EBTRON®
a measurable difference!

Advantage IV

Bleed Airflow Measurement with Temperature and Alarm Capability

- Thermal Dispersion Technology
- Bi-directional Airflow Measurement
- Detect ΔP as low as 0.0002" H_2O
- Optional Mounting Kits Available
- Airflow (or ΔP) and Status Alarm
- Temperature Output Capability
- Analog and RS-485 Output Models
- 1/2" NPT Female Pipe Connections
- Remote Transmitter with LCD Display
- 3-year Warranty

The HTx104-**B** is a unique measurement device that can detect very small pressure differentials (as low as 0.0002" H2O) between two adjacent spaces by sensing the airflow rate induced by the pressure gradient. The HTx104-B can be used to determine the airflow rate across fixed openings when a reference airflow rate is provided. More output circuit protection than the EF-x2000-B with a true 4-20mA output option (HTA104-B) make this the best choice for these applications.

Typical Applications

- Ultra-low Pressure Detection
- Parking Garage Pressurization
- Construction Zone Contaminant Containment
- Stairwell Pressurization
- Relief and Exhaust Damper Control
- Airflow across a Louver or other Fixed Opening

Benefits

- Maintain Pressure Relationships between Adjacent Spaces
- Satisfy LEED Prerequisites and Credits
- Provide Acceptable IAQ
- Save Energy
- Reduce Liability
- Improve Performance

Product Highlights

- Uni- or Bi-directional Measurement
- Extremely Sensitive
- Airflow or Equivalent Pressure Output
- Long-term Stability
- Small Footprint
- Simple NPT Pipe Connections
- Optional Mounting Kits Available

HTx104-B_Overview_r1a

General

Probe and Sensor Node Configurations
1 bi-directional, dual 1/2" NPT female bleed sensor housing

Installed Accuracy
Airflow through an opening or across and obstruction: Requires field measurement of a reference airflow of the specific installation. The Field Adjust Wizard (FAW) facilitates setup.

Equivalent pressure between two adjacent spaces: Requires field measurement of a reference pressure to correct the default flow coefficient of the specific installation. The Field Adjust Wizard (FAW) facilitates setup.

Listings and Compliance
UL: UL-873 and CSA C22.2 No. 24
CE: Non-UK European shipments only
UKCA: UK shipments only
BACnet International: BTL Listed (HTN104 transmitter)
FCC: This device complies with Part 15 of the FCC rules
RoHS: This device is RoHS2 compliant

Environmental Limits
Temperature:
    Sensor: -20 to 160 ºF [-28.9 to 71.1 ºC]
    Transmitter: -20 to 120 ºF [-28.9 to 48.9 C]
Humidity: (non-condensing)
    Probes: 0 to 100%
    Transmitter: 5 to 95%

Bleed Sensor Assembly

Sensing Node Sensors
Self-heated sensor: Two precision, hermetically sealed, bead-in-glass thermistor probes
Temperature sensor: One precision, hermetically sealed, bead-in-glass thermistor probe

Sensing Node Housing
Material: Glass-filled Polypropylene
Sensor Potting Materials: Waterproof marine epoxy

Airflow Measurement
Accuracy: ±2% of reading to NIST-traceable airflow standards (includes transmitter uncertainty)
Calibrated Range: -3,000 to 3,000 fpm [-15.24 to 15.24 m/s]
Calibration Points: 9

Temperature Measurement
Accuracy: ±0.15ºF [0.08 ºC] to NIST-traceable temperature standards (includes transmitter uncertainty)
Calibrated Range: -20 to 160 ºF [-28.9 to 71.1 ºC]
Calibration Points: 3

Probe to Transmitter Cables
Type: FEP jacket, plenum rated CMP/CL2P, UL/cUL listed, -67 to 302 ºF [-55 to 150 ºC], UV tolerant
Standard Lengths: 10, 25 and 50 ft. [3.1, 7.6 and 15.2 m]
Connecting Plug: 0.60" [15.24 mm] nominal diameter

Transmitter

Power Requirement: 24 VAC (22.8 to 26.4 under load) @8V-A
PCB Connections: Gold-plated PCB interconnects and test points
User Interface: 16-character LCD display and 4 button interface
B.A.S. Connectivity Options
HTA104 Transmitter: Two field selectable (0-5/0-10 VDC or 4-20mA), scalable and isolated analog output signals (AO1=airflow or equivalent ΔP, AO2=temperature or alarm)
HTN104 Transmitter: One field selectable (BACnet MS/TP or Modbus RTU) and isolated RS-485 network connection- Individual sensor node airflow rates and temperatures are available via the network

Airflow (or Pressure) Alarm
Type: Low and/or high user defined setpoint alarm
Tolerance: User defined % of setpoint
Delay: User defined
Reset Method: Manual or automatic
Visual Indication: Yes, LCD display
Network Indication: Yes (HTN104 only)
Analog Signal Indication: Yes, on AO2 assignment (HTA104 only)

System Status Alarm
Type: Sensor diagnostic system trouble indication
Visual Indication: Yes, LCD display
Network Indication: Yes (HTN104 only)
Analog Signal Indication: Yes, on AO2 assignment (HTA104 only)