

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
- Combination Analog/Network Models
- Throat, Face, and Forward Mounting
- Remote Transmitter with LCD Display
- 3-year Warranty



The GTx108e-F/SI and GTx108e-F/DI are EBTRON’s 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 fan performance. Bluetooth® low energy technology interface.

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

General

Probe and Sensor Node Configurations

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

Installed Airflow Accuracy¹

±(3% to 10%) of reading, depending on fan type and installation. May be improved by field adjustment using the Field Adjust Wizard (FAW) to a reliable reference.

Sensor Node Averaging Method

Airflow: Independent, arithmetic average
Temperature: Independent, velocity weighted average

Listings and Compliance

UL: UL-873 and CSA C22.2 No. 24
CE: Yes
BACnet International: BTL Listed (GTC108e and GTM108e transmitters)
FCC: This device complies with Part 15 of the FCC rules
RoHS: This device is RoHS2 compliant

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 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 1676.4 mm] (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 mm] (diameter at inlet entrance)

Probe to Transmitter Cables

Type: FEP jacket, plenum rated CMP/CL2P, UL/cUL listed, -67 to 302 °F [-55 to 150 °C], UV tolerant
Standard Lengths: 10, 25, and 50 ft. [3.1, 7.6 and 15.2 m]
Connecting Plug: 9/16" [14.29 mm] nominal diameter with gold-plated connector pins

Transmitter

Power Requirement: 24 VAC (22.8 to 26.4 under load) @16V-A
Connector Receptacle Pins and PCB Connections: Gold-plated receptacle pins, PCB interconnects, PCB edge fingers, and test points
User Interface: 2 line x16-character backlit LCD display and 4 button interface

B.A.S. Connectivity Options

All Transmitters: Three field selectable (0-5/0-10 VDC or 4-20mA), scalable and isolated analog output signals (AO1=airflow, AO2=temperature or alarm, AO3=Not Used).
GTA108e Transmitter: No additional connectivity to B.A.S.
GTC108e Transmitter: One additional 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
GTM108e Transmitter: One additional isolated Ethernet (simultaneously supported BACnet Ethernet or BACnet IP, Modbus TCP and TCP/IP) network connection - Individual sensor node airflow rates and temperatures are available via the network
GTF108e Transmitter: One additional isolated Lonworks Free Topology network connection
GTU108e Transmitter: One additional USB connection for thumb drive data-logging of sensor node airflow rates and temperatures

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 (GTM108 and GTC108 only)
Analog Signal Indication: Yes, on AO2 assignment

System Status Alarm

Type: Sensor diagnostic system trouble indication
Visual Indication: Yes, LCD display
Network Indication: Yes
Analog Signal Indication: Yes, on AO2 assignment
EB-Link Bluetooth® low energy Interface for Android® and iPhone®: Download individual sensor node airflow/temperature data, settings and diagnostics

¹ Installed airflow accuracy is the actual system accuracy expected and includes sampling uncertainty of the sensor probes.