

AIRFLOW MEASUREMENT WITH TEMPERATURE AND ALARM CAPABILITY



PRODUCT HIGHLIGHTS

- “Plug and Play” operation
- EBTRON exclusive bead-in-glass thermistor sensors
- Sensor nodes are individually calibrated at 16 airflow rates to NIST traceable standards
- 0 to 5,000 FPM calibrated range with percent-of-reading accuracy
- Airflow and status alarm
- Temperature output capability
- Analog and RS-485 output models
- Three mounting styles
- Remote transmitter with LCD display
- Actual (CFM) or mass (SCFM) airflow measurement
- Velocity-weighted temperature measurement between -20° F to 160° F
- Smart *Sensor Detection System (SDS)* continuously monitors for sensor and transmitter faults
- Independent test data demonstrates resistance to saltwater and chemical exposure
- Standard FEP plenum rated cable between sensor probes and transmitter
- Three-year warranty
- Toll-free customer support for the lifetime of the product

TYPICAL APPLICATIONS

- Outdoor airflow monitoring
- Small duct airflow tracking
- Hospital pressurization
- Laboratory pressurization
- Air change verification and monitoring
- Differential airflow tracking and pressure control
- System performance monitoring

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 HTx104-P is EBTRON’s most economical solution for larger systems when “out-of-the-box” installed accuracy is not required and field adjustment is acceptable. Perfect for LEED outdoor air delivery monitoring or other low sensor density airflow measurement applications. The HTx104-P transmitter has isolated outputs with a true 4-20mA output option (HTA104-P)

HTx104-P TECHNICAL SPECIFICATIONS

General

Probe and Sensor Node Configurations (max.)

Type A Transmitter: 1 probe x 4 sensor nodes/probe

Type B Transmitter: 2 probes x 2 sensor nodes/probe

Installed Airflow Accuracy¹

≤ 2 sq.ft. [0.185 sq.m.]: ±3% of reading

> 2 sq.ft. [0.185 sq.m.]: ±(3% to 10%), typical (increases with increasing duct size). May be improved by field adjustment using the Field Adjust Wizard (FAW) to a reliable reference.

PE Sensor Density: Refer to the PE sensor density table.

Sensor Node Averaging Method

Airflow: Independent, arithmetic average

Temperature: Independent, velocity weighted average

Listings and Compliance

UL: 60730-1; CAN/CSA-E60730-1

CE: Yes

UKCA: Yes

BACnet International: BTL Listed (HTN104 transmitter)

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 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 [0 to 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]

Calibration Points: 3

Sensor Probe Assembly

Tube

Material: Gold anodized 6063 aluminum (316 stainless steel with /SS option)

Mounting Brackets

Material: 304 stainless steel

Mounting Options & Standard Size Limits¹

Insertion: 6 to 191 in. [152.4 to 4851 mm]

Stand-off: 6 to 190 in. [152.4 to 4826 mm]

Internal: 8 to 194 in. [203.2 to 4928 mm]

Probe to Transmitter Cables

Type: FEP jacket, plenum rated CMP/FT6/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: 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)

¹ Installed airflow accuracy allows for additional uncertainty that results from averaging a finite number of sensors in a contorted velocity profile created from up and downstream disturbances. The specified installed accuracy is based on the PE sensor density rules for installations that meet or exceed EBTRON minimum placement requirements. PE sensor density rules may not be available for all duct sizes due to sensor placement limitations.

SENSOR DENSITY

Sensor density refers to the number of sensor nodes located in the sensing plane where the probes are mounted. Typical HVAC applications have limited straight run between up and downstream disturbances. Those disturbances can create a significant velocity profile. As a result, the installed accuracy is based not only on the sensor node accuracy, but the ability sensor nodes to average the velocity profile sufficiently. Most instrumentation manufacturers dismiss the effect of sampling error and only publish laboratory sensor accuracy.

The number of sensor nodes provided depends on the sensor density suffix (E) that follows the probe type description of "P" in the model code. A custom sensor density, Z, is also available for applications that do not fall into standard installation tables. The transmitter provides the average velocity of the sensor nodes for the true volumetric or mass air-flow of the airstream. When installed in accordance with EBTRON placement guidelines, if the duct is less than or equal to two square feet (0.185 sq.m.), the HTx104-P will provide a measurement accuracy of better than or equal to $\pm 3\%$ of reading without field adjustment. If the duct is greater than two square feet (0.185 sq.m.), the HTx104-P will provide a typical measurement accuracy of $\pm 3\%$ to 10% (increases with increasing duct size). May be improved by field adjustment using the Field Adjust Wizard (FAW) to a reliable reference.

Refer to the sensor density tables below for the specific information on the number of probes and sensors per probe for a given sensor density designation.

PE SENSOR DENSITY TABLE

PE SENSOR DENSITY TABLE (# Probes/# Sensor nodes per probe)

| | | Probe Length (inches) | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------------------|------------|-------------------------------------------------------------------------------------------------|-----|------------|------------|------------|-----|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|
| | | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 84 | 96 | 108 | 120 ² |
| Round ➤ | | <u>1/1</u> | 1/1 | 1/1 | <u>1/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 |
| Flat Oval ➤ | | All flat ovals are custom. Contact EBTRON or your representative for information on flat ovals. | | | | | | | | | | | | | | | | | | | | | |
| Square/Rectangle Adjacent Side Length (inches) | 6 | <u>1/1</u> | 1/1 | 1/1 | 1/1 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 8 | <u>1/1</u> | 1/1 | 1/1 | <u>1/2</u> | 1/2 | 1/2 | 1/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 10 | <u>1/1</u> | 1/1 | 1/1 | <u>1/2</u> | 1/2 | 1/3 | <u>1/4</u> | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 12 | <u>1/1</u> | 1/1 | 1/1 | <u>1/2</u> | <u>1/3</u> | 1/3 | <u>1/4</u> | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 14 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 16 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 18 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 20 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 22 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 24 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 30 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 36 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 42 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 48 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 54 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 | 1/4 |
| | 60 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | 1/4 |
| 66 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | 1/4 | |
| 72 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/4 | |
| 84 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | |
| 96 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | |
| 108 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | |
| 120 | <u>2/1</u> | 2/1 | 2/1 | <u>2/2</u> | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | |

NOTE:

1. UNDERLINED items cannot be manufactured as internal mount due to manufacturing limitations.
2. Probe lengths greater than 120 in. will be PZ custom sensor density.

SENSOR PROBE PLACEMENT

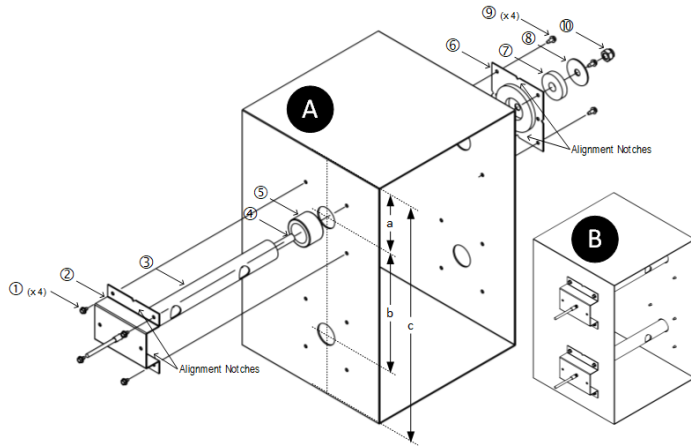
Determine the location where the sensor probes will be mounted. Refer to the O&M Manual for Duct and Plenum Probe Placement or contact EBTRON or your local EBTRON representative for assistance. A selection software tool is available at EBTRON.com that creates a placement schedule.

SENSOR PROBE INSTALLATION

Detailed installation guidelines for probes are provided in the O&M Manual for the following duct configurations.

Sensor Probe Installation Diagrams

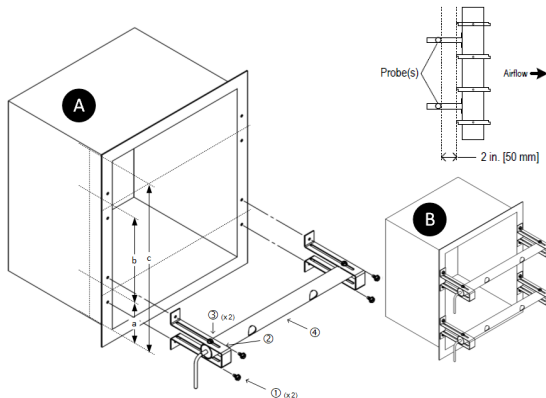
-P Probe Installation (Insertion Mounting—Rectangular Ducts)



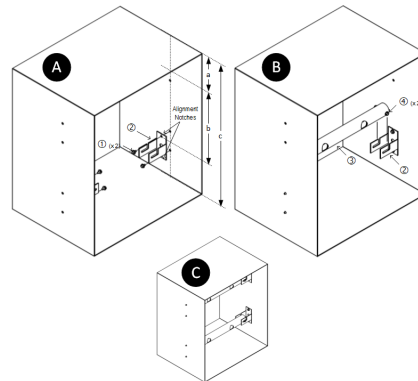
RECTANGULAR & OVAL TYPE C DUCTS

| Number of Probes | a | b |
|------------------|-----|-----|
| 1 | c/2 | |
| 2 | c/4 | c/2 |

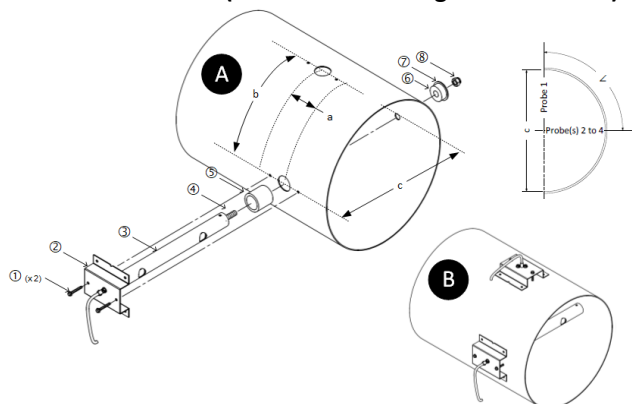
-P Probe Installation (Standoff Mounting—Rectangular Ducts)



-P Probe Installation (Internal Mounting—Rectangular Ducts)



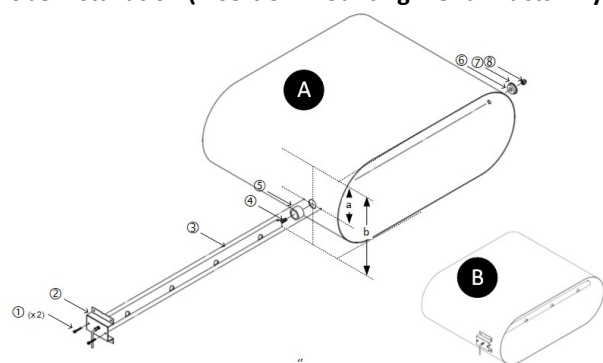
-P Probe Installation (Insertion Mounting—Round Ducts)



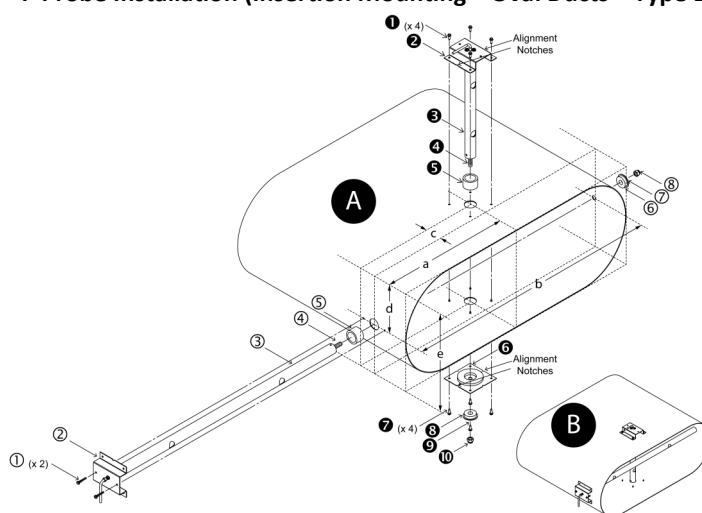
ROUND DUCTS

| Number of Probes | a | b | ∠ from previous |
|------------------|-----------|-------|-----------------|
| 1 | | | |
| 2 | 2" [50mm] | 0.79c | 90° |

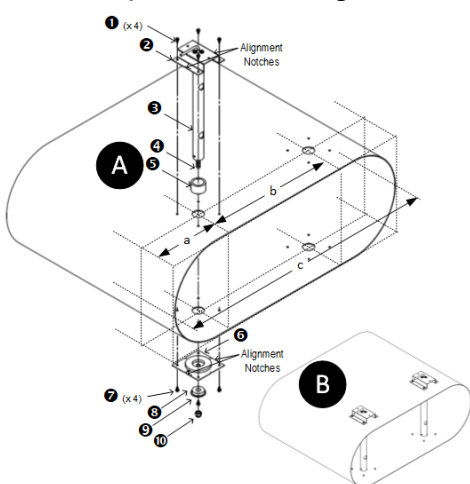
-P Probe Installation (Insertion Mounting—Oval Ducts—Type A)



-P Probe Installation (Insertion Mounting—Oval Ducts—Type B)

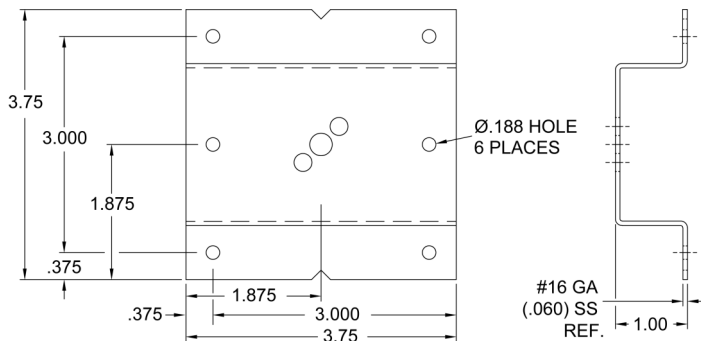


-P Probe Installation (Insertion Mounting—Oval Ducts—Type C)

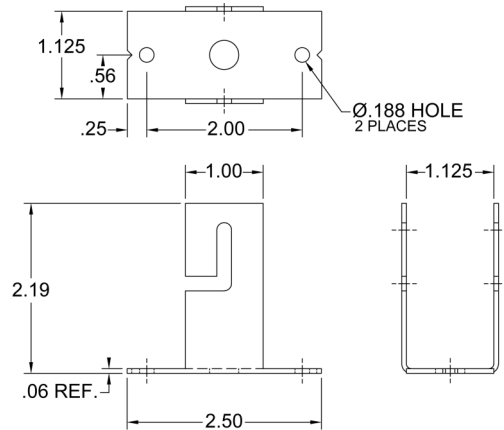


Sensor Probe Mounting Bracket Dimensions

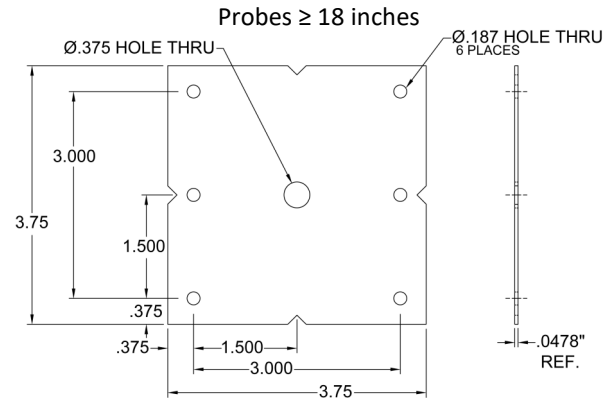
INSERTION MOUNTING BRACKET - Insertion Side



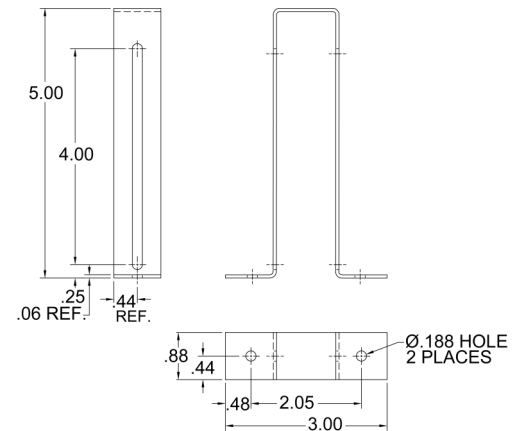
INTERNAL MOUNTING BRACKET (x2)



INSERTION MOUNTING BRACKET - Terminal Side



STANDOFF MOUNTING BRACKET (x2)



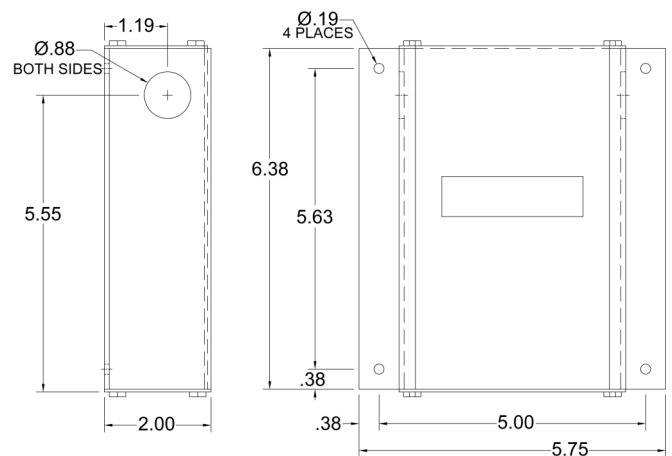
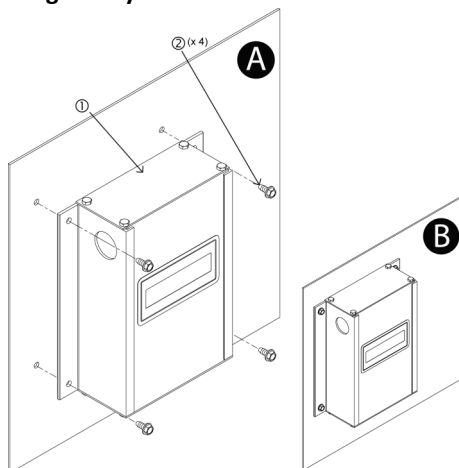
TRANSMITTER INSTALLATION AND WIRING

Detailed installation guides for transmitters are provided in the O&M Manual for the connectivity options that follow. All HTx104 transmitters are provided with either an analog (x = A) or a RS-485 (x = N) output.

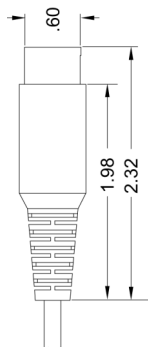
Locate the transmitter where all of the sensor probe connecting cables will reach the transmitter and it is protected from moisture, rain, and snow.

Transmitter Mounting Diagram and Dimensions

Advantage IV Hybrid Series Transmitter Installation



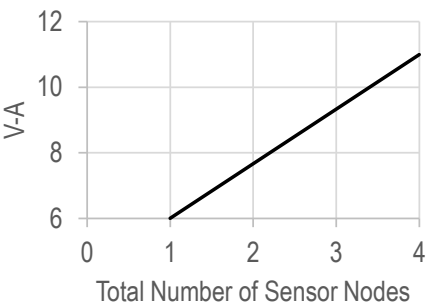
All Models - Probe Connector and Power Requirement



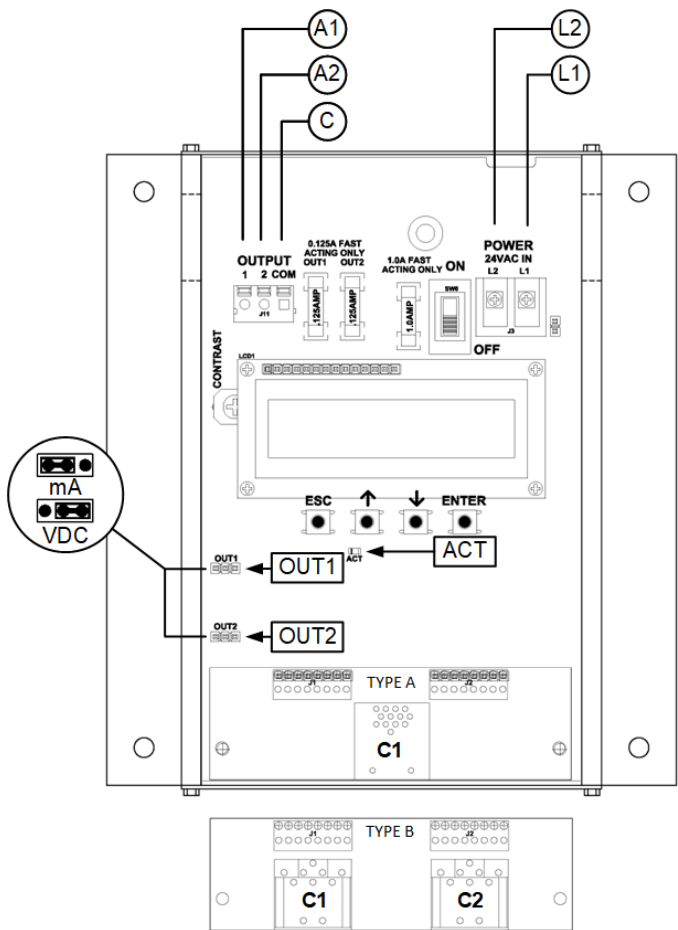
⚠ Push in **keyed** connector plugs (sensor data is stored in serial memory chip in connector plug). **DO NOT TWIST!**

ⓘ Cables have an FEP plenum rated jacket that are UV tolerant and suitable for operation over the entire operating temperature range of the device.

V-A REQUIREMENT @ 24 VAC



HTA104-P - Wiring and Probe Connections



TRANSMITTER CONNECTIONS

| Power | | Analog Out (isolated) | | | Type | |
|--------------|------------------|-----------------------|------------------------|---------------|---------------------------|----------------------------|
| L1 | L2 | A1 | A2 | C | A | B |
| 24 VAC (hot) | 24 VAC (neutral) | Airflow + | Temperature or Alarm + | Signal Common | 1 probe x 4 sensors/probe | 2 probes x 2 sensors/probe |

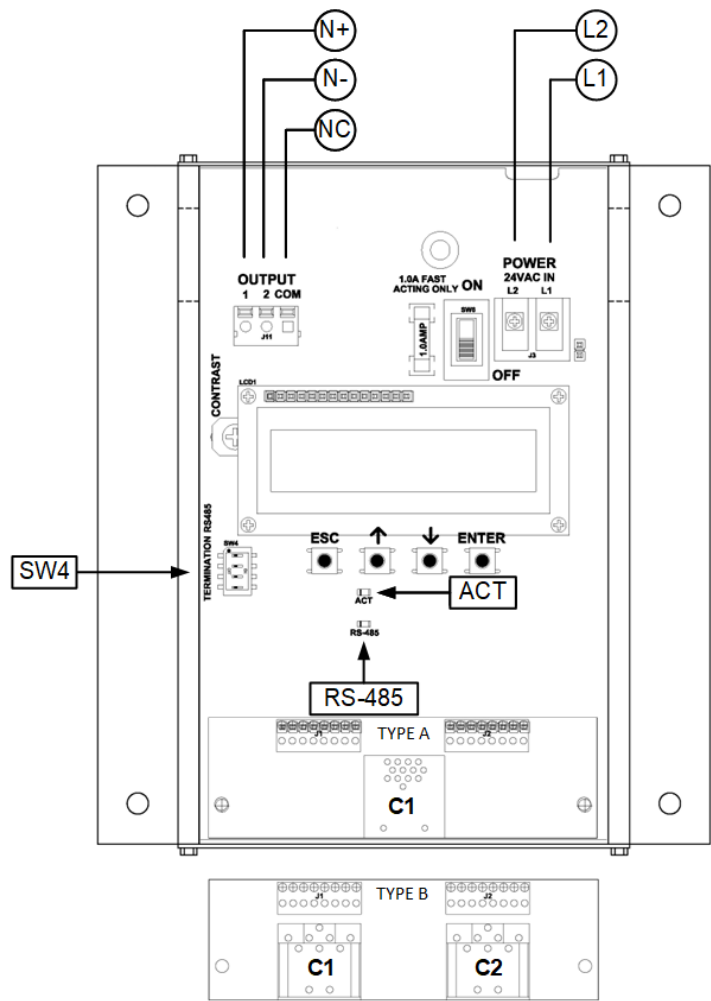
Connect each analog output signal required to the host B.A.S. using shielded twisted-pair wire. Properly terminate the shield (typically at the B.A.S.).

⚠ If twisted pair wire and/or shielded cable is not used, extraneous electrical noise can be picked up between the transmitter and host control panel.

ⓘ Analog output signals are electrically isolated from the main circuit board and power supply.

ⓘ Transmitters are preconfigured for 4-20mA. Consult the Startup Guide for the appropriate model to change the output to either 0-5 VDC or 0-10 VDC.

HTN104-P - Wiring and Probe Connections



TRANSMITTER CONNECTIONS

| Power | | RS-485 (isolated) | | | Type | |
|--------------|------------------|-------------------|-----------|----------------|---------------------------|----------------------------|
| L1 | L2 | N+ | N- | NC | A | B |
| 24 VAC (hot) | 24 VAC (neutral) | Network + | Network - | Network Common | 1 probe x 4 sensors/probe | 2 probes x 2 sensors/probe |

Use a 3-conductor network cable meeting the corresponding BACnet or Modbus standards. Ensure that all three connections, N+, N- and NC are connected.

- Refer to the O&M Manual for information regarding network configuration, BACnet objects, and Modbus registers.
- Transmitters are preconfigured for BACnet MS/TP. Consult the Startup Guide for the appropriate model to change the output to Modbus RTU network protocol.

! If a 2-conductor network cable or other non-conforming cable is used, network speed, length and reliability may be compromised or network failure may occur.

SW4—RS-485 TERMINATION DIP SWITCH POSITIONS

| 1 | 2 | 3 | 4 | TERMINATION |
|-----|-----|-----|-----|--------------------------|
| OFF | OFF | OFF | OFF | No termination (default) |
| OFF | ON | ON | OFF | End of Line |
| ON | OFF | OFF | ON | Fail-Safe Bias |

STARTUP

Detailed startup guides are provided in the O&M Manual.

VERIFICATION, TROUBLESHOOTING, AND MAINTENANCE

Verification and troubleshooting is discussed in detail in the O&M manual.

EBTRON airflow monitoring devices are factory calibrated and should not require periodic maintenance or recalibration in most HVAC environments. If the sensor probes are installed in a location that is subject to excessive dust, lint, or other airborne debris accumulation, filtration at the source or access for cleaning should be provided. Please note that this issue is not specific to EBTRON or EBTRON technology. Consult EBTRON to discuss specific concerns or suggested remedies if airborne particulates are a concern.

APPLICATION REVIEW REQUESTS

EBTRON and/or your local representative will review the application and make recommendations on the proper use of this device prior to requesting a quotation or placing an order. Provide as much of the following information as possible to facilitate the review process:

- | | |
|-----------------------------------------------------------|---------------------------------------------------|
| ✓ Service: SA, RA, OA, EA, Other (specify) | ✓ Immediate up and downstream disturbance and the |
| ✓ Duct or opening size where the probes will be installed | distance between disturbances |
| ✓ Minimum and maximum expected airflow rates | ✓ Mechanical drawings or sketches |
| ✓ Minimum and maximum expected airstream | ✓ Sequence of operation |
| temperatures | ✓ Control schematic |

QUOTATIONS AND ORDERING

Use the model code below to request a quote or place an order. Quotations and orders are provided by your local EBTRON representative.

HT 104 · P / : x / :

Custom Configuration Z Only

- Custom Layout
{blank} = standard, C = custom
- Number of Sensors/Probe
1 Probe: 1, 2, 3, 4
2 Probes: 1, 2
- Number of Probes
1, 2, 3, 4

Internal Insulation
{leave blank} = none, Enter internal insulation thickness of one side

Adjacent Side Length (including internal insulation of both sides if applicable)
Enter the opening dimension of the side the probe is inserted or connected to

Probe Length (including internal insulation of both sides if applicable)
Enter the opening dimension that the probes are mounted parallel to
Note: Standoff probes are built 2 inches larger than the Probe Length entered

Probe Cable Length
10 = 10 ft., 15 = 15 ft., 20 = 20 ft., 25 = 25 ft., 30 = 30 ft., 40 = 40 ft., 50 = 50 ft.
Note: Custom lengths between 3 ft. and 50 ft. are available

Mounting Style
1 = Insertion, 2 = Internal, 3 = Stand-off

Shape
1 = Rectangle, 2 = Round, 3 = Oval (Type A), 4 = Oval (Type B), 5 = Oval (Type C)

Option list: Separate options with additional /

Tube Material
{leave blank} = Aluminum, SS = 316 Stainless steel w/Kynar sensor nodes

Units of Measure for Dimensions
{leave blank} = I-P, SI = metric

Sensor Density
Standard Densities: E
Custom Density: Z (fill in custom section)

Connectivity
A = isolated analog outputs (AO1 = airflow, AO2 = temperature or alarm)
N = RS-485 field selectable BACnet MS/TP or Modbus RTU