ET Series

Temperature Sensor



Product Description

The ET Series temperature sensors offer high accuracy and interchangeability over a wide temperature range. These sensors can be used in the following applications:

- Room
- Duct
- Immersion
- Averaging
- Strap-on
- Bead/bullet
- Outdoor air

Features

- High accuaracy and interchangeability over a wide temperature range
- Non-polarity sensitive

Available Products

Description	TAC Vista	TAC/NET	Andover Continuum	TAC I/A Series	1000 Ω Platinum	1000 Ω BALCO
Room	ETR100	ETR200	ETR500	ETR800		
Room with Setpoint	ETR101	ETR201	ETR501	ETR801		
Room with Override Pushbutton	ETR102	ETR202	ETR502	ETR802		
Room with Setpoint and Override Pushbutton	ETR103	ETR203	ETR503	ETR803		
Stainless Wallplate (No Logo)	ETP100	ETP200	ETP500	ETP800		
Stainless Wallplate (Schneider Electric Logo)	ETP100-L	ETP200-L	ETP500-L	ETP800-L		
4” Duct (Galvanized Steel Enclosure)	ETD100-4	ETD200-4	ETD500-4	ETD800-4	ETDPK0-4	ETDBK0-4
6” Duct Galvanized Steel Enclosure)	ETD100-6	ETD200-6	ETD500-6	ETD800-6	ETDPK0-6	ETDBK0-6
8” Duct (Galvanized Steel Enclosure)	ETD100-8	ETD200-8	ETD500-8	ETD800-8	ETDPK0-8	ETDBK0-8
12” Duct (Galvanized Steel Enclosure)	ETD100-12	ETD200-12	ETD500-12	ETD800-12	ETDPK0-12	ETDBK0-12
4” Duct without Enclosure	ETD100- NE-4	ETD200- NE-4	ETD500- NE-4	ETD800- NE-4	ETDPK0- NE-4	ETDBK0- NE-4
6” Duct without Enclosure	ETD100- NE-6	ETD200- NE-6	ETD500- NE-6	ETD800- NE-6	ETDPK0- NE-6	ETDBK0- NE-6

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Available Products (cont.)

Description	TAC Vista	TAC/NET	Andover Continuum	TAC I/A Series	1000 Ω Platinum	1000 Ω BALCO
8” Duct without Enclosure	ETD100- NE-8	ETD200- NE-8	ETD500- NE-8	ETD800- NE-8	ETDPK0- NE-8	ETDBK0- NE-8
12” Duct without Enclosure	ETD100- NE-12	ETD200- NE-12	ETD500- NE-12	ETD800- NE-12	ETDPK0- NE-12	ETDBK0- NE-12
2.5” Immersion (Galvanized Steel Enclosure)*	ETI100-2	ETI200-2	ETI500-2	ETI800-2	ETIPK0-2	ETIBK0-2
4” Immersion (Galvanized Steel Enclosure)*	ETI100-4	ETI200-4	ETI500-4	ETI800-4	ETIPK0-4	ETIBK0-4
6.25” Immersion (Galvanized Steel Enclosure)*	ETI100-6	ETI200-6	ETI500-6	ETI800-6	ETIPK0-6	ETIBK0-6
8’ Averaging (Flexible Copper)	ETA100-8	ETA200-8	ETA500-8	ETA800-8		
12’ Averaging (Flexible Copper)	ETA100-12	ETA200-12	ETA500-12	ETA800-12	ETAPK0-12	ETABK0-12
24’ Averaging (Flexible Copper)	ETA100-24	ETA200-24	ETA500-24	ETA800-24	ETAPK0-24	ETABK0-24
Outside Air	ETO100	ETO200	ETO500	ETO800		
Strap On	ETS100	ETS200	ETS500	ETS800		
Bead / Bullet	ETB100	ETB200	ETB500	ETB800		

* Length indicates immersion depth.

Miscellaneous Options	Code
LCD display in Fahrenheit (for room units only)	-LCD
LED indicator (for room units with override only)*	-LED
Thermometer indicator (for room units only)	-TI
RS232 communication jack (for use with I/NET systems only)	-RS232
Four-pin RJ11 communication jack (for use with TAC Vista and Andover Continuum systems only)	-RJ4

* Not available on TAC I/A series, 1000 Ohm Platinum or 1000 Ohm BALCO.

Well Type	Part Number
2.5” stainless steel well*	ETI-WELL-2S
4” stainless steel well*	ETI-WELL-4S
6.25” stainless steel well*	ETI-WELL-6S

* Length indicates immersion depth.

Specifications

	For TAC Vista, I/NET, Continuum, and I/A	1000 Ω Platinum	1000 Ω BALCO
Output	1.8 kΩ @ 77 °F (25 °C) Vista 10 kΩ @ 77 °F (25 °C) I/Net 10 kΩ @ 77 °F (25 °C) Continuum 10 kΩ @ 77 °F (25 °C) with 11k Ω shunt resistor I/A	1 kΩ @ 32 °F (0 °C)	1000 Ω @ 70 °F (21 °C)
Temperature Range	-40 to 302 °F (-40 to 150 °C)	-58 to 392 °F (-50 to 200 °C) -50 to 275 °F (-45.5 to 134.8 °C)	-40 to 240 °F (-40 to 116 °C)
Interchangability	+/- 0.2 °F (0 to 70 °C) +/- 0.36 °F (32 to 158 °C)		
Temperature Coefficient		0.00385 Ω/Ω/°C	2.2 Ω/°F
Dissipation Constant Stability	3 mW/ºC		
Accuracy	+/- 0.2 °C (0 to 70 °C) +/- 0.36 °F (32 to 158 °C)	+/- 0.06% @ 32 °F (0 °C) Single Point +/- 1.0 Ω @ 70 °F (Averaging)	+/- 0.1%
Operating Humidity	0 to 90% RH non-condensing		

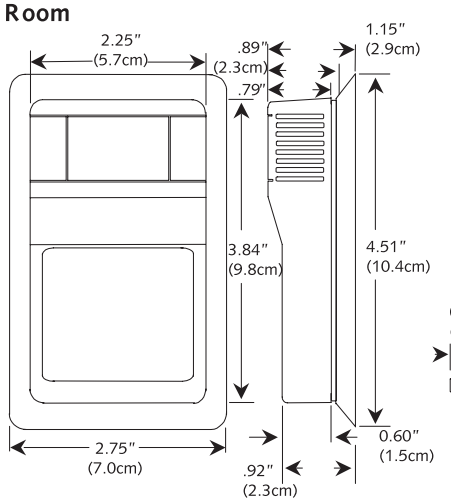
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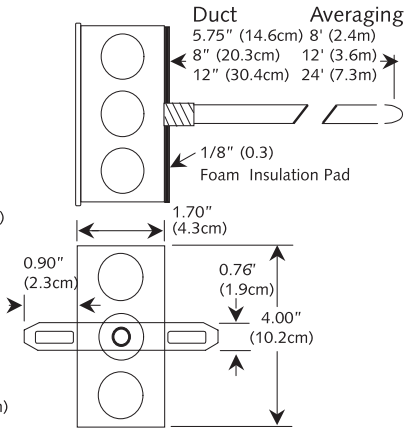
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Dimensions

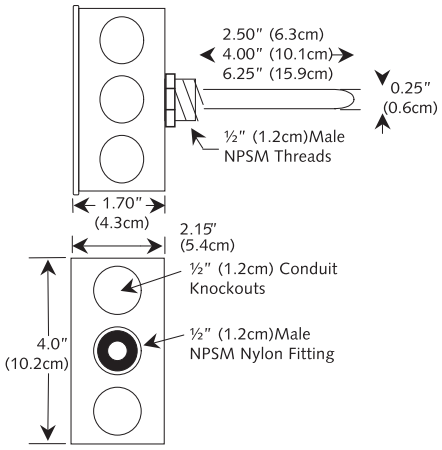
Room



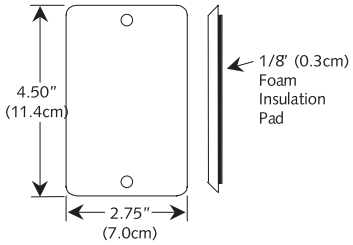
Duct / Averaging



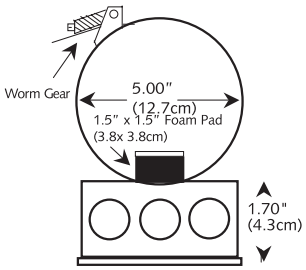
Immersion



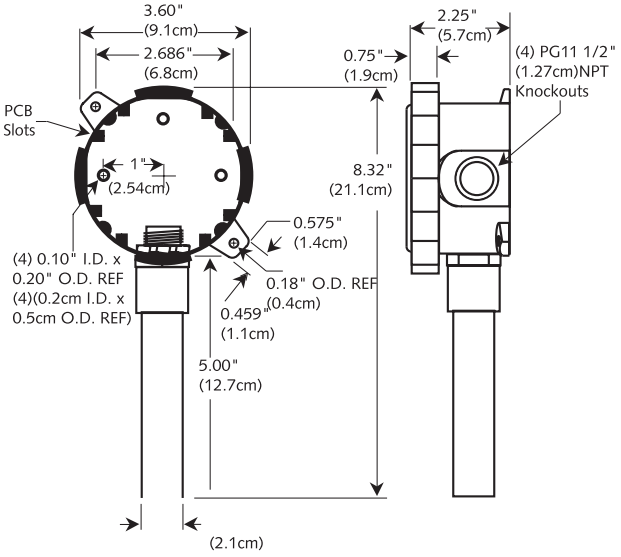
Stainless Plate



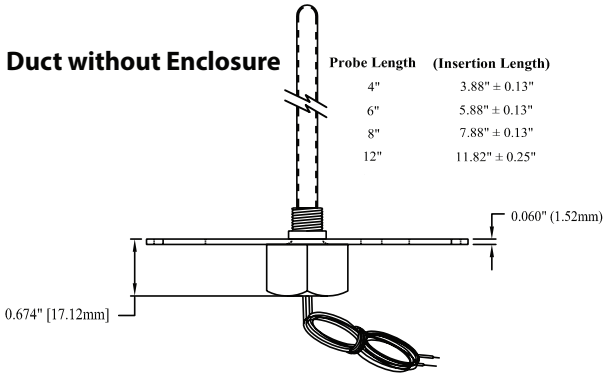
Strap-On



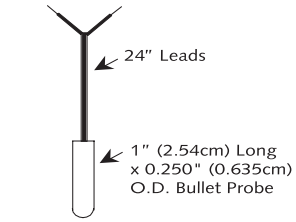
Outside Air



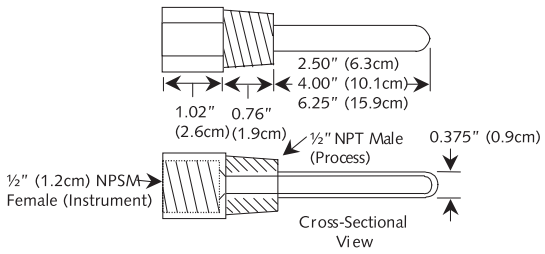
Duct without Enclosure



Bullet Probe



Thermowell



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Installation

Room Temperature Sensors

This unit is suitable for either drywall mounting or junction box mounting. The room sensor is provided with screw terminal blocks for all connections. Remove the cover from the unit and mount the housing base to the wall using the (2) 6/32" x 1" machine screws. Replace the cover and tighten down, using the (2) 1/16" Allen screws located on the bottom of the enclosure.

Duct and Duct Averaging Sensors

For duct temperature sensors:

1. Drill a 3/8" hole in the duct and insert the probe through the hole until the foam pad is tight to the duct.
2. Insert the two screws through the mounting holes in the flange and tighten until the unit is held firmly to the duct.

For duct averaging sensors:

1. Drill a 3/8" hole in the duct and insert the averaging element through the hole until the foam pad is tight to the duct.
2. Insert the two screws through the holes in the mounting flange and tighten until the unit is held firmly to the duct.

The sensor should then be strung in a criss-cross pattern throughout the duct using the mounting clips provided, in a pattern that covers the greatest surface area of the duct, to insure that there is no stratification. When bending the copper tubing, be careful that you use a gradual bend and do not kink the copper tubing.

Immersion Temperature Sensors

The immersion sensors are used with either a brass or stainless steel thermowell (purchased separately) in 2-1/2", 4" or 6" lengths. Heat transfer compound may be used but it is not necessary.

Strap-on Temperature Sensors

Strap-on sensors are provided in a NEMA 1 rated junction box with an adjustable 2" to 5" pipe clamp. The unit should be mounted on the bottom side of the pipe to ensure proper heat transfer and a true temperature reading. Heat transfer compound and insulating the sensor will help the overall accuracy of the sensor. By ordering extra straps, and fastening them together, it is possible to make them fit larger pipes.

Outside Air Temperature Sensors

The outdoor air temperature sensors are provided in a weatherproof enclosure. An optional weatherproof aluminum bell box or NEMA 4x polycarbonate enclosure is also available upon request for an additional charge. All of the mounting hardware is provided with the sensor. Be sure to mount the sensor out of direct sunlight, with the sensor probe pointing downward.

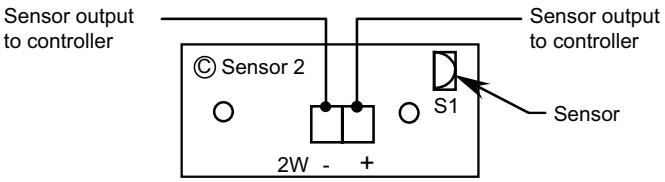
Stainless Plate Temperature Sensors

The stainless plate temperature sensors are mounted on the back of a single-gang stainless steel plate. The foam pad will insulate the sensor from any drafts in the wall. Two 6/32" x 1" machine screws are provided for junction box mounting. Be sure that the sensor is not mounted on an outside wall, due to the extreme temperature changes from either drafts or heat transfer. Stainless plate sensors are available with or without the Schneider Electric logo.

Wiring

For wiring information on room temperature sensors, refer to the following documents:

System	Document Number
Vista	F-27616
I/NET	F-27617
Continuum	F-27618
I/A	F-27619



Note: This diagram applies to ET sensors except ETR.

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