BLEED AIRFLOW MEASUREMENT WITH TEMPERATURE AND ALARM CAPABILITY

PRODUCT HIGHLIGHTS

- *"Plug and Play"* operation
- EBTRON exclusive bead-in-glass thermistor sensors
- NIST traceable calibration
- Detect ΔP as low as 0.0002" H_2O
- Uni- or bi-directional measurement
- Airflow (or ΔP) and status alarm
- Three mounting kits available
- 1/2" NPT female pipe connections
- Smart Sensor Detection System (SDS) continuously monitors for sensor and transmitter faults
- Standard FEP plenum rated cable between sensor probes and transmitter
- Unsurpassed connectivity options
- Three-year warranty
- Toll-free customer support for the lifetime of the product

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

EBTRON ADVANCED THERMAL DISPERSION TECHNOLOGY

EBTRON pioneered bead-in-glass thermistor based thermal dispersion over 40 years ago. EBTRON's thermal dispersion technology relates the power dissipated by a self-heated thermistor to the airflow rate at one or more sensor nodes in an airstream. All EBTRON airflow monitoring systems use this time-tested thermal dispersion technology.

MODEL DESCRIPTION

The HTx116-B is a unique measurement device that can detect very small pressure differentials (as low as 0.0002" H_2O) between two adjacent spaces by sensing the airflow rate induced by the pressure gradient. The HTx116-B can be used to determine the airflow rate across fixed openings when a reference airflow rate is provided.

EBTRON, Inc., 1663 HWY 701 South, Loris SC 29569
800-2-EBTRON (1-800-232-8766)
EBTRON.com
sales@ebtron.com

HTx116-B TECHNICAL SPECIFICATIONS

General

Probe and Sensor Node Configuration (max.)
4 bi-directional, dual 1/2" NPT female bleed sensor housing

Installed Accuracy
Airflow through an opening or across an 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 & Compliance
UL: 60730-1; CAN/CSA-E60730-1
BACnet International: BTL Listed (HTB116, HTC116, HTM116, and HTS116 transmitters)
FCC: This device complies with Part 15 of the FCC rules
RoHS: This device is RoHS2 compliant

Environmental Limits
Temperature:
Sensor: -20 to 160 ^{0}F [-28.9 to 71.1 ^{0}C]
Transmitter: -20 to 120 ^{0}F [-28.9 to 48.9 ^{0}C]
Humidity: (non-condensing)
Sensor: 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: ±0.15^{0}F [0.08 ^{0}C] to NIST-traceable temperature standards (includes transmitter uncertainty)
Calibrated Range: -20 to 160 ^{0}F [-28.9 to 71.1 ^{0}C]
Calibration Points: 3

Probe to Transmitter Cables
Type: FEP jacket, plenum rated CMP/FT6/CL2P, UL/cUL listed, -67 to 302 ^{0}F [-55 to 150 ^{0}C], 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) @16V-A max.
PCB Connections: Gold-plated PCB interconnects, and test points
User Interface: 2 line x16-character backlit LCD display and 4 button interface

B.A.S. Connectivity Options
All Transmitters: 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).
HTA116 Transmitter: No additional connectivity to B.A.S.
HTC116 Transmitter[1]**:** One additional field selectable (BACnet MS/TP or Modbus RTU) and isolated RS-485 network
HTB116 Transmitter[1]**:** One additional isolated RS-485 and one additional isolated Ethernet network connections field configurable as follows:
- Single RS-485 connection to B.A.S. with field selectable BACnet MS/TP or Modbus RTU, and
- Single Ethernet connection to B.A.S. with simultaneously supported BACnet IP or BACnet Ethernet, Modbus TCP, and TCP/IP, or
- Single Ethernet connection to *EB-Bus* device(s)

HTM116 Transmitter[1]**:** One additional isolated Ethernet network connection field configurable as follows:
- Single connection to B.A.S. with simultaneously supported BACnet IP or BACnet Ethernet, Modbus TCP, and TCP/IP, or
- Single connection to *EB-Bus* device(s)

HTS116 Transmitter[1]**:** Two additional isolated Ethernet network connections field configurable as follows:
- Single connection to B.A.S. and single connection to *EB-Bus* device(s), or
- Daisy-chain connection to B.A.S., or
- Daisy-chain connection to *EB-Bus* device(s)

Note: B.A.S. network connections can simultaneously support BACnet IP or BACnet Ethernet, Modbus TCP, and TCP/IP.
HTU116 Transmitter: One additional USB connection for thumb drive data-logging of sensor node airflow rates and temperatures

Alarms
Airflow (or Pressure): Low and/or high user defined setpoint alarm
System Status: Sensor diagnostic system trouble indication

***EB-Link* Bluetooth® low energy Interface for Android®** : Available for firmware updates if required.[2]

[1] Individual sensor node airflow rates and temperatures are available via the network.

[2] Order with the /NR option when RF devices are not permitted.