



Model STx104 Transmitter/ Sensor Probes



Economically measure airflow rates and temperature in ducts, plenums and fan inlets. Measure outside air intake flow rates and temperature in unit ventilators.

- Accurate and repeatable
- Factory calibrated to NIST traceable airflow and temperature standards
- True average, independent multi-point sensing
- Advanced Thermal Dispersion (TD) airflow measurement technology
- Microprocessor based digital circuitry
- Exclusive "plug and play" SMART sensor design

The Silver Series is ideal for applications on a "tight" budget. It is competitively priced with lesser quality pneumatic systems. "Percent of reading" accuracy assures reliable and repeatable measurement throughout the entire range of airflow and temperature.

Every *EBTRON* is a complete, factory tested device that does not require additional transmitters or transducers to interface to your host Building Automation System. Lower your startup and maintenance costs, and improve the control of your HVAC system by selecting this attractively priced *EBTRON* airflow and temperature measurement technology.



STx104-**P** Economy Airflow/Temperature Measurement

Ideal for the direct measurement of outside air intakes as well as airflow measurement in ducts and plenums. The STx104-P is *EBTRON's* economy airflow measurement system. Flexible mounting options simplify installation. When installed in accordance to published guidelines, accurate and repeatable measurement necessary for most HVAC applications can be achieved.



STx104-**F** Fan Inlet Airflow/Temperature Measurement

Accurate and repeatable fan inlet measurement, ideal for fan tracking. The streamline design of the STx104-F does not significantly degrade fan performance or increase sound levels. Available in six standard sizes with adjustable mounting brackets to simplify ordering and installation.



STx104-**U** Unit Ventilator Airflow/Temperature Measurement

Outside air intake flow rates on unit ventilators are very susceptible to wind and stack pressure variations. When combined with an appropriate DDC controller, the STx104-U can assure that proper outside airflow rates are maintained. The STx104-U easily mounts in many of today's popular unit ventilators (consult *EBTRON* for compatibility).

Technical Specifications

STx104-P
Ducts & Plenums

STx104-F
Fan Inlet

STx104-U
Unit Ventilator

System Performance

Installed airflow accuracy (typ. ± % of Reading)
Repeatability (± % of Reading)

3% to 10%	3% to 10%	3% to 6%
0.25%		

Sensor Probe Specifications

Sensor Assembly Model

SP1	SF1	SU1
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Probe Construction

Mill Finish 6061 aluminum , 316 SS	304 stainless steel mounting block w ith Zinc plated adjustable rod	N/A
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Sensors

Hermetically sealed "bead-in-glass" thermistors

Sensor Housing

Glass-filled polypropylene , Kynar	Glass-filled polypropylene	
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Mounting brackets

304 SS	304 SS	304 SS
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Mounting

Insertion, internal or stand-off	Centrifugal or vane axial fans	Unit ventilator OA intake
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Probe size range

8" to 192"	11" to 64"	4" Opening
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Cable Assembly

"Plug and Play", UL Plenum-Rated

Length

10' Standard (up to 50' optional)	5' (up to 50' optional)	
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Connection to Transmitter

5/8" Circular DIN

Number of air velocity calibration points

16	16	16
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Number of temperature calibration points

3	3	3
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Maximum number of sensors per sensor probe

4	1	1
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Sensor distribution

Equal area or Log-Tchebycheff	Equal area	Equal area
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Airflow sensor accuracy (± % of Reading)

2%	2%	2%
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Calibrated range

0-5,000 FPM	0-10,000 FPM	0-3,000 FPM
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Temperature sensor accuracy (±)

0.15° F

Sensor Temperature Range

-20° F to 160° F (0-1,500 FPM)
30° F to 160° F (>1,500 FPM)

Humidity Range

0 to 99% RH, non-condensing

Transmitter Specifications

Transmitter Model

STx104		
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Maximum number of sensors per location

4	4 (2 per inlet)	2
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Microprocessor

Powered by Motorola® Digital DNA™

A/D Converter

12-Bit

Power Requirement

24 VAC (22.5 - 29 VAC), 8 V-A max. (fused and protected on transmitter, isolation not required)

Chassis (Enclosure)

Aluminum (protect from the weather)

Output Signal Adjustments

Field adjustable digital primary output gain

Analog Output Configuration

STA104 Transmitter

Analog Output Protection

Fused and protected ISOLATED analog outputs

Analog Output Signals

[4-20 mA](#) or 0-10 VDC

Analog Output Resolution

0.025% of SELECTED range

Output Signal Ranges

Airflow (unidirectional[0-])

Set by DIP switches, see data sheet

Airflow Factory Default Scale

0-5,000 FPM	0-10,000 FPM	0-1,500 FPM
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Temperature

Set by DIP switches, see data sheet

Temperature Factory Default Scale

[-20° F to 160° F](#)

Transmitter Temperature Range

-20° F to 120° F

Warranty & Startup

Standard Warranty

36 Months from shipment

underlined items indicate *Factory Default Settings*