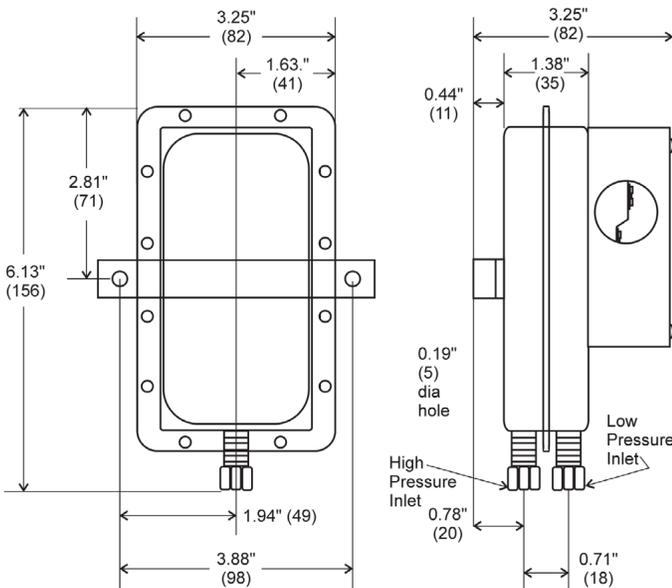


Installation Guide

Mounting

Select a mounting location that is free from vibration. Mount in any vertical plane in order to obtain the lowest specified operating setpoint. Avoid mounting with the sample line connections in the “up” position. Surface mount via the two 3/16" diameter holes in the integral mounting bracket. The mounting holes are 3-7/8" apart.

1. Align the unit vertically with the barbed ports at the bottom (alternately pointing to the left or right).
2. Using the two 3/16" mounting holes, attach to the ducting.
3. Using the knockout, attach a 1/2" conduit.
4. Connect wires to the screw terminals. See the Wiring section.



Nominal Dimensions in Inches (Millimeters)

(CSE-1103 Shown)

Connecting Sensing Ports

NOTE: A sampling probe should be located a minimum of 1.5 duct diameters downstream from the air source. Install the sampling probe as close to the center of the airstream as possible.

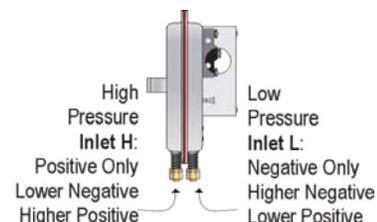
NOTE: For sample lines of up to 10 feet, 1/4" OD tubing is acceptable. For lines up to 20 feet, use 1/4" ID tubing. For lines up to 60 feet, use 1/2" ID tubing.

To attach a sampling line:

- To a CSE-1102 with barbed connections, use 1/4 to 3/8" (6 to 9 mm) tubing for air sampling lines and connect the tubing to the appropriate port(s).
- To a CSE-1103 with compression connections, connect 1/4" OD copper to the compression fitting(s).

Connect the sampling lines according to the application:

- **Positive Pressure Only:** Connect the sample line to inlet H. (Inlet L remains open to the atmosphere.)
- **Negative Pressure Only:** Connect the sample line to inlet L. (Inlet H remains open to the atmosphere.)
- **Two Negative Samples:** Connect the higher negative sample to inlet L. Connect the lower negative sample to inlet H.
- **Two Positive Samples:** Connect the higher positive sample to inlet H. Connect the lower positive sample to inlet L.
- **One Positive and One Negative Sample:** Connect the positive sample to inlet H. Connect the negative sample to inlet L.



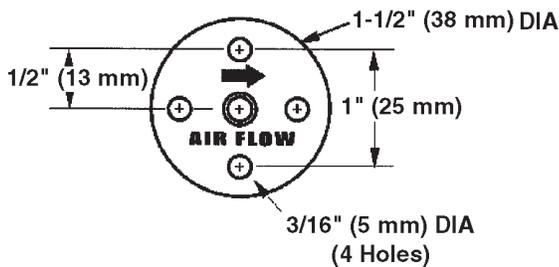
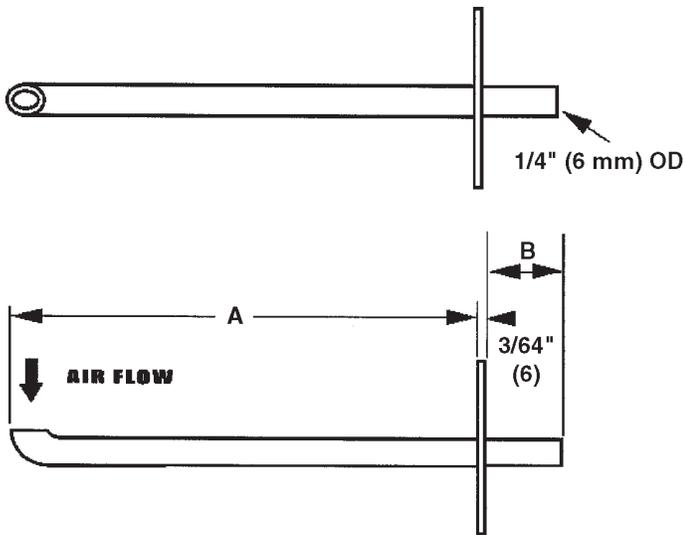
Optional HFO-001x Sensor Probe

Accessories for the CSE-1102/1103 are the following air flow sensing probes:

- HFO-0015, 4 inches (102 mm) long
- HFO-0016, 6 inches (152 mm) long

To install either probe:

1. Drill holes in the ducting for the 1/4" (6 mm) OD sensor probe and the mounting screws.
2. Insert the sensor probe through the mounting plate and into the duct.
3. Turn the sensor probe so that air flows into the sensor's opening.
4. Attach the mounting plate to the ducting using screws.
5. Connect to the probe using 3/8" (9 mm) OD flexible tubing or a compression fitting to 1/4" OD copper tubing.

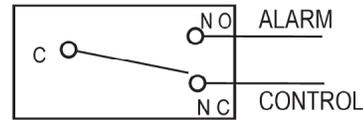


| Dimension | HFO-0015 | HFO-0016 |
|-----------|--------------|--------------|
| A | 4" (102 mm) | 6" (102 mm) |
| B | 0.5" (13 mm) | 0.5" (13 mm) |

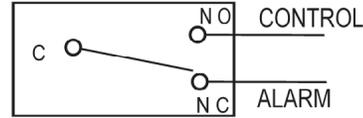
Wiring

Before pressure is applied to the diaphragm, the SPDT switch contacts will be in the normally closed (NC) position. The snap switch has screw top terminals with cup washers. Wire control and alarm applications appropriately.

To prove excessive air flow or pressure:



To prove insufficient air flow or pressure:



Setpoint Adjustment

NOTE: To properly calibrate an air switch, a digital manometer or other measuring device should be used to confirm the actual setpoint.

The adjustment range is 0.05 ±0.02 to 12.0" wc. To adjust the setpoint:

1. Turn the adjusting screw **counterclockwise** until motion has stopped.
2. Turn the adjusting screw **clockwise** 4 complete turns (to engage the spring). From this point, the next (up to) ten turns are used for the actual calibration. Each full turn represents approximately 1.2" wc. For example, 2-1/2 turns (after the initial 4 clockwise turns) equals about 3" wc (2.5 turns x 1.2" wc per turn).

Maintenance

No routine maintenance is required. Each component is designed for dependable, long-term reliability, and performance. Careful installation will also ensure long-term reliability and performance.

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