Analog Sensors—1000 Ω Platinum (375 α) RTD

Description

1000 Ohm Platinum (375 α) RTD sensors provide input for cost-effective, accurate temperature sensing (detecting) via a 20 AWG twisted, shielded cable pair. The sensor resistance varies according to the temperature being measured. Several models are available for specific mounting and sensing applications.

Figure 3. Duct (Single Point) Temperature Sensor (544-339-18 Shown with AQM2000 Accessory).

Figure 1. Surface Mounted Temperature Sensor.

Figure 4. Duct (Averaging) Flexible Temperature Sensor.

Figure 2. Outside Air Temperature Sensor.

Figure 5. Duct (Averaging) Rigid Temperature Sensor.

Figure 6. Liquid Immersion Temperature Sensor.

Specifications

Temperature Monitoring Ranges	See *Sensor Specifications*
Output Signal	Changing resistance
Elements	Platinum (or equivalent) wire resistance type
Accuracy	See *Sensor Specifications*
Reference Resistance at 32ºF (0ºC)	1000 Ohm

Sensor Specifications

Sensor Applications	Temperature Range (See Tolerance Formula at Bottom of Table)	Element Package	Part Number
Surface Mount - Pipe	-40°F to 240°F (-40°C to 116°C)	2-inch × 4-inch metal box with clamps	544-089
Outdoor Air		Through-the-wall	544-578
Duct - Single Point		4-inch (10 cm) 8-inch (20 cm) 18-inch (45 cm)	544-339-4 544-339-8 544-339-18
Duct - Averaging, Rigid	20°F to 120°F (-7°C to 49°C) Special Tolerances: 20°F ±2.3°F 70°F ±1.0°F 120°F ±2.8°F	18-inch (46 cm) 24-inch (60 cm) 36-inch (91 cm) 48-inch (122 cm)	544-343-18 544-343-24 544-343-36 544-343-48
Duct - Averaging, Flexible		8-foot(2.4 m) 16-foot (4.9 m) 24-foot (7.3 m)	544-342-8 544-342-16 544-342-24
Liquid Immersion	-40°F to 240°F (-40°C to 116°C)	2.5-inch (5 cm) 4-inch (10 cm) 6-inch (15 cm) Stainless steel wells NEMA 4/IP56 (immersion heads only)	544-577-25 544-577-40 544-577-60

Tolerance Formula: $\pm(0.54°F+(0.005 \times |T_{°F}\text{-}32|)$ $[\pm(0.3°C+(0.005 \times |T_{°C}|)]$
where $T_{°F}$ ($T_{°C}$) is the operating temperature point within the transmitter's range

(Example: For a sensor operating at 100°F; Tol = $\pm(0.54°F+(0.005 \times |100°F\text{-}32°F|)$ or ±0.88°F)

Accessories

AQM2000   Flange Gasket Kit (order separately if an adjustable depth is required for 544-339-18 duct point temperature sensors.)

544-577-RK   Immersion Repair Kit

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