

Temperature Sensors

TS Series



TS3003



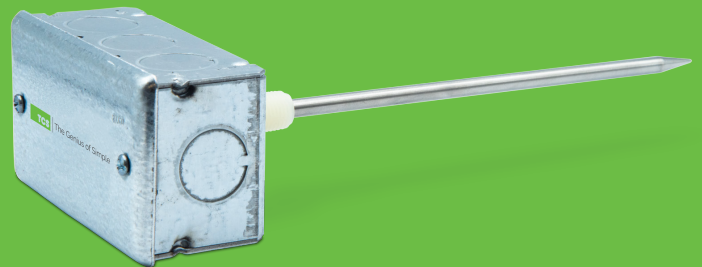
TS1006



TS3000



TS2007



TS1002



TS1005



TS1000



TS1007

Description

The TS Series 1000Ω RTD (Resistance Temperature Detector) platinum single-point sensors are available in a variety of configurations to suit most applications. The continuous-averaging sensors (TS1006, TS1008) utilize a bendable, copper-sheathed proprietary element that matches the characteristics of platinum but at a more cost-effective price point.

TS Series sensors are compatible with all TCS room controllers and many other brands of thermostats capable of measuring inputs from a remote sensor.

TS Series Features

- Long-term stability
- Linear, drift-free operation
- Compliant with DIN IEC 751 standards
- Industry standard temperature coefficient of .00385 Ω/Ω/°C

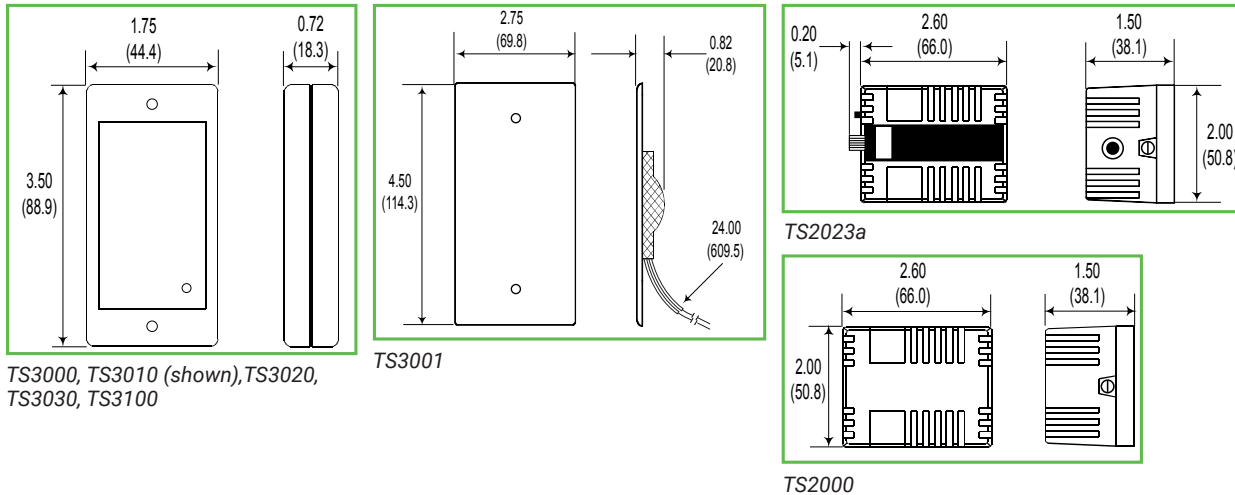
Configuration Options

Room-Mount Sensors

Model: TS2000, TS2023a (only for use with SZ1025a), TS3000, TS3001, TS3010, TS3020, TS3030, TS3100

Room-mount sensors are used in standard spaces. The sensor is enclosed in a ventilated ASB plastic housing with a plastic base. Units are suitable for mounting to dry wall or block, or to a standard 2" X 4" conduit box using a TQ Series plate adapter.

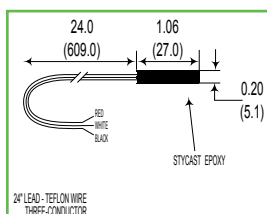
NOTE: The sensors in the TS3020 and TS3030 kits are averaging sensors for use in multiple zones. They are NOT interchangeable with the TS3000 sensor, which is for use in a single zone.



Quick-Response Sensor

Model: TS2007

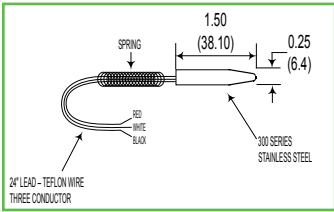
Quick-response sensors are encapsulated in a thermo-conductive compound that allows the sensor to respond quickly to temperature changes.



Universal Sensor

Model: TS1007

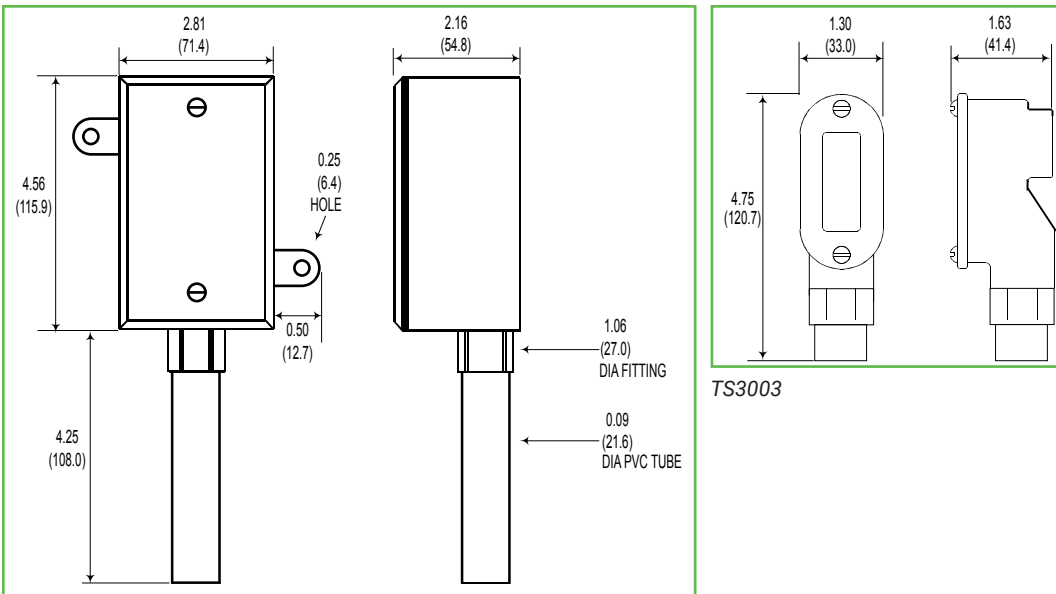
Universal sensors can be mounted alone or with existing hardware. Sensor includes an adhesive-backed clip for mounting the sensor to any clean, dry surface.



Outdoor Air Sensors

Model: TS1003, TS3003, TS3004

Outdoor air sensors are enclosed in a sealed conduit junction (TS3003) or a standard aluminum box (TS1003, TS3004). Outdoor air sensors can be converted for duct-mounting applications by changing the position of the PVC probe(s).

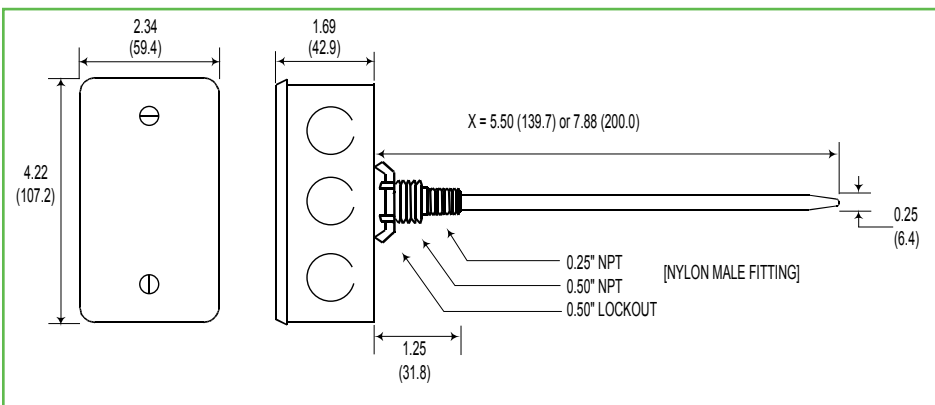


TS1003, TS3004

Duct-Mount Sensors

Model: TS1002, TS1009

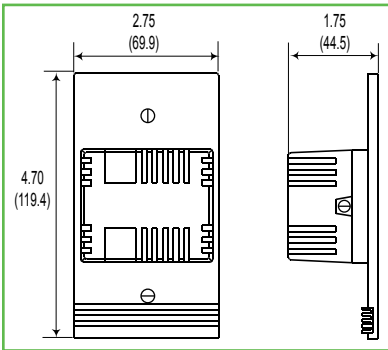
Sensors come in a standard 2" x 4" conduit box enclosure with 1/2" knockouts for use with conduit. Can be used in conjunction with 4" or 8" thermowell for liquid applications.



Wall-Mount Sensor

Model: TS1000

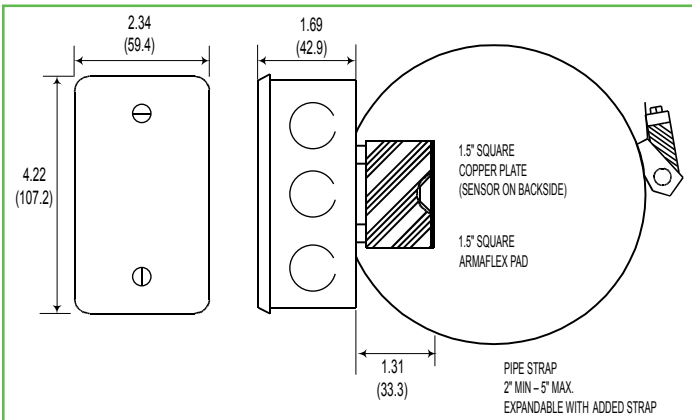
The wall-mount sensor is paired with a TX Series 4 to 20 mA transmitter. Mount to interior walls at a height of about five feet above the floor. Avoid areas that are unventilated, near open windows or doors, or where they can be exposed to direct sunlight or heat sources. Mount the unit vertically with the heat sensor at the bottom. Units can be mounted to drywall or block, or to a standard 2" X 4" conduit box.



Pipe-Mount Sensor

Model: TS1005

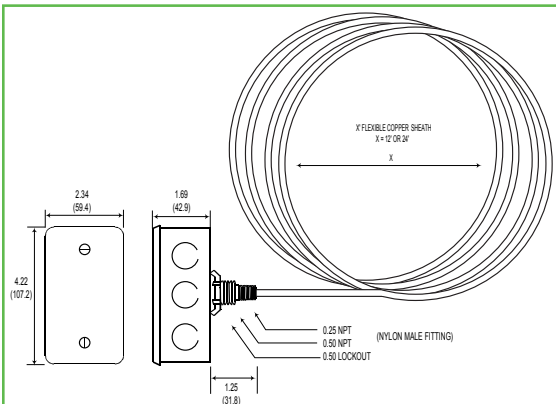
Sensors come in a standard 2" X 4" conduit box enclosure with 1/2" knockouts for use with conduit. Ships with 5" pipe strap. Other size straps can be used.



Averaging-Mount Sensors

Model: TS1006, TS1008

Use the provided capillary tube mounting clips to arrange the sensor in a zig-zag pattern across the air flow of the duct. Use a one-inch hole saw to make a mounting hole in the side of the duct and mount the sensor enclosure to the duct.



Specifications

General

Single-point sensor accuracy: $\pm 0.1\%$ @ 32°F (0°C), $\pm (0.3 + .005t)$ °C

Averaging sensor accuracy: $\pm 1^\circ\text{F}$ @ 70°F (21.11°C)

Temperature coefficient: 0.00385 $\Omega/\Omega/^\circ\text{C}$

Reference resistance: 1000 Ω @ 32°F (0°C)

Compliance: DIN IEC 751

Response time (90%)

Air @ 1m/s: 25 seconds

Air @ 3m/s: 17 seconds

Water: 0.3 seconds

Environmental

Operating temperature: -50 to 375°F (-45.6 to 190.6°C)

Electrical

Maximum current: 5 mA; recommended: 1 mA

Specifications subject to change without notice.

Ordering

Part #	Description
TS1000	1000 Ω Platinum RTD, wall mount
TS1002	1000 Ω Platinum RTD, 8" duct mount
TS1003	1000 Ω Platinum RTD, outdoor air mount single sensor
TS1005	1000 Ω Platinum RTD, pipe mount
TS1006	1000 Ω Platinum RTD, continuous averaging sensor, 24' length
TS1007	1000 Ω Platinum RTD, universal sensor, 24" lead
TS1008	1000 Ω Platinum RTD, continuous averaging sensor, 12' length
TS1009	1000 Ω Platinum RTD, 4" duct mount
TS2000	1000 Ω Platinum RTD, room mount
TS2007	1000 Ω Platinum RTD, quick response sensor, 24" lead
TS2023a	1000 Ω Platinum RTD, room mount with setpoint (to be used with SZ1025a)
TS3000	1000 Ω Platinum RTD, space temperature sensor, room mount, decorator style (single zone)
TS3001	1000 Ω Platinum RTD, space temperature sensor, room mount, secure style
TS3004	1000 Ω Platinum RTD, outdoor air mount with four sensors
TS3010	1000 Ω Platinum RTD, space temperature sensor, room mount, decorator style with override
TS3020	1000 Ω Platinum RTD, zone-averaging temperature sensor, room mount, decorator style (two-zone)
TS3030	1000 Ω Platinum RTD, zone-averaging temperature sensor, room mount, decorator style (three-zone)
TS3100	1000 Ω Platinum RTD, room mount, decorator style with setpoint and override (to be used with SZ Series Superstats)

TS Series Accessories

TQ1104 4" thermowell, stainless steel

TQ1110 8" thermowell, stainless steel

TX Series Temperature Transmitters

View our full line at www.tcsbasys.com.