EBTRON® Advantage IV

Airflow and Temperature Measurement Device with Integral Relative Humidity Sensor (with /H option)

GTx116e-PC
Gold Series

Thermal Dispersion Airflow Technology
- Supports up to 16 Sensor Nodes
- NIST-traceable Calibration
- %-of-reading Airflow Accuracy
- Airflow and Status Alarms
- Velocity-weighted Temperature
- Output %RH, Enthalpy or Dew Point¹
- Three Mounting Styles
- Remote Transmitter with LCD Display
- 3-year Warranty

¹ Requires /H option

The GTx116e-PC is EBTRON’s top-of-the-line solution for accurate and repeatable measurement in ducts and plenums. Ruggedized RH sensor option (/H), onboard barometric pressure sensor and velocity-weighted temperature results in accurate relative humidity, enthalpy and dew point calculations. Ideal for supply, return and outdoor air intake applications on systems with an airside economizer. Bluetooth® low energy technology interface.

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**SPECIFICATIONS: GTx116e-PC**

**General**
- **Probe and Sensor Node Configurations (max.):**
  - 2 probes x 8 sensor nodes/probe
  - 4 probes x 4 sensor nodes/probe
- **Installed Airflow Accuracy**
  - Ducts/Plenums: ±3% of reading
  - Non-ducted OA Intakes: better than or equal to ±5% of reading
- **PC Sensor Density:** Refer to the PC sensor density table.
- **Sensor Node Averaging Method**
  - Airflow: Independent, arithmetic average
  - Temperature: Independent, velocity weighted average

**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 probe
  - **Temperature sensor:** Precision, hermetically sealed, bead-in-glass thermistor probe
- **Sensing Node Housing**
  - **Material:** Glass-filled Polypropylene (Kynar® with /SS option)
  - **Sensor Potting Materials:** Waterproof marine epoxy
- **Sensing Node Internal Wiring**
  - **Type:** Kynar® coated copper
- **Airflow Measurement**
  - **Accuracy:** ±2% of reading to NIST-traceable airflow standards (includes transmitter uncertainty)
  - **Calibrated Range:** 0 to 5,000 fpm [25.4 m/s]
  - **Calibration Points:** 16
- **Temperature Measurement**
  - **Type:** Velocity-weighted average
  - **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]

**Optional Relative Humidity Sensor (IH Option)**
- **Type:** Ruggedized capacitive polymer RH sensor
- **Accuracy @ 77 °F [25 °C]**
  - 20 to 80% RH: ±2% RH
  - 0 to 20 and 80 to 100% RH: ±3.5% RH
- **Temperature Coefficient:** 0.07%/°F [0.13%/°C]
- **Long Term Drift:** 0.5% RH/year
- **Calculated Measurements:**
  - Weighted relative humidity, velocity-weighted enthalpy and dew point using measured RH, velocity-weighted temperature and on-board barometric pressure sensor.

**Sensor Probe Assembly**
- **Tube**
  - **Material:** Gold anodized 6063 aluminum (316 stainless steel with /SS option)
- **Mounting Brackets**
  - **Material:** 304 stainless steel
- **Mounting Options & Size Limits**
  - **Insertion:** 6 to 191 in. [152.4 to 4851 mm]
  - **Stand-off:** 6 to 190 in. [152.4 to 4826 mm]
  - **Internal:** 10 to 194 in. [254.0 to 4928 mm]
- **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, 15, 20, 25, 30, 40 and 50 ft. [3.1, 4.6, 6.1, 7.6, 9.1, 12.2 and 15.2 m]
  - **Connecting Plug:** 13/16" [20.63 mm] nominal diameter with gold-plated connector pins

**Transmitter**
- **Power Requirement:** 24 VAC (22.8 to 26.4 under load) @20V-A max.
- **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=%RH, enthalpy or dew point when /H option is provided).
  - **GTA116e Transmitter:** No additional connectivity to B.A.S.
  - **GTC116e 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
  - **GTM116e 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
  - **GTF116e Transmitter:** One additional Lonworks Free Topology network connection
  - **GTU116e 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
- **Analog Signal Indication:** Yes, on AO2 assignment

**System Status Alarm**
- **Type:** Sensor diagnostic system trouble indication
- **Visual Indication:** Yes, LCD display
- **Analog Signal Indication:** Yes, on AO2 assignment

**EB-Link® Bluetooth® low energy Interface for Android® and iPhone®:**
- Display real-time airflow, velocity-weighted temperature, humidity, enthalpy, dew point, individual sensor node airflow/temperature data, settings and diagnostics.