



## Analog Sensors—100 Ω Platinum RTD

### Description

100 ohm RTD sensors provide input for accurate loop powered temperature sensing (detecting) via a 20 AWG twisted, shielded cable pair. The loop current varies according to the temperature being measured. Several models are available for specific mounting and sensing applications.

### Specifications

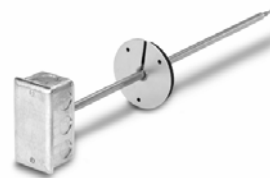
Temperature mounting range	See <i>Sensor Specifications</i>
Output signal	4 to 20 mA
Elements	Platinum RTD
Accuracy	See Table 1
Reference resistance at 32°F (0°C)	100 Ω



**Figure 1. Surface Mounted Pipe Sensor.**



**Figure 2. Outside Air Temperature Sensor.**



**Figure 3. Duct (Single Point) Temperature Sensor (544-560-18 Shown with AQM2000 Accessory).**



**Figure 4. Duct (Averaging) Flexible Temperature Sensor.**



**Figure 5. Duct (Averaging Rigid Temperature Sensor).**



**Figure 6. Liquid Immersion Temperature Sensor.**

## Sensor Specifications

Application	Temperature Range (See Tolerance Formula at Bottom of Table)	Element Package	Product Number
Surface Mount - Pipe	30°F to 250°F (-1°C to 121°C)	2-inch × 4-inch metal box with clamps	536-780
Outdoor Air	-58°F to 122°F (-50°C to 50°C)	Through-the-wall	536-768
Duct - Single Point, Rigid	20°F to 120°F (-7°C to 49°C)	4-inch (10 cm) 8-inch (20 cm) 18-inch (46 cm)	533-376-4 533-376-8 533-376-18
	30°F to 250°F (-1°C to 121°C)	4-inch (10 cm) 8-inch (20 cm) 18-inch (46 cm)	533-377-4 533-377-8 533-377-18
	-4°F to 122°F (-20°C to 50°C)	4-inch (10 cm) 8-inch (20 cm) 18-inch (46 cm)	544-560-4 544-560-8 544-560-18
Duct – Averaging, Rigid	20°F to 120°F/± 0.7°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) rigid 24-inch (60 cm) rigid 36-inch (91 cm) rigid 48-inch (122 cm) rigid	535-490-18 535-490-24 535-490-36 535-490-48
		8-foot (2.4 m) flexible 16-foot (4.9 m) flexible 25-foot (7.6 m) flexible	533-380-8 533-380-16 533-380-24
Liquid Immersion	30°F to 250°F (-1°C to 121°C)	2-1/2-inch (6.4 cm) 4-inch (10.2 cm) 6-inch (15.2 cm)	536-767-25 536-767-40 536-767-60
	20°F to 70°F (-7°C to 21°C)	2-1/2-inch (6.4 cm) 4-inch (10.2 cm) 6-inch (15.2 cm)	536-774-25 536-774-40 536-774-60
	32°F to 212°F (0°C to 100°C)	2-1/2-inch (6.4 cm) 4-inch (10.2 cm) 6-inch (15.2 cm) Stainless steel wells NEMA 4/IP56 (immersion heads only)	544-562-25 544-562-40 544-562-60

Tolerance Formula:  $\pm(0.54^{\circ}\text{F} + (0.005 \times |T_{\text{F}} - 32|)) \pm(0.3^{\circ}\text{C} + (0.005 \times |T_{\text{C}}|))$

Where:

$T_{\text{F}}$  ( $T_{\text{C}}$ ) is the operating temperature point within the transmitter's range

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

## Accessories

AQM2000 Flange Gasket Kit (order separately if an adjustable depth is required for 533-376-18, 533-377-18, and 544-560-18 duct point temperature sensors).

## Immersion Repair Kits

536-774-RK    20°F to 70°F

536-767-RK    30°F to 250°F

544-562-RK    0°C to 100°C

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