

TEMPERATURE

ALL-PURPOSE THERMISTOR SENSOR MODEL ST-A◇



DESCRIPTION

The PreCon **Model ST-A◇ All-Purpose Thermistor Sensor** provides precision remote temperature sensing for building automation systems and mechanical equipment room instrumentation. The active sensing element is made of a highly stable precision thermistor material accurate to within $\pm 0.36^{\circ}\text{F}$ (0.2°C).

The **Model ST-A◇** is a rugged, point-sensitive waterproof sensor featuring a 9" (22.8 cm) 304 stainless steel probe and brass fitting. The brass fitting has a 1/2" NPT male thread. The sensor is supplied with two 1/2" locknuts for easy installation in handboxes (or other enclosures with 1/2" knockouts).

FEATURES

- **Five-year warranty**
- **$\pm 0.36^{\circ}\text{F}$ (0.2°C) accuracy**
- **Wide selection of thermistor curves**
- **Tip sensitive for precise temperature response**
- **Adaptable with many options**
- **All metal construction with 304 stainless steel probe**
- **Easy to mount to duct, wall, or back box**
- **Waterproof probe**

OPTIONS

- **Custom lengths up to 9' (2.74m)**
- **Matched sensor pairs**
- **Dual sensor probe**
- **NIST traceable**



APPLICATION

The **Model ST-A◇** is waterproof and can be used where it is possible for the sensed temperature to fall below the ambient dew point, causing condensation to occur on the sensor. However, it is important that the field connection be made as far as possible from the sensed media. The sensing element is sealed with a thermally conductive compound in a versatile 9" long stainless steel tube with a brass electrical fitting. The all-purpose probe is suitable for plenum mounting, duct mounting, immersion wells, or outside air. The operating range is -30° to 230°F (-34° to 110°C).

SPECIFICATIONS			
Sensing element	Thermistor (thermal resistor)	Sensitivity	See <i>Sensor Resistance Charts</i> in the Technical Reference Section
Accuracy	$\pm 0.36^{\circ}\text{F}$ (0.2°C) (NIST traceable is optional)	Stability	0.24°F (0.13°C) over five years
Sensor types available	2.252K, 3K, 10K, 20K, 100K (ref. in ohms @ $77^{\circ}\text{F}/25^{\circ}\text{C}$)	Heat dissipation	$2.7 \text{ mW}/^{\circ}\text{C}$ (power needed to raise the temperature by 1°C)
Temp range	-30° to 230°F (-34° to 110°C)	Connection	8' (2.4m) of 24 AWG pigtailed with prestripped ends
Temp response	Negative temperature coefficient	Mounting	Directly to duct, wall, or customer-supplied back box, no adapters needed for standard boxes

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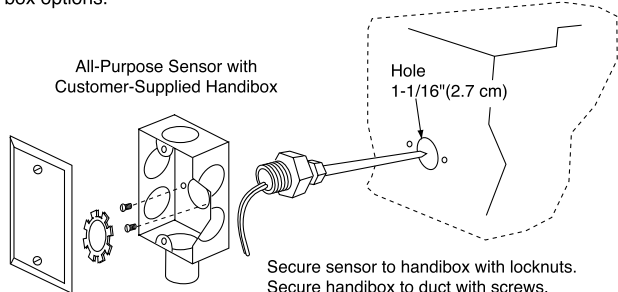
MODEL ST-A◇



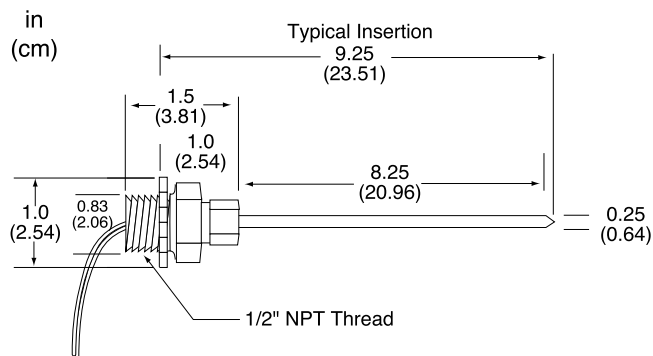
MOUNTING

Locknuts provide direct mounting and can be used where conduit is not required. Mount directly to electrical outlet boxes as shown below.

Basic model comes with two locknuts for mounting to a variety of box options.



DIMENSIONS



Use the full 8' (2.4m) lead length provided to avoid moisture migration at the field connection.

ORDERING INFORMATION

MODEL	DESCRIPTION
ST-A3	10,000Ω All-Purpose Thermistor @ 77°F (25°C) Type III Material (gray leads)
ST-A21	2252Ω All-Purpose Thermistor @ 77°F (25°C) Type II Material (green leads)
ST-A22	3000Ω All-Purpose Thermistor @ 77°F (25°C) Type II Material (blue leads)
ST-A24	10,000Ω All-Purpose Thermistor @ 77°F (25°C) Type II Material (yellow leads)
ST-A27	100,000Ω All-Purpose Thermistor @ 77°F (25°C) Type II Material (gray leads)
ST-A42	20,000Ω All-Purpose Thermistor @ 77°F (25°C) Type IV Material (green leads)
OPTIONS (see page 45 for option details)	
XCO	1/2" LB conduit fitting
XD	Dual sensors in one probe
XH	Handibox housing (factory installed)
XHP	Non-metallic handibox housing (factory installed)
XL	Custom probe length, available 2' to 9' (5.08 cm to 2.74m) in 1" (2.5 cm) increments
XL2	Custom length insertion probe, 4-7/8" (12.38 cm)
XN1	NIST certificate, 1 reference point 32°F (0°C)
XN2	NIST certificate, 2 reference points 32°/160°F (0°/77°C)
XP	Matched sensor pair (shipped in pairs, matched to ±0.1°F/0.06°C)
XW	Weatherproof housing (factory installed)
X25	25' (7.62m) lead length

ST-A24 - XP

Example: ST-A24-XP 10,000Ω Type II all-purpose temperature sensor with matched sensor

Related Products

UR Moisture resistant three-wire butt splice