EBTRON®
a measurable difference!

Advantage IV

Fan Array Airflow Measurement with Temperature and
Alarm Capability

Supports up to 8 fans!

- ■ Thermal Dispersion Technology
- ■ Supports up to 8 Fans
- ■ NIST-traceable Calibration
- ■ *%-of-reading* Accuracy
- ■ Individual Fan Airflow Alarms
- ■ Temperature Output Capability
- ■ Combination Analog/Network Models
- ■ Four Mounting Styles
- ■ Remote Transmitter with LCD Display
- ■ 3-year Warranty

The GTx108e-**F**/An is EBTRON's solution for accurate and repeatable airflow measurement in fan arrays. One to eight fans are supported. Airflow, temperature and/or airflow alarming are available on all models. Individual fan airflow rates and fan alarming are available with combination analog output/network models. Does not affect fan performance. Bluetooth® low energy technology interface.[1]

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

Typical Applications

- ♦ Fan Airflow Tracking
- ♦ Air Change Verification & Monitoring
- ♦ Individual Fan Performance Monitoring & Fault Detection

Benefits

- ♦ Monitor up to 8 Fans with a Single Transmitter
- ♦ Demonstrate Fan Performance and Operation
- ♦ Improve Fan Tracking of VAV Systems
- ♦ Comply with ASHRAE Standards
- ♦ Save Energy
- ♦ Reduce Fan Horsepower

Product Highlights

- ♦ Accurate and Repeatable
- ♦ Long-term Stability
- ♦ Streamline Design
- ♦ Individual Fan Airflow Monitoring & Alarming
- ♦ Adjustable Mounting Brackets
- ♦ "Plug and Play" Operation
- ♦ FEP Plenum Rated Cables

General

Probe and Sensor Node Configurations
Fan Arrays (less than or equal to 4 fans): 2 probes x 1 sensor node per probe or 1 probe x 1 sensor node per probe in each fan
Fan Arrays (greater than 4 fans): 1 probe x 1 sensor node per probe in each fan (8 probe maximum)

Installed Airflow Accuracy[1]
±(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 per fan
Temperature: Independent, velocity weighted average

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 (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 ºF [-28.9 to 71.1 ºC]
Transmitter: -20 to 120 ºF [-28.9 to 48.9 ºC]
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: ±0.15ºF [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

Sensor Probe Assembly

Mounting Rods
Material: Zinc plated steel
Mounting Brackets (Forward, Face, Flare)
Material: 304 stainless steel
Mounting Brackets (Cantilever)
Material: Zinc plated steel
Mounting Options & Size Limits
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)
Flare: 6 to 57 inches [152.4 to 1447.8 mm] (opening size at backdraft damper inlet)
Cantilever: 11 to 82 inches [279.4 to 2082.8 mm] (diameter at inlet entrance)

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: 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 (GTM108e and GTC108e only)
Analog Signal Indication: Yes, on AO2 assignment

Fan Alarm
Type: Minimum airflow, % deviation from median airflow, or % deviation from maximum airflow stored in memory
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 (GTM108e and GTC108e 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.[2]

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

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