Bleed Airflow Sensor

Installation Guide

-B Bleed Airflow Sensor (without Mounting Kit)

Bleed Airflow Sensor (Part number 610-18*xx*G)
(without Mounting Kit)
For use with Gold Series GB1, and
Hybrid Series HB1/SB1 Bleed Airflow Sensors

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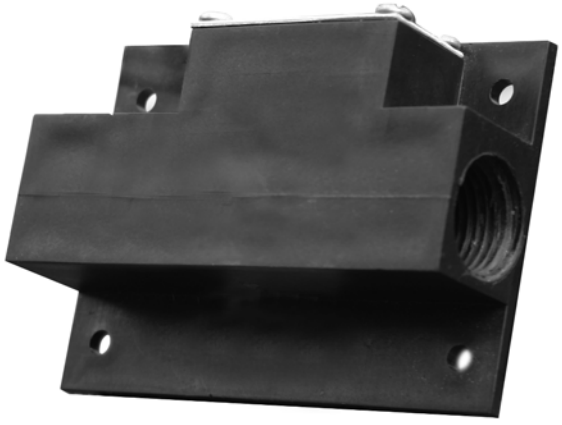

Part Number 930-0095NK

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1 OVERVIEW

This document provides the instructions necessary to install the Bleed Airflow Sensor when supplied without any of the optional Mounting Kits. Separate Installation Guides are available under separate cover for those optional Mounting kits.

1.1 BLEED AIRFLOW SENSOR MOUNTING CONSIDERATIONS

Figure 1 is a detail view of the Bleed Airflow Sensor. The Bleed Airflow Sensor features standard 0.5 inch female threads that accept standard 0.5 inch inside diameter NPT fittings. The total length of tubing connected to the sensor must not exceed 36 inches, and the tubing must be a minimum of 0.5 inches inside diameter. If longer runs are required, consider larger diameter tubing/piping to reduce frictional and entry losses, and make use of the transmitter Field Adjust Wizard feature. (Consult factory for additional information in these applications.)

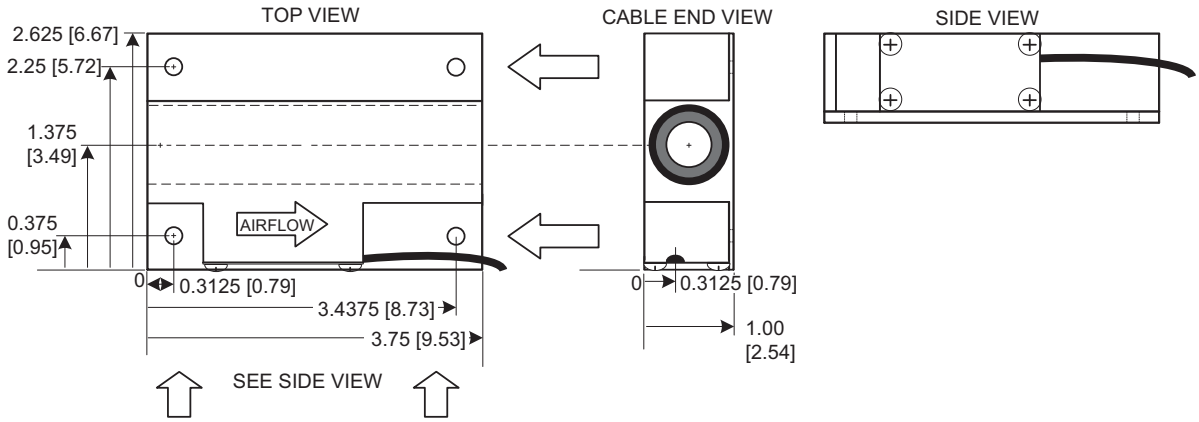

Figure 1. Bleed Airflow Sensor Detail View

Typical applications of Bleed Airflow Sensors are:

- Through-the-wall applications between adjacent spaces.
- Under floor applications for pressurized under floor plenums.
- Ducted damper applications where damper access is available on both sides of the damper.
- Plenum damper/louver applications.

The following paragraphs provide recommendations for application specific details.

1.1.1 Under Floor Mounting Applications

Bleed Airflow Sensors can be applied in under floor systems to ensure stable control of inherently low floor plenum pressure. Since most under floor systems are maintained near 0.05 iWC, a small change in pressure can result in a very large change in flow through the diffusers. Other commercially available HVAC pressure sensors are unstable at these low pressures.

1.1.2 Ducted Damper Mounting Applications

Bleed Airflow Sensors can be applied in duct mounted relief dampers (supply/return fan systems) or in return dampers (supply/relief fan systems) with access on both sides of the damper, to ensure positive airflow control during periods of relief/exhaust at the air handling unit (AHU). It can also be applied on systems where mixed air plenum pressure control is implemented to maintain minimum outside air intake flow rates.

1.1.3 Plenum Damper Mounting Applications

Bleed Airflow Sensors can be applied on plenum mounted dampers or louvers to ensure positive relief air damper control and prevent negative airflow through the relief flow circuit. This application also minimizes negative airflow during switch over from minimum outside air to economizer modes, especially on multi-story buildings where stack pressure can be problematic.

1.1.4 Minimum Outside Air Control Applications

For critical control of minimum outside air, contact the Ebtron Applications team at 800.2EBTRON (800. 232-8766).

2 PREPARATION FOR INSTALLATION

a. Determine the specified location for the Bleed Airflow Sensor as indicated on the engineer's plans. Ensure that the cable supplied with the sensor is of sufficient length to reach the planned transmitter installation site. It is recommended that the sensor be installed first to ensure that the included cable will reach the transmitter after routing and securing the cable.

b. Carefully open the Bleed Airflow Sensor package and inspect for damage. If damage is noted, immediately file a claim with carrier.

3 BLEED AIRFLOW SENSOR INSTALLATION

The following paragraphs detail installation of the bleed airflow sensor. For application specific installation questions, concerns or assistance, please contact the Ebtron Applications team at 800.2EBTRON (800. 232-8766).

CAUTION

⚠ Do not permit condensation or precipitation to carry over into the Bleed Airflow Sensor.

NOTE

The maximum length of 0.5 inch inside diameter bleed tubing connected to the Bleed sensor must not exceed 36 inches {91.4 cm}. If longer runs are required, consider larger diameter tubing/piping to reduce frictional and entry losses, and make use of the transmitter Field Adjust Wizard feature. (Consult factory for additional information in these applications.).

a. Orient the bleed sensor so that the airflow directional arrow label points from the normally higher pressure side to the lower pressure side of the installation.

b. Mount the sensor (if necessary) using the four mounting holes provided with suitable attaching hardware.

c. Install tubing from each pressure zone, observing the precautions and notes above. The Bleed Airflow Sensor features standard 0.5 inch female threads that accept standard 0.5 inch inside diameter NPT fittings. The total length of tubing connected to the sensor must not exceed 36 inches, and the tubing must be a minimum of 0.5 inches inside diameter.

CAUTION

⚠ A rain shield or louver (provided by others) must be used to prevent water carry over into the sensor on exterior wall surface applications.

d. Route the plenum rated cable supplied to the transmitter.

e. For improved accuracy, engage the Field Adjust Wizard feature on the transmitter as outlined in the Transmitter technical manual (under separate cover).

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