



TS-SP Transmitter Series

Strap-On Temperature Transmitters



Overview

This series are single point strap-on temperature transmitters that incorporate a precision platinum RTD encapsulated in a stainless steel probe. All probes provide excellent heat transfer, fast response and resist moisture penetration. A transmitter that provides a high accuracy signal with excellent long term stability, low hysteresis and fast response is provided. This temperature transmitter is available with various enclosures to fit any application.

Applications

- ❑ Used for measuring temperature on supply and return hot water pipes used in heating systems
- ❑ Incorporated in chillers to monitor temperature gradients
- ❑ Used in heat exchangers and air handling units to provide temperature sensing for control of heating / cooling coils.

Features & Benefits

- ❑ Economical
- ❑ Ease of installation
- ❑ Probes made of corrosion resistant 304 stainless steel
- ❑ Accurate temperature monitoring for increased comfort
- ❑ Transmitters are hermetically sealed

Accessories

Calibration Certificate

TS-NIST	Calibration Certificate
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Note: Calibration certificates must be purchased at the time of purchasing the relative sensors.

Model Selection

		TS-	SP	C04	PS	002	R1
Mounting Style	SP = Strap-on, probe						
Control Signal Output	C04 = Current, 4-20mA V05 = Voltage, 0-5VDC V10 = Voltage, 0-10VDC						
Enclosure	PS = Plastic square enclosure PR = Plastic round enclosure MJ = Metal junction box enclosure MW = Metal weatherproof enclosure						
Probe Length	002 = 2"						
Temperature Range	R1 = 0° - 35°C (32° - 95°F) R2 = 0° - 50°C (32° - 122°F) R3 = 0° - 100°C (32° - 212°F) R4 = -50° - 50°C (-58° - 122°F)						

Product Specifications

Environmental

Operating temperature	-40°C to 85°C; -40°F to 185°F
Storage temperature	-40°C to 85°C; -40°F to 185°F
Ambient humidity	0 to 95% Non-condensing

Transmitter/Sensor/Probe

Transmitter Accuracy	±0.1% of span, including linearity
Temperature Sensor Type ¹	1000Ω Platinum RTD
Sensor Accuracy	±0.3°C (±0.54°F) @ 0°C (32°F)
Output Signal	4-20mA current loop, 0-5 Vdc, or 0-10 Vdc
Probe Sensing Range	-20 to 105°C (-4 to 221°F)
Probe Dimension	6.35 mm (0.25") Diameter
Probe Material	Aluminum Plate with compressible foam backing

Enclosure

Material:

<input type="checkbox"/> Plastic square enclosure (PS)	Grey ABS Type: UL94-5VB IP61 (NEMA12)
<input type="checkbox"/> Plastic round enclosure (PR)	Grey ABS; Type: UL94-5VB; IP65 (NEMA4X)
<input type="checkbox"/> Metal junction box enclosure (MJ)	Galvanized Steel Type: IP50 (NEMA1)
<input type="checkbox"/> Metal weatherproof enclosure (MW)	Cast Aluminum Type: IP64 (NEMA3X)

Shipping Weight:

<input type="checkbox"/> Plastic square enclosure (PS)	0.60lbs (0.2727kg)
<input type="checkbox"/> Plastic round enclosure (PR)	0.60lbs (0.2727kg)
<input type="checkbox"/> Metal junction box enclosure (MJ)	1.00lbs (0.4550kg)
<input type="checkbox"/> Metal weatherproof enclosure (MW)	1.20 lbs (0.5455 kg)

Electrical

Minimum Loop Current	2 mA nominal (occurs with shorted sensor)
Maximum Loop Current	22.5 mA nominal (occurs with open sensor)
Maximum Loop Load	>600Ω
4-20 mA Loop Power Supply	15-35 Vdc or 22-32 Vac
0-5 Vdc Power Supply	10-35 Vdc or 10-32 Vac
0-10 Vdc Power Supply	15-35 Vdc or 15-32 Vac
Maximum Current (Voltage)	5 mA nominal
Input Voltage Effect	Negligible over specified operating range
Maximum Output (Voltage)	Limited to <5.5 Vdc for 0-5 Vdc, <10.5 for 0-10 Vdc
Protection Circuitry	Reverse voltage protected and output limited
RFI Rejection	Good RFI rejection of normal frequencies
Wire Material	PVC Insulated, parallel bonded (Type 2, 100 Plat. Uses FT4)
Wire Length	1.524 m (5')

Agency Approvals

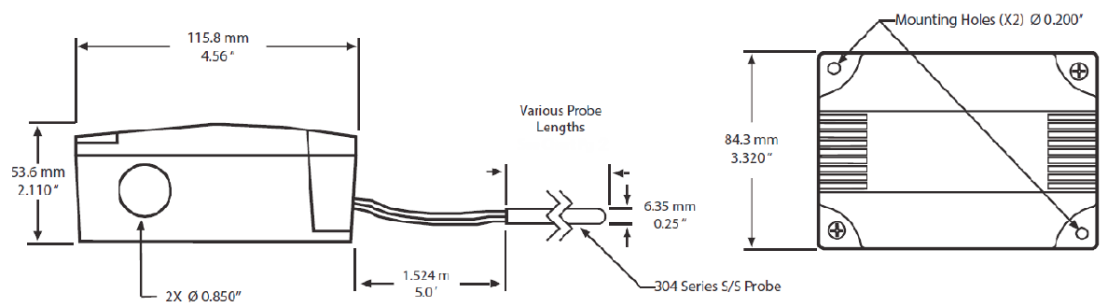
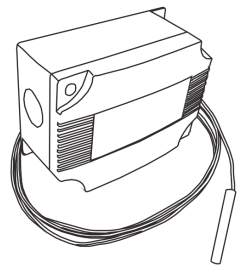
Material ²	UL94-5VB
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1. Temperature sensor type stated is standard. Other temperature sensor types are available.

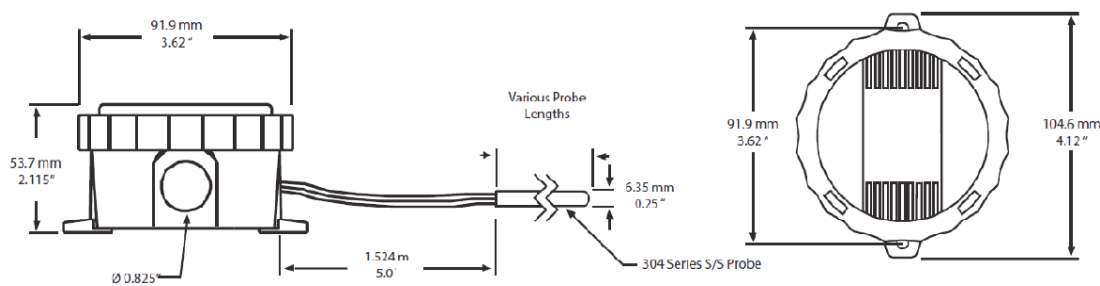
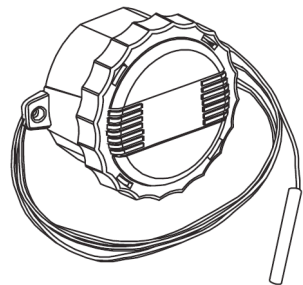
2. All materials and manufacturing processes comply with the RoHS directive

Dimensions

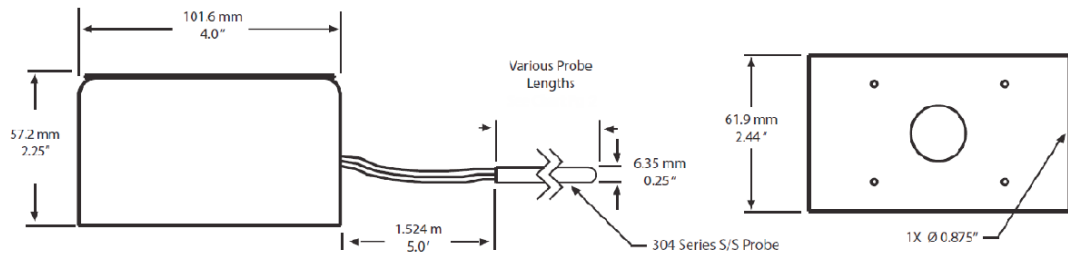
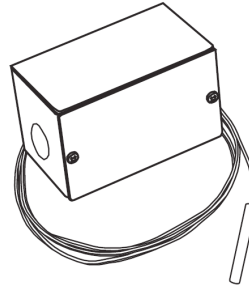
ABS Enclosure



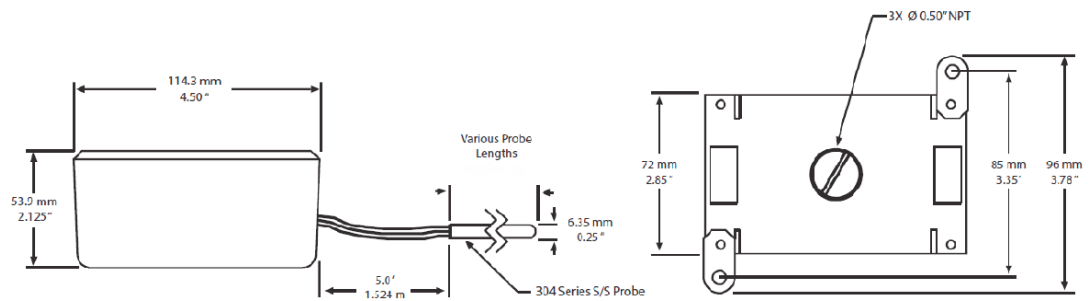
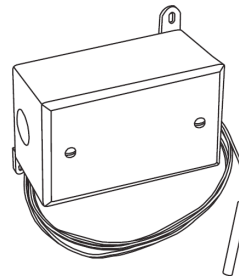
Round ABS Enclosure



Metal Enclosure



Weatherproof Enclosure



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