

SWSI & DWDI Airflow Measurement with Temperature and Alarm Capability

OVERVIEW



- Thermal Dispersion Technology
- Designed for SWSI and DWDI Fans
- NIST-traceable Calibration
- %-of-reading Accuracy
- Airflow and Status Alarm
- Temperature Output Capability
- Analog and RS-485 Output Models
- Throat, Face, and Forward Mounting
- Remote Transmitter with LCD Display
- 3-year Warranty

The HTx104-F/SI and HTx104-F/DI are EBTRON’s most economical solution for accurate and repeatable airflow measurement in SWSI and DWDI fans. Airflow, temperature and/or airflow alarming are available on all models. Does not affect SWSI or DWDI fan performance.

Typical Applications

- ◆ Fan Airflow Tracking
- ◆ Air Change Verification & Monitoring
- ◆ Fan Performance Monitoring

Benefits

- ◆ Demonstrate Fan Performance and Operation
- ◆ Improve Fan Tracking on VAV Systems
- ◆ Comply with ASHRAE Standards
- ◆ Save Energy
- ◆ Reduce Fan Horsepower

Product Highlights

- ◆ Accurate and Repeatable
- ◆ Long-term Stability
- ◆ Streamline Design
- ◆ Adjustable Mounting Brackets
- ◆ “Plug and Play” Operation
- ◆ Intuitive User Interface
- ◆ FEP Plenum Rated Cables



SPECIFICATIONS: HTx104-F (/SI & /DI)

General

Probe and Sensor Node Configurations

SWSI and DWDI fans: 2 probes x 1 sensor node/per probe in each fan inlet

Sensor Node Averaging Method

Airflow: Independent, arithmetic average

Temperature: Independent, velocity weighted or arithmetic average

Listings

UL: UL 873 Listed

CE: European shipments only

BACnet International: BTL Listed (HTN104 transmitter)

Environmental Limits

Temperature:

Probes: -20 to 160 °F [-28.9 to 71.1 °C]

Transmitter: -20 to 120 °F [-28.9 to 48.9 °C]

Humidity: (non-condensing)

Probes: 0 to 100%

Transmitter: 5 to 95%

Individual Sensing Nodes

Sensing Node Sensors

Self-heated sensor: Precision, hermetically sealed, bead-in-glass thermistor

Temperature sensor: Precision, hermetically sealed, bead-in-glass thermistor

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: 0 to 10,000 fpm [0 to 50.8 m/s]

Calibration Points: 16

Temperature Measurement

Accuracy: ±0.15°F [0.08 °C] to NIST-traceable temperature standards (includes transmitter uncertainty)

Calibrated Range: -20 to 160 °F [-28.9 to 71.1 °C]

Calibration Points: 3

Sensor Probe Assembly

Mounting Rods

Material: Zinc plated steel

Mounting Brackets

Material: 304 stainless steel

Mounting Options & Size Limits

Throat: 6 to 66 inches [152.4 to 1676.4mm] (throat diameter)

Forward: 6 to 64 inches [152.4 to 1625.6 mm] (diameter at inlet entrance)

Face: 11 to 77 inches [279.4 to 1955.8] (diameter at inlet entrance)

Probe to Transmitter Cables

Type: FEP jacket, plenum rated CMP/CL2P, UL/cUL listed, -67 to 392 °F [-55 to 200 °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] circular DIN

Transmitter

Power Requirement: 24 VAC (22.8 to 26.4 under load) @11V-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, 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 Alarm

Type: Low and/or high user defined setpoint alarm

Tolerance: User defined % of setpoint

Delay: User defined

Zero Disable: Alarm can be disabled when the airflow rate falls below the low limit cutoff value (unoccupied periods)

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)