



TEMPERATURE

EXECUTIVE ROOM THERMISTOR AND RTD SENSORS

ST-S*E, ST-S*EW SERIES

DESCRIPTION

The Precon **ST-S*E** and **ST-S*EW Series Executive Room Sensors** provide precision room temperature sensing for building automation systems. The active sensing element is made of a highly stable, precision thermistor material or platinum RTD.

FEATURES

- **Lifetime warranty**
- **$\pm 0.36^{\circ}\text{F}$ ($\pm 0.2^{\circ}\text{C}$) thermistor accuracy**
- **$\pm 0.27^{\circ}\text{F}$ ($\pm 0.15^{\circ}\text{C}$) or $\pm 0.54^{\circ}\text{F}$ ($\pm 0.30^{\circ}\text{C}$) RTD accuracy**
- **Ultra high accuracy optional**
- **Wide selection of thermistor and RTD curves**
- **Vented housing for quick temperature response**
- **Adaptable with many options**
- **Traditional beige or white covers**
- **Durable plastic housing and base plate**
- **Easy to mount to wall or electrical box**



ST-S*E-XA-XME-XPL-XTAC

Precon™

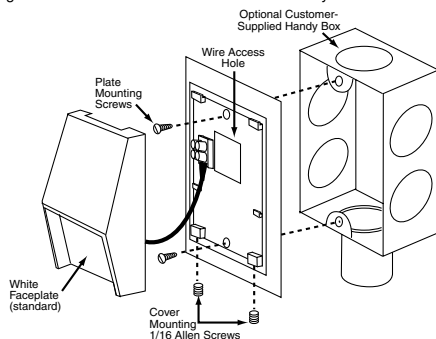


ST-S*EW

TYPICAL MOUNTING

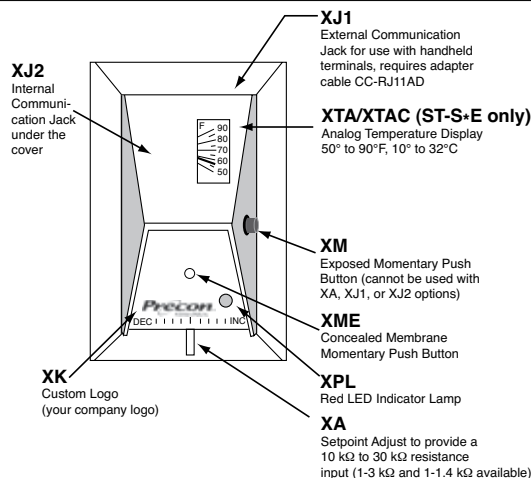
Toggle bolts or other direct wall-mount screws can be used where conduit is not required. Adapters are not required when mounting directly to electrical outlet boxes.

Basic model comes with screw terminal block, white decorator faceplate, two #6-32 screws for handybox mounting, and two #6 x 1" screws for direct wall mounting. Cover screws are #6-32 with a 1/16" allen key head.



The sensor should be mounted approximately 5' (12.7 cm) above the floor, on an interior wall, away from any heating or cooling generating devices.

TYPICAL COVER WITH MULTIPLE OPTIONS



SPECIFICATIONS

Accuracy

Thermistor $\pm 0.36^{\circ}\text{F}$ (0.2°C)

RTD

Type 63 $\pm 0.72^{\circ}\text{F}$ (0.40°C)

Type 71 $\pm 0.054^{\circ}\text{F}$ (0.03°C)

Type 81, 85 $\pm 0.27^{\circ}\text{F}$ (0.15°C)

Type 91 $\pm 0.54^{\circ}\text{F}$ (0.30°C)

Sensor types available

Thermistor 2.252 kΩ, 3 kΩ, 10 kΩ, 20 kΩ, 100 kΩ

RTD

Type 63 1000Ω Nickel

Type 71, 81 100Ω Pt 385 Curve

Type 85 1000Ω Pt 385 Curve

Type 91 1000Ω Pt 375 Curve

Temperature range

Thermistor 10° to 230°F (-12° to 110°C)

RTD

Type 63 -76° to 392°F (-60°C to 200°C)

Type 71

Type 81, 85, 91

Temperature response

-58° to 572°F (-50°C to 300°C)

-67° to 240°F (-55°C to 115°C)

Thermistor

Negative temperature coefficient

RTD

Positive temperature coefficient

Stability

Thermistor

0.24°F (0.13°C) over five years

RTD

<0.09°F (0.05°C) over five years

Heat dissipation

2.7 mW/°C (power needed to raise the temperature by 1°C)

Connections

Mounting

Terminals

Directly to wall or customer-supplied back box, no adapters needed for standard boxes

Enclosure

ST-S*E

Beige plastic with tan metal face plate

ST-S*EW

White plastic with white metal face plate

Weight

0.2 lb (0.09 kg)

Warranty

Lifetime

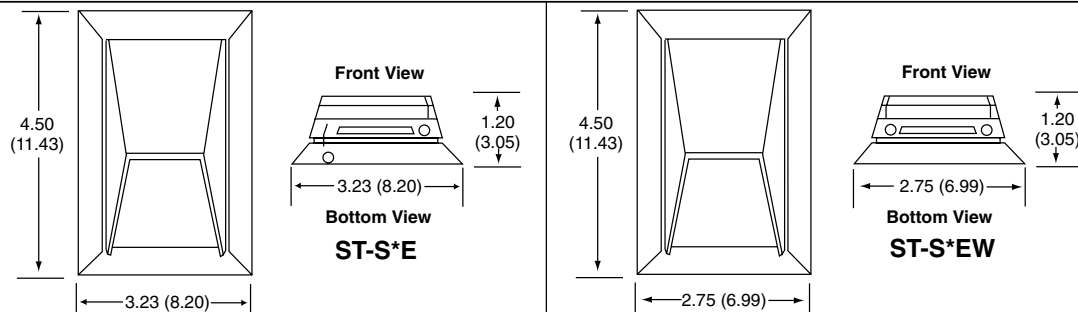
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DIMENSIONS



ORDERING INFORMATION

MODEL	DESCRIPTION
ST-S3	10,000 Ω executive thermistor @ 77°F (25°C), Type III (gray leads)
ST-S21	2252 Ω executive thermistor @ 77°F (25°C), Type II (green leads)
ST-S22	3000 Ω executive thermistor @ 77°F (25°C), Type II (blue leads)
ST-S24	10,000 Ω executive thermistor @ 77°F (25°C), Type II (yellow leads)
ST-S27	100,000 Ω executive thermistor @ 77°F (25°C), Type II (gray leads)
ST-S42	20,000 Ω executive thermistor @ 77°F (25°C), Type IV (green leads)
ST-S63	1000 Ω nickel executive RTD @ 70°F (21°C), (yellow leads)
ST-S71	100 Ω ultra high accurate executive RTD @ 32°F (0°C), 385 platinum curve (blue leads)
ST-S81	100 Ω executive RTD @ 32°F (0°C), 385 platinum curve (yellow leads)
ST-S85	1000 Ω executive RTD @ 32°F (0°C), 385 platinum curve (blue leads)
ST-S91	1000 Ω executive RTD @ 32°F (0°C), 375 platinum curve (green leads)
E	Executive beige enclosure with wide back plate
EW	Executive white enclosure with narrow back plate
OPTIONS	(List options in alphabetical order with dashes)
R	Rugged moistureproof coating 3.5"
R#	Rugged moistureproof coating. # equals number of feet of the coating
XA *	Setpoint adjustment (10,000 Ω to 30,000 Ω , resistance input)
XA10K *	Setpoint adjustment (1,000 Ω to 3,000 Ω , resistance input)
XA2K *	Setpoint adjustment (1,000 Ω to 1,400 Ω , resistance input)
XD	Dual sensors
XGR	Gray decorator faceplate (tan is standard)
XJ1 *	RJ11 externally-accessible communication jack (CCRJ11AD required)
XJ2 *	Internal RJ11 communication jack
XK	Custom Logo
XM **	Momentary switch wired N.O. to terminal block
XME	Membrane momentary switch wired only N.O. to terminal block, tan faceplate only
XMP	Membrane push button switch (XME) with terminals for separate button termination
XN	NIST certificate of conformance
XN1	NIST certificate, one reference point 32°F (0°C)
XN2	NIST certificate, two reference points 32°F/158°F (0°C/70°C)
XN3	NIST certificate, three reference points 32°F/77°F/158°F (0°C/25°C/70°C)
XP	Matched sensor pair, matched to $\pm 0.1^\circ\text{F}$, 0.05°C (must order two sensors)
XPA	Ultra high accuracy, thermistors only, $\pm 0.135^\circ\text{F}$ (0.075°C)
XPL *	Red LED lamp externally powered 24VAC/VDC
XTA ▲	Analog temperature display, 50 to 90°F $\pm 1^\circ\text{F}$
XTAC ▲	Centigrade analog temperature display 10 to 32°C $\pm 1^\circ\text{C}$
XZ ▲	Three wire RTD connections (Optional only on Type 81, standard on Type 71)

ST-S3 - E - XA - XTA

Example: ST-S3-E-XA-XTA 10,000 Ω Type III executive sensor zone with setpoint adjustment and analog display

* Circuit board option | ** Cannot be mounted in conjunction with *options | ▲ Not available on EW housing

RELATED PRODUCTS

CC-RJ11AD
79-1
KT1
10-531Adapter cable for XJ1 option with female RJ11 8-pin connector
Replacement battery for XTD and XTC option
Mounting screwdriver 1/16" Allen key
Wall adaptor plate 7" x 5.25" (for ST-S*EW)