

Air Temperature Sensor

Installation Instructions

IMPORTANT: READ ALL OF THESE INSTRUCTIONS BEFORE INSTALLING THE SENSOR

SAFETY CONSIDERATIONS

Read and follow the manufacturer instructions carefully. All wiring must conform to local and national electrical codes. Improper wiring or installation may damage the sensor. Recognize safety information. This is the safety alert symbol ⚠. When the safety alert symbol is present on equipment or in the instruction manual, be alert to the potential for personal injury. Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies a hazard which could result in personal injury or death. CAUTION is used to identify unsafe practices which may result in minor personal injury or property damage.

GENERAL

The PSPAC-DS Air Temperature Sensor measures air temperature with a range of -40 to 131 F. This sensor may be used as a Remote Sensor, a Supply Air Sensor, or a Return Air Sensor.

1 Wiring Requirements

The attached 20' of plenum rated cable should be adequate for many installations. If the cable needs to be extended, we recommend no more than one additional segment of wire be spliced onto the 20' leads. Please use 18 - 22 gauge 2 conductor unshielded thermostat wire. Wire length not to exceed 200 feet.

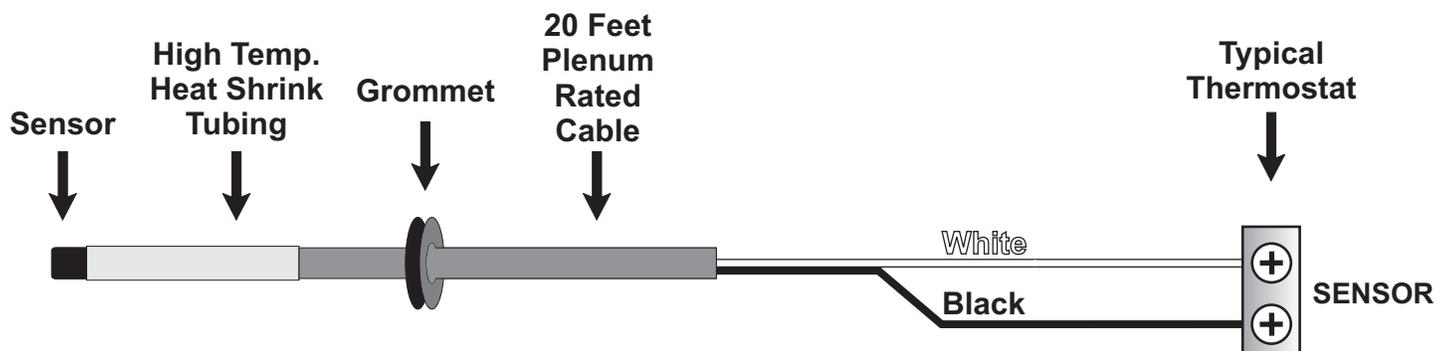
IMPORTANT: Do not run sensor wiring in the same conduit as the 24VAC thermostat wiring. Electrical interference may cause the sensor to give incorrect temperature readings. Keep wiring at least two feet away from motors, lighting ballasts, other line-voltage circuits.

2 Sensor Wiring

⚠ WARNING

Turn off power to the thermostat before wiring.
Death or injury from electric shock could result.

The connection between the Air Temperature Sensor and the thermostat must be wired per the connection diagram. Only two conductors are used, therefore the extra conductors should be cut from each end of the cable to prevent shorting.

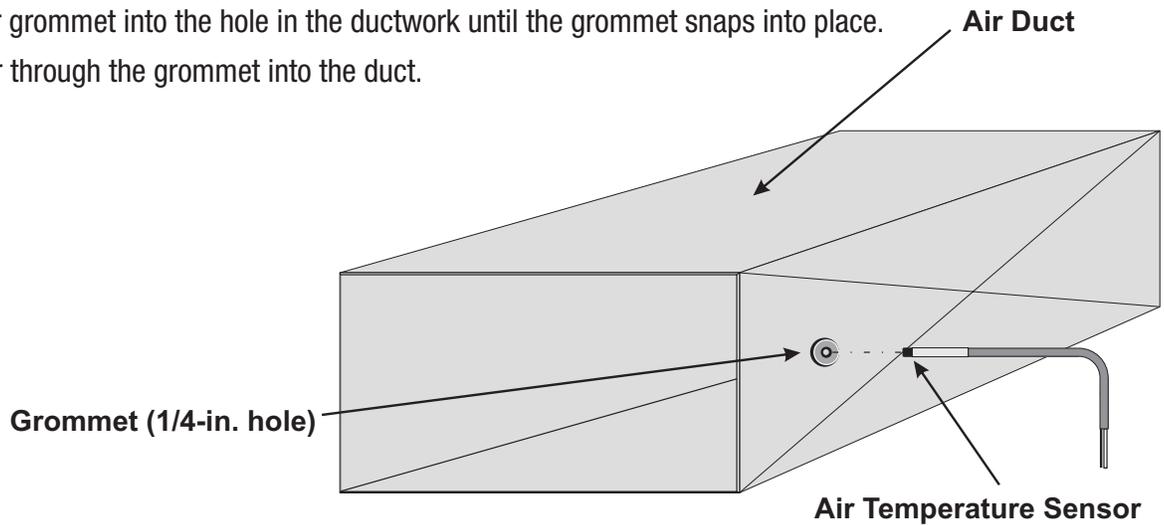


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3 Sensor Installation

When used as a duct sensor perform the following procedures to install the sensor:

1. Select a location in the ductwork for the sensor. Mark this location in the center of the duct.
2. Drill a 1/4-in. mounting hole in the ductwork at the marked location.
3. Push the rubber grommet into the hole in the ductwork until the grommet snaps into place.
4. Push the sensor through the grommet into the duct.



Air Temperature vs. Sensor Resistance

Air Temperature		Resistance in Ohms
°F	°C	
-20	-28.9	106926
-10	-23.3	80485
0	-17.8	61246
10	-12.2	47092
20	-6.7	36519
30	-1.1	28558
40	4.4	22537
50	10	17926
60	15.6	14356
70	21.1	11578
80	26.7	9398
90	32.2	7672
100	37.8	6301
110	43.3	5203
120	48.9	4317