

the Eliminator™ Product Data Sheet

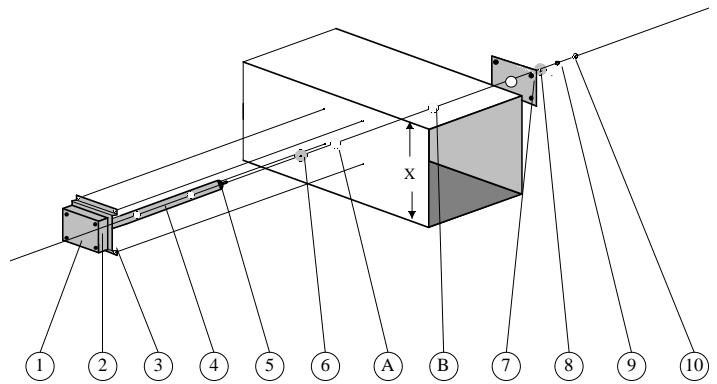
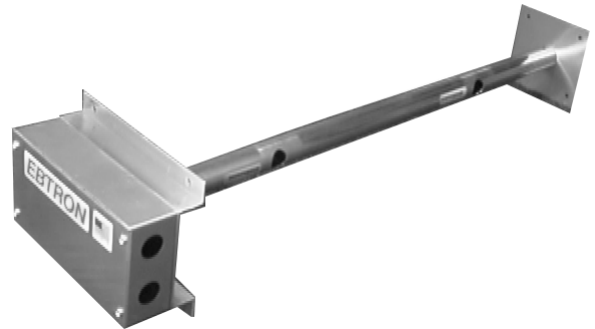
The Eliminator T003 temperature sensor probe is designed for simple insertion into a duct. This highly accurate averaging thermistor temperature sensing probe is factory calibrated and provides the user with a linear output signal for temperature. When combined with intelligent DDC systems, the *Eliminator* affords the engineer and building manager a cost effective tool for the accurate and reliable control necessary to meet the requirements of today's air distribution systems. Maintenance free and easy to install.

Effective and Economical Measurement For:

- Accurate discharge air temperature control
- Mixed air temperature control
- Process temperature control

Features:

- Microprocessor based electronics with “watchdog” timer circuitry to assure continuous operation after power resets and brownouts
- Highly reliable and stable instrument grade thermistor probes
- Each sensing point is independent
- True average temperature output
- 1:1 isolation transformer assures a “floating” output to host control interface



Specifications

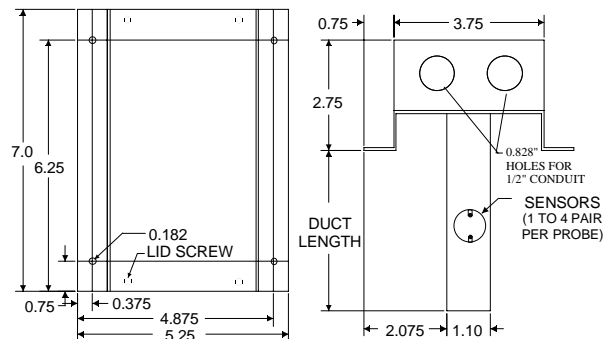
PERFORMANCE		
Sensor Accuracy - Temperature	typ.	0.18° F
	max.	0.36° F
Output Resolution		0.4% of F.S.
OUTPUT SIGNAL		
Temperature	std.	linear 0-5 VDC
	opt.	linear 4-20mA
OUTPUT SCALING		
Temperature	std.	Custom when ordered
POWER REQUIREMENT		
AC Power Input		24 VAC @ 6.6 VA +- 10%
OPERATING RANGES		
Operating Temperature Range		20° to 160° F
Operating Humidity Range		0 to 99% RH
PRESSURE DROP		
Pressure Drop @ 2000 ft/min	max.	0.005 in w.g.
CONSTRUCTION		
Sensors per Probe		1 to 4
Probe Enclosure	std.	Aluminum 5052 & 6063-T52
	opt.	NEMA 4
Probe Body	std.	304 Stainless Steel
	opt.	316 Stainless Steel
Sensor Housing	std.	Glass Filled Polypropylene
	opt.	Kynar
Temperature Sensor		Instrument Grade Thermistor

Mechanical Construction

- **Enclosure and cover [1 and 2]:** Stamped, 0.04", 5052 alloy sheet, aluminum, non rated enclosure, access for two (2) 1/2" conduit connections
- **External Support Bracket [3]:** Extruded, 6063-T52 alloy, aluminum
- **Support Struts [4]:** Tubular, 6063-T6 alloy, aluminum; 1.1" O.D.
- **Terminal Mounting Stud (probes ≥ 18") [5]:** 3/8"x 16, zinc plate, steel
- **Insertion Side Gasket [6]:** Neoprene Rubber
- **External Support Bracket [7]** Stamped, 0.04", 5052 alloy sheet, aluminum
- **Terminal Side Gasket (probes ≥ 18") [8]:** Neoprene Rubber
- **Fender Washer (probes ≥ 18") [9]:** Zinc plate, steel
- **Lock Nut (probes ≥ 18") [10]:** Nickel plate, steel

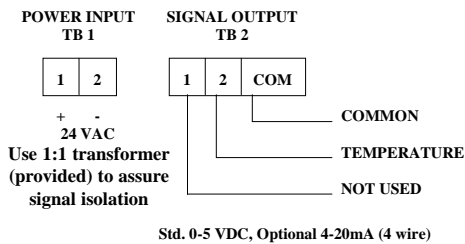
Sensor Construction

- **Temperature Sensor:** glass encapsulated, hermetically sealed, industrial thermistor probe
- **Sensor Housing:** Glass Filled Polypropylene
- **Sensor Assembly Compounds:** epoxy
- **Internal Wiring:** Kynar® coated copper



NOTE: 3/8" X 1.5" THREADED ROD EXTENDS FROM END WHEN UNIT IS 18" OR LONGER

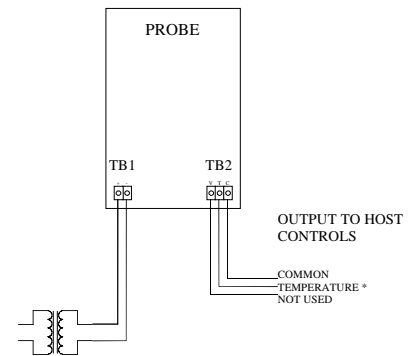
Wiring



TERMINAL CONNECTIONS

Model	VA
T113	6.6
T123	6.6
T133	6.6
T143	6.6

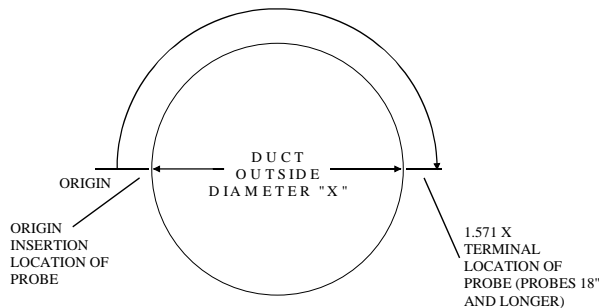
POWER REQUIREMENTS



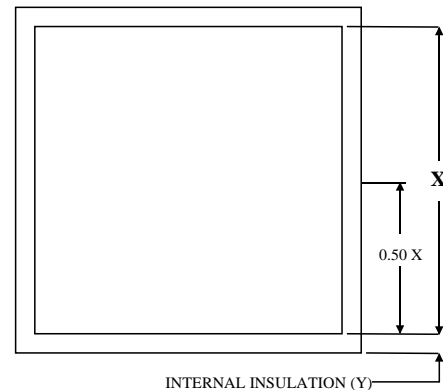
24 VAC ONLY

WIRING SCHEMATIC

Installation



INSTALLATION IN ROUND DUCTS



INSTALLATION IN RECTANGULAR DUCTS

Suggested Engineers Guide Specification

Insert under the temperature measurement heading in the Temperature Control Section of the Specification [optionally, T003 sensors can also appear in the AHU section of the specification]

A. Manufacturer

1. Base Bid: **EBTRON** Inc., ModelSeries T003

B. Temperature Measurement: Averaging temperature sensor using instrument grade thermistor temperature sensors. Measurement drift shall not exceed Manufacturers repeatability statement for the life of the equipment. Manufacturer shall provide test data for accuracy performance prior to bid date.

1. **EBTRON** Model T003 Duct Mounted Sensor

a) Flow Station Construction

(1) Type: Duct Mounted

(2) Sensors : One glass encapsulated thermistor temperature sensor for each sensing point.

(3) Sensor Housing: Noryl [option for corrosive environments, insert: Kynar]

(4) Sensors per probe: 1 to 4

(5) Support Struts: Tubular Aluminum 6063-T6 extrusion [option for corrosive environments, insert: 316 Stainless Steel]

(6) Supporting Bracket: Aluminum 5052 sheet & 6063-T52 extrusion [option for corrosive environments, insert 304 Stainless Steel]

b) Electronics

(1) Type: Microprocessor Based, totally solid state.

(2) Power Requirement: 24 VAC. Multiple Model T003 probes wired from a single

transformer must be wired in phase.

(3) Enclosure: Aluminum, indoor use only. [option, insert: NEMA 4, outdoor use][option for corrosive environments, insert: 304 Stainless Steel]

c) Performance

(1) Electronics temperature range: 30 to 160 F

(2) Temperature sensor temperature range: 20 to 160 F

(3) Pressure drop: less than 0.005 inwc @ 2000 ft./min

(4) Humidity range: 0 to 99% RH (non-condensing)

(6) Analog output signal: 0-5VDC [option 4-20mA, 4-wire]

(a) Sensor temperature accuracy: typ. 0.18 F, max. 0.36 F

(b) Type: linear

(c) Repeatability: +- 0.2% scale

(d) Resolution: 0.4% scale

d) Warranty

(1) 36 months from shipment, parts and factory labor as described in the Company's Standard Terms & Conditions of Sale

Ordering Information

T 1 a 3 - b c - d e - f g

a- Sensors per Probe: 1 to 4

b- Probe Length (inches)

c- Internal Insulation (inches, each side of duct)

d- Shape and Material: 1=alum. rect., 2=alum. rnd., 3=alum. oval, 4=SS rect., 5=SS rnd., 6=SS oval

e- Input Power: 1=24 VAC, 2=110 VAC

f- Output Signals: 1=0-5 VDC temp., 3*=4-20 temp.

g- Temperature Signal Range: 1=30°-80°F, 2=Custom °F, 3=Custom °C

* Optional configuration, may require additional charges

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