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Flush Mount Room Temperature Sensors

Figure 1. Metal Flush Mount Room Temperature Sensors.

Figure 2. Plastic Flush Mount Room Temperature Sensor.

Description

The Flush Mount Room Sensors from Siemens Building Technologies, Inc. provide a temperature sensing input to Siemens room controller products.

Both styles connect to a controller via a two-wire pigtail connection or a six-wire cable terminated with a plug-in RJ-11 terminal. All versions incorporate a temperature-sensing element (10K ohm thermistor, 100K ohm thermistor, or 1K ohm Platinum [375 α] RTD) the resistance of which varies based on to the actual room temperature.

The Metal Flush Mount Sensors have a standard canned sensing element secured to the back of a blank stainless steel switch cover plate, covered with a patch of closed cell foam insulation.

The Plastic Flush Mount Sensors are designed with the sensing element mounted on a PCA with an aluminum cover, mounted in a Styrofoam block, which is in the box behind the cover plate. The aluminum cover on the sensor PCA subassembly is also thermally isolated from the cover plate by an air gap.

The Plastic Flush Mount Sensor provides superior thermal isolation from interior wall conditions compared to the Metal Flush Mount Sensors.

The Flush Mount Room Sensors are designed for those applications in which a standard room temperature sensor is not aesthetically acceptable or is a security issue.

The tamper-proof screws used to install the sensor prevent removal of the sensor by unauthorized personnel. Both the metal and plastic sensors may be painted after installation.

The Flush Mount Room Temperature Sensors are designed for mounting to a 2 × 4 electrical box. Metal sensors have a brushed stainless steel finish; plastic sensors are available in desert beige or white.

Specifications – Housing

Dimensions (Plastic)	4-1/2" H × 2-3/4" W × 1-1/36" D (114 mm H × 70 mm W × 27 mm D)
Dimensions (Metal)	4-1/2" H × 2-3/4" W × 0.25" D (114 mm H × 70 mm W × 6 mm D)

Specifications –Sensing Elements

Accessory

Output Signal   Changing resistance

Operating Temperature Range[1]

55°F to 95°F (12°C to 35°C)

10K ohm Thermistor

Calibration Point Factory Setting   77°F (25°C)

Accuracy[2]   ±0.5°F (±0.3°C)
@ Resistance Value   10K ohm

100K ohm Thermistor

Calibration Point   77°F (25°C)
Accuracy[2]   ±0.5°F (±0.3°C)
@ Resistance Value   100K ohm

1K ohm Platinum (375 α) RTD

Calibration Point   32°F (0°C)
Accuracy[2]   ±0.54°F (±0.3°C)
@ Resistance Value   1K ohm

[1] Functional range for AI Input is controller-dependent.

[2] Accuracy is of the sensing element only. System accuracy may vary.

Figure 3. 540-538 Flush Mount Sensor Guard Kit for Plastic Flush Mount Sensors.

Table 1. Flush Mount Room Temperature Sensors.

Sensor Type	Connection Type	Metal Cover[1]	Plastic Cover
10K ohm (Type II) NTC	Pigtail	540-984	536-994B
10K ohm (TEC compatible) NTC	RJ-11	540-995	540-520[1]
100K ohm (NTC)	Pigtail	536-984	536-784[1]
1K ohm Platinum (375 α) RTD	Pigtail	544-973	544-374[1]

[1]Add letter suffix to indicate desired color. A=Desert Beige; B=White

NOTE: The **540-984** and **536-994B** sensors are only compatible with Staefa controllers, APOGEE PXC and TALON® TC controllers, and APOGEE TX/IO modules. They are not intended for use with the Terminal Equipment Controller (TEC). These sensors do not have an RJ-11 jack. Any attempt to fit an RJ-11 jack to these sensors and connect them to a TEC will result in an inaccurate reading or no reading at all.