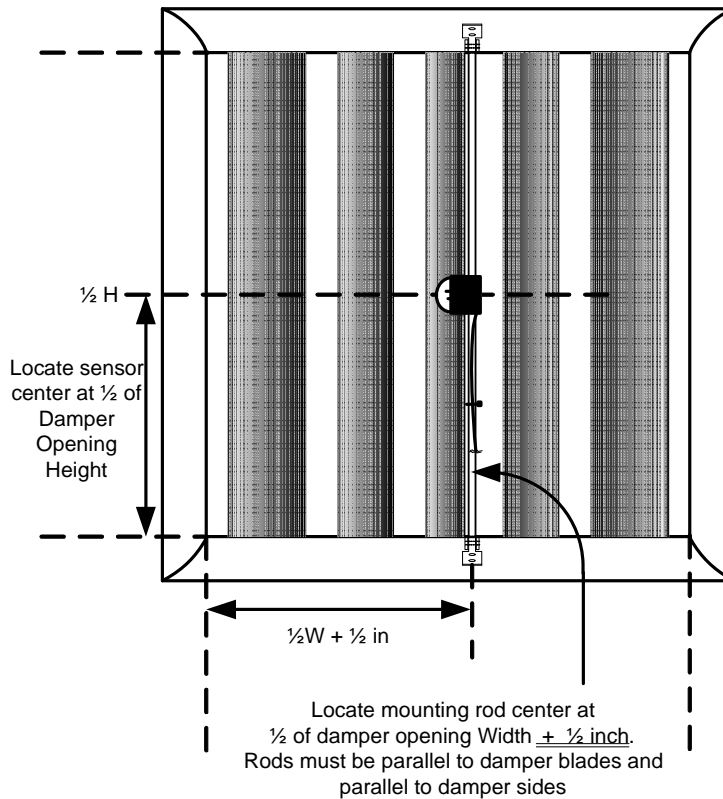
## 3 FAN INLET SENSOR WITH FLARE MOUNT KIT INSTALLATION

**Flare Mount Fan Array Fan Sensors are factory designed for the specific application with either single or dual sensors at the flare opening.** Sensors are marked for their intended location (INSIDE LEFT, INSIDE RIGHT) in the flare, and all cables must exit downward. Check for obstructions at the flare inlet prior to installation. Refer to Figures 1, 2 and 3 for installation detail. For specific installation questions, concerns or assistance, please contact EBTRON Applications Engineering Team at 800.2EBTRON (800.232-8766).

- a. Physically locate the flare where the air flow measuring station is to be installed on the engineer's plans.
- b. Use the hex wrench provided to loosen the sensor housing set screws on the sensor mounting block as shown in Figure 1.
- c. For sensors marked "INSIDE LEFT", insert an inner mounting rod (with mounting bracket attached at inner roll pin) into sensor mounting block inner rod hole with sensor oriented as in Figure 1.
- d. Insert outer mounting rod (with mounting bracket attached at outer roll pin) into sensor mounting block outer rod hole (Figure 1).
- e. For sensors marked "INSIDE RIGHT", repeat steps c and d with sensor shroud oriented to the right (opposite) as in Figure 1.
- f. Use Figure 2 for dual sensor and Figure 3 for Single sensor installation. Using the appropriate Figure, mark the sensor mounting rod center line(s) as shown in Figures 2 and 3.



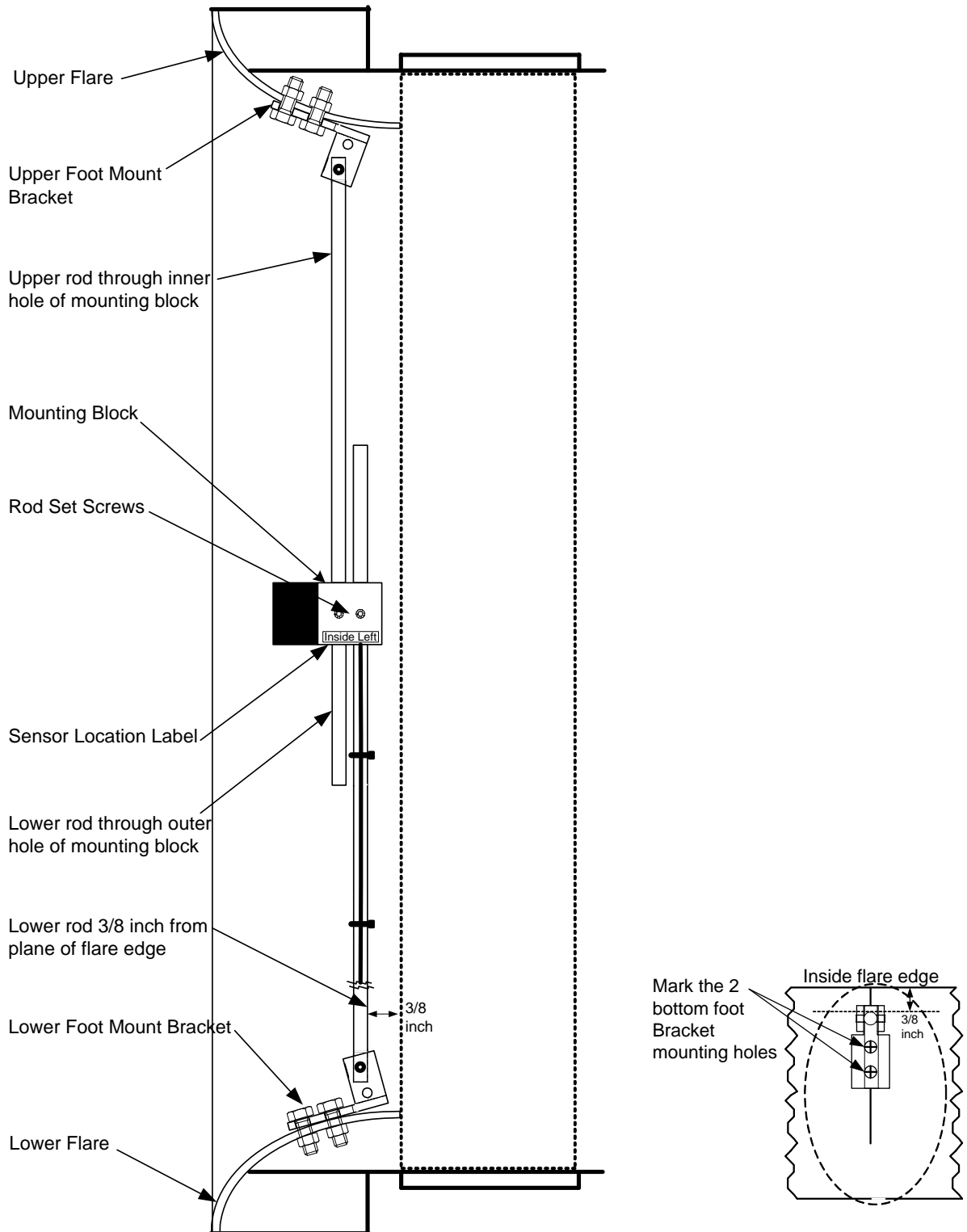
**Figure 2. Fan Inlet Flare Mount Dual Sensor Rod Location Detail**



\*Typical single sensor installation shown using LEFT side sensor. For installation using RIGHT side sensor (sensor shroud facing right side; cable exit down), measure  $\frac{1}{2} W + \frac{1}{2}$  inch from RIGHT side of opening.

**Figure 3. Fan Inlet Flare Mount Single Sensor Rod Location Detail**

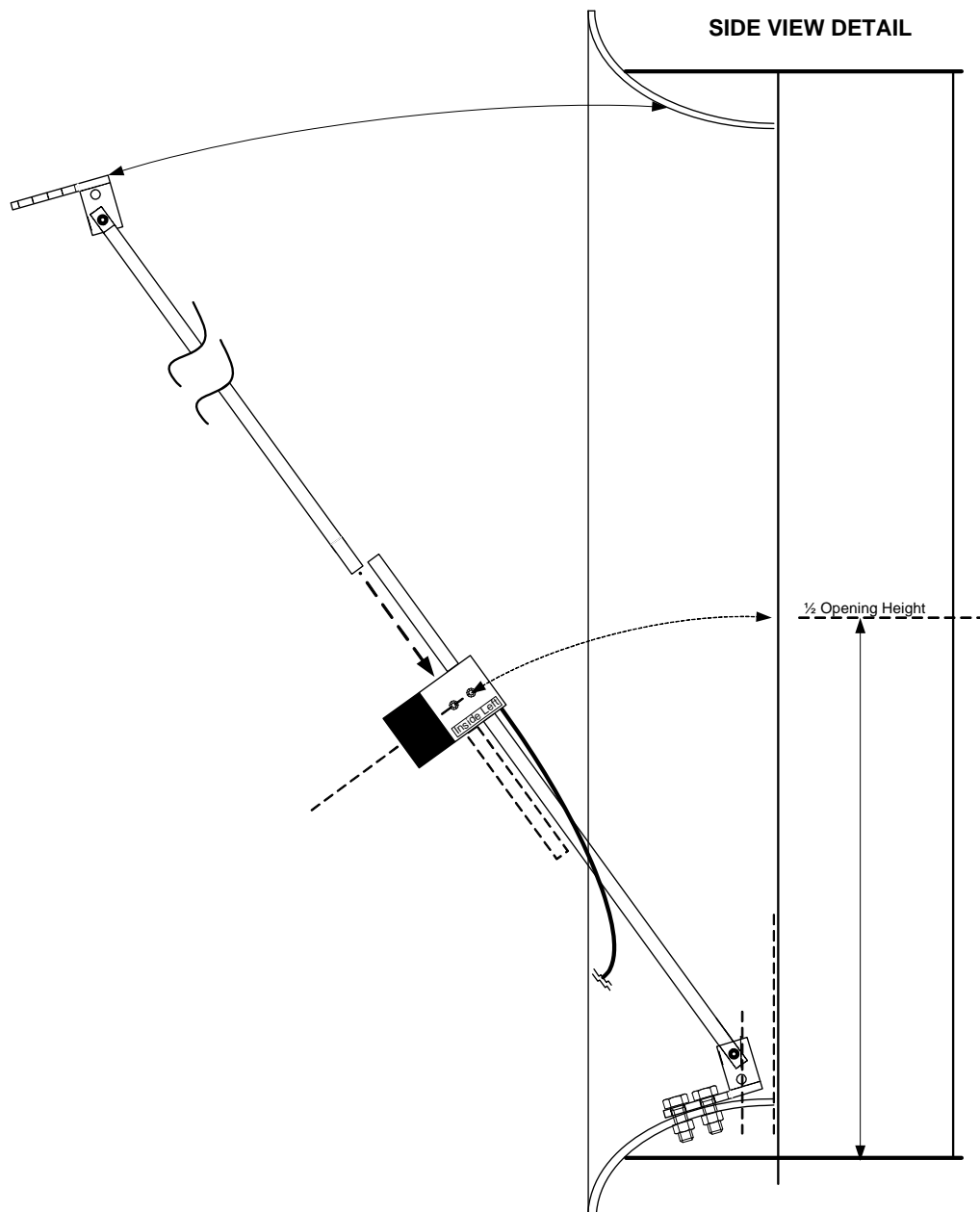
- g. Hold a lower rod foot bracket on the lower flare drawn mark so that the rear of the lower rod is 3/8 inch from the inner flare edge plane and mark the locations of the two mounting holes as shown in Figure 4.
- h. Drill suitable pilot holes for the lower mounting foot hardware selected (maximum #12 hardware) and then mount lower foot and rod securely to flare.



**Figure 4. Fan Inlet Flare Mount Rod Lower Foot Marking and Mounting Detail**

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- i. Slide the sensor marked for the side being installed (with cable exiting downward) onto the mounted lower rod through outer hole of sensor mounting block as shown in Figure 5. Adjust sensor block so that sensor shroud points towards the side of the opening that it is marked for, and is approximately  $\frac{1}{2}$  the height of the damper opening. Tighten rod setscrew to hold it in place.
- j. Next, slide upper rod into inner hole of sensor mounting block. Adjust this rod so that upper foot mount bracket is aligned and pressing against drawn mark on upper flare and both rods are parallel to the damper blades, then mark and drill the locations for the upper foot mounting bracket holes (maximum #12 hardware) as shown in Figure 5.
- k. Verify that sensor center line is at  $\frac{1}{2}$  'H' flare opening height. If necessary, adjust height by holding sensor body and loosening rod set screws to adjust sensor height to exactly  $\frac{1}{2}$  the height of the damper opening, and then re-tighten the setscrews.



**Figure 5. Fan Inlet Flare Mount Rod Upper Foot Marking and Mounting Detail**

- l. Verify that sensor installation does not interfere with damper blade movement or fan rotation.
- m. Strap down sensor cable to mounting rods using the tie wraps provided (minimum of two tie wraps per sensor).
- n. For dual fan inlet sensors, repeat steps g through m to install right hand sensor at the right hand side of the flare opening.
- o. Route sensor cable to transmitter and secure with appropriate hardware. Sensor installation is complete. Refer to separate technical manual for transmitter connection and set up.

For any application specific installation questions, concerns or assistance, please contact the Ebtron Applications team at 800.2EBTRON (800. 232-8766).