

# TEMPERATURE

## RING LUG THERMISTOR AND RTD SENSOR ST-L\* SERIES



Precon



### DESCRIPTION

The Precon ST-L\* Series Thermistor and RTD Ring Lug Sensors provide precision equipment temperature sensing for building automation systems. The active sensing element is made of a highly stable, precision thermistor material or platinum RTD.

The ring lug design allows the sensor to be mounted to a bolt or stud to monitor equipment temperature. A common use is to monitor motor winding temperature by mounting to the motor housing. It comes in sizes to accommodate 1/4", 5/16" and 3/8" studs or bolts.



ST-L\*

### FEATURES

- Lifetime warranty
- Wide selection of thermistor and RTD curves
- Ring lug mounting for equipment monitoring
- Three stud sizes available
- Ultra high accuracy optional



SPECIFICATIONS	
<b>Accuracy</b>	
<b>Thermistor</b>	±0.36°F (0.2°C)
<b>RTD</b>	
Type 63	±0.72°F (0.40°C)
Type 71	+/-0.0774°F (0.043°C)
Type 81, 85	±0.27°F (0.15°C)
Type 91	±0.54°F (0.30°C)
<b>Sensor Type</b>	
<b>Thermistor</b>	2.252 kΩ, 3 kΩ, 10 kΩ Type II, III & III w/11K shunt, 20 kΩ, 100 kΩ
<b>RTD</b>	
Type 63	1000Ω Nickel
Type 71, 81	100Ω Pt 385 Curve
Type 85	1000Ω Pt 385 Curve
Type 91	1000Ω Pt 375 Curve
<b>Temperature Range</b>	
<b>Thermistor/RTD</b>	-40° to 221°F (-40° to 105°C)
	<b>Temperature Coefficient</b>
	<b>Thermistor</b> Negative temperature coefficient
	<b>RTD</b> Positive temperature coefficient
	<b>Temperature Stability</b>
	<b>Thermistor</b> 0.24°F (0.13°C) over five years
	<b>RTD</b> Max 0.04% after 1k hours @ 500 °C
	<b>Heat Dissipation</b> 2.7 mW/°C (power needed to raise the temperature by 1°C)
	<b>Mounting</b> Directly to stud or bolt
	<b>Wiring Terminations</b> 24 AWG, UL low voltage to 105°C Connections 8' (2.4m) of 24 AWG prestripped pigtails, type 71 & 81 sensors have 18" leads
	<b>Weight</b> 0.1 lb (0.05 Kg) w/o options w/o options
	<b>Approvals</b> CE
	<b>Warranty</b> Lifetime



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### ORDERING INFORMATION

MODEL	DESCRIPTION
ST-L3	10,000Ω lug thermistor @ 77°F (25°C), Type III (gray leads)
ST-L11K	10,000Ω lug thermistor @ 77°F (25°C), Type III with 11K shunt (gray leads)
ST-L21	2252Ω lug thermistor @ 77°F (25°C), Type II (green leads)
ST-L22	3000Ω lug thermistor @ 77°F (25°C), Type II (blue leads)
ST-L24	10,000Ω lug thermistor @ 77°F (25°C), Type II (yellow leads)
ST-L27	100,000Ω lug thermistor @ 77°F (25°C), Type II (gray leads)
ST-L42	20,000Ω lug thermistor @ 77°F (25°C), Type IV (green leads)
ST-L63	1000Ω nickel lug RTD @ 32°F (0°C) (yellow leads)
ST-L71	100Ω lug RTD @ 32°F (0°C) 385 Platinum Curve (blue leads)
ST-L81	100Ω lug RTD @ 32°F (0°C) 385 Platinum Curve (yellow leads)
ST-L85	1000Ω lug RTD @ 32°F (0°C) 385 Platinum Curve (blue leads)
ST-L91	1000Ω lug RTD @ 32°F (0°C) 375 Platinum Curve (green leads)

#### OPTIONS

<b>25</b>	1/4" Stud Size
<b>31</b>	5/16" Stud size
<b>38</b>	3/8" Stud size
<b>XN1</b>	NIST certificate, one reference point 32°F(0°C)
<b>QD<sup>1</sup>/<sub>4</sub></b>	Nylon insulated quick disconnect 1/4"
<b>X25</b>	25' (7.6m) lead length 24 AWG
<b>XC25</b>	25' (7.6m) lead length 24 AWG jacketed cable
<b>XCP25</b>	25' (7.6m) non-shielded 22AWG plenum cable
<b>XN</b>	Certificate of conformance
<b>XN1</b>	NIST certificate, one reference point 32°F(0°C)
<b>XN2</b>	NIST certificate, two reference points 32°F/158°F(0°C/70°C)
<b>XN3</b>	NIST certificate, three reference points 32°F/77°F/158°F(0°C/25°C/70°C)

ST-L3 — 25 — XN1

**Example:** ST-L3-25-XN1 10,000Ω mini probe sensor with NIST one reference point certificate

#### RELATED PRODUCTS

<b>T85U-XR</b>	1000 ohm, Type 85 4-20 mA temperature transmitter, custom rangeable
<b>T81U-XR</b>	100 ohm, Type 81 4-20 mA temperature transmitter, custom rangeable
<b>T91U-XR</b>	1000 ohm, Type 91 4-20 mA temperature transmitter, custom rangeable