

Analog Sensors—100K Ω Thermistor

Description

100K Ohm Thermistor sensors provide input for cost-effective, accurate temperature sensing (detecting) for controllers from Siemens Industry, Inc. 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.

Specifications

Temperature monitoring range	See <i>Sensor Specifications</i>
Output signal	Changing resistance
Elements	Thermistor
Accuracy	$\pm 0.36^{\circ}\text{F}$ ($\pm 0.2^{\circ}\text{C}$) at calibration point 77°F (25°C)
Reference resistance at 77°F (25°C)	100K Ω



Figure 2. Outside Air Temperature Sensor.

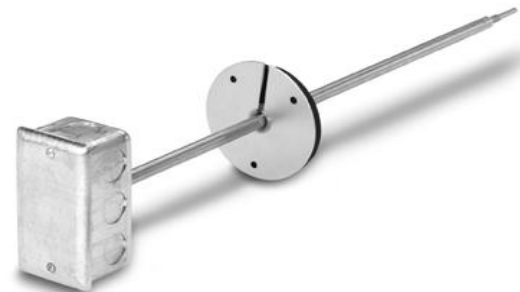


Figure 3. Duct (Single Point) Temperature Sensor (535-741-18 Shown with AQM2000 Accessory).



Figure 1. Surface Mounted Pipe Sensor.

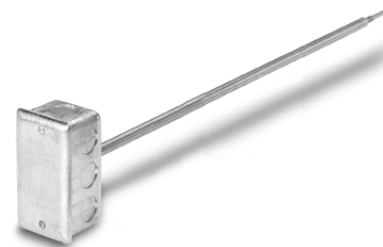


Figure 4. Averaging Rigid Temperature Sensor.



Figure 5. Averaging Flexible Temperature Sensor.



Figure 6. Liquid Immersion Temperature Sensor.

Sensor Specifications

Sensor Applications	Temperature Range*	Element Package	Part Number
Surface Mount - Pipe	-35°F to 240°F (-37°C to 116°C)	1-1/2 inch (3.8 cm) sensor with clamps	540-258
Outdoor Air	0°F to 120°F (-18°C to 49°C)	Through the wall	536-778
Rigid Duct - Single Point	40°F to 150°F (4°C to 66°C)	4-inch (10 cm) 8-inch (20 cm) 18-inch (45 cm)	535-741-4 535-741-8 535-741-18
Averaging	0°F to 180°F (-18°C to 82°C)	18-inch (46 cm) rigid 36-inch (91 cm) flexible 72-inch (18 m) flexible	540-244-18 540-245-36 540-246-72
Liquid Immersion	30°F to 240°F (-1°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)	536-777-25 536-777-40 536-777-60

*Application sensing range is determined by controller to which the sensor is connected.

Accessories

AQM2000	Flange Gasket Kit (order separately if an adjustable depth is required for 535-741-18 duct point temperature sensors)
536-777-RK	Immersion Repair Kit

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