

# TEMPERATURE

## SUBMERSIBLE THERMISTOR AND RTD SENSORS ST-TS\* SERIES



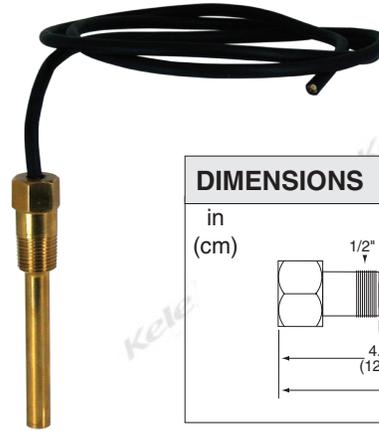
Precon™



### DESCRIPTION

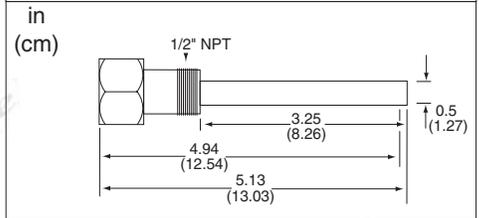
The Precon ST-TS\* Series Tank Thermistor and RTD Sensors provide precision remote temperature sensing for cooling tower tanks for use in building automation systems. The active sensing element is a highly stable precision thermistor material or platinum RTD.

The sensing element is rugged and sealed in a thermally conductive compound. The housing is a standard brass immersion well that has the weight to keep the sensor submerged and is compatible for all liquids suitable with brass. Water resistant cable is used.



ST-TS\*

### DIMENSIONS



### FEATURES

- Lifetime warranty
- Wide selection of thermistor and RTD curves
- Brass thermowell for quick temperature response
- Water resistant cable
- Ultra high accuracy optional
- One piece design

### SPECIFICATIONS

<b>Accuracy</b>		<b>Temperature Coefficient</b>	
<b>Thermistor</b>	±0.36°F (0.2°C)	<b>Thermistor</b>	Negative temperature coefficient
<b>RTD</b>		<b>RTD</b>	Positive temperature coefficient
<b>Type 63</b>	±0.72°F (0.40°C)	<b>Temperature Stability</b>	
<b>Type 71</b>	±0.054°F (0.03°C)	<b>Thermistor</b>	0.24°F (0.13°C) over five years
<b>Type 81, 85</b>	±0.27°F (0.15°C)	<b>RTD</b>	<0.09°F (0.05°C) over 5 years
<b>Type 91</b>	±0.54°F (0.30°C)	<b>Heat Dissipation</b>	2.7 mW/°C (power needed to raise the temperature by 1°C)
<b>Sensor Type</b>		<b>Mounting</b>	Lower sensor into cooling tower tank, support cable at wiring box, use water proof connectors
<b>Thermistor</b>	2.252 kΩ, 3 kΩ, 10 kΩ Type II & III, 20 kΩ, 100 kΩ	<b>Wiring Terminations</b>	8' (2.44m) 2 conductor for SJO 18/2 water resistant cable
<b>RTD</b>		<b>Approvals</b>	CE
<b>Type 63</b>	1000Ω Nickel	<b>Weight</b>	0.8 lb (0.36 kg)
<b>Type 71, 81</b>	100Ω Pt 385 Curve	<b>Warranty</b>	Lifetime
<b>Type 85</b>	1000Ω Pt 385 Curve		
<b>Type 91</b>	1000Ω Pt 375 Curve		
<b>Temperature Range</b>			
<b>Thermistor/RTD</b>	-40° to 221°F (-40° to 105°C)		

### ORDERING INFORMATION

MODEL	DESCRIPTION
ST-TS3	10,000Ω tank sensor thermistor @ 77°F (26°C), Type III (gray leads)
ST-TS21	2252Ω tank sensor thermistor @ 77°F (26°C), Type II (green leads)
ST-TS22	3000Ω tank sensor thermistor @ 77°F (26°C), Type II (blue leads)
ST-TS24	10,000Ω tank sensor thermistor @ 77°F (26°C), Type II (yellow leads)
ST-TS27	100,000Ω tank sensor thermistor @ 77°F (26°C), Type II (gray leads)
ST-TS42	20,000Ω tank sensor thermistor @ 77°F (26°C), Type IV (green leads)
ST-TS63	1000Ω nickel tank sensor RTD @ 70°F (21°C) (yellow leads)
ST-TS71	100Ω tank sensor RTD @ 32°F (0°C) (blue leads)
ST-TS81	100Ω tank sensor RTD @ 32°F (0°C) (yellow leads)
ST-TS85	1000Ω tank sensor RTD @ 32°F (0°C) (blue leads)
ST-TS91	1000Ω tank sensor RTD @ 32°F (0°C) (green leads)
<b>OPTIONS</b>	
XC25	25' (7.6m) lead length cable
XD	Dual sensors
XN1	NIST Certificate, one reference point 32°F (0°C)
XN2	NIST Certificate, two reference point 32°F (0°C)
XN3	NIST Certificate, three reference point 32°F (0°C)
XP	Matched pair
XPA	Ultra high accuracy, thermistors only, ±0.135°F (0.075°C)
S	Stainless steel thermowell

ST-TS3-XN1 Example: ST-TS3-XN1 10,000Ω tank sensor thermistor with NIST one reference point certificate

	RELATED PRODUCTS	PAGE
T85U-XR	1000 ohm, Type 85 4-20 mA temperature transmitter, custom rangeable	1279
T81U-XR	100 ohm, Type 81 4-20 mA temperature transmitter, custom rangeable	1281
T91U-XR	1000 ohm, Type 91 4-20 mA temperature transmitter, custom rangeable	1277
UR	Moisture-resistant three-wire butt splice	229