Part Number P474-0401

IMPORTANT: Read entire instructions before installing the sensor.

SAFETY CONSIDERATIONS

Read and follow manufacturer instructions carefully. Follow all local electrical codes during installation. All wiring must conform to local and national electrical codes. Improper wiring or installation may damage 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 would result in minor personal injury or property damage.

GENERAL

The Remote Temperature Sensor measures indoor air temperature. The sensor measures temperature with a range of 0° to 150 F. The sensor has an override button which will place the thermostat into override.

INSTALLATION

Step 1 — Sensor Location — The sensor should be mounted:

• approximately 5 ft from the floor
• close to or in a frequently used room, preferably on an inside partitioning wall
• on a section of wall without pipes or ductwork
• where temperature operating limits are within 41 to 104 F
• where humidity operating range is within 0 to 95% relative humidity, non-condensing

The sensor should **NOT** be mounted:

• close to a window, on an outside wall, or next to a door leading to the outside
• where exposed to direct light and heat from a lamp, the sun, a fireplace, or any other temperature-radiating object which may cause a false reading
• close to or in direct airflow from supply registers or return air grilles
• in areas with poor air circulation (such as behind a door or in an alcove)

Step 2 — Wiring Requirements — The remote temperature sensor wiring has the following requirements:

1. All system wiring must be in compliance with all applicable local and national codes.

2. All sensor wiring should be color coded for ease of maintenance and service. Three wires are required.

3. All wiring should be 18, 20-, or 22-gage, **unshielded** wire. The maximum distance between the sensor to the thermostat for 18-gage wire is 150 feet. The maximum distance between the sensor to the thermostat for 20-gage wire is 300 feet. The maximum distance between the sensor to the thermostat for 22-gage wire is 450 feet.

NOTE: Thinner wire is used for longer distances.

IMPORTANT: Do not use shielded wire. Do not run sensor wiring in the same conduit as the 24-v thermostat wiring. Electrical interference may cause the sensor to give incorrect temperature readings.

Step 3 — Install Sensor — Perform the following procedure to install the sensor:

⚠ WARNING

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

1. Place the remote temperature sensor wall plate on the wall. Mark the mounting screw holes on the wall through the holes in the wall plate. See Fig. 1.
2. Drill two $^3/_{16}$-in. mounting holes in the wall in the locations marked in Step 1.
3. Mount the remote temperature sensor wall plate to the wall with 2 screws provided.
4. Run wiring from sensor to thermostat. Wiring should enter sensor through hole in wall plate. See Fig. 1. Do not run the sensor wiring in same conduit as the 24-v thermostat wiring.
5. Press circuit board into place on the wall plate.
6. Install the Override button onto the circuit board. Press the two tabs on the Override button into the two holes provided in the circuit board.
   NOTE: The Override button can be disabled by placing non-conductive tape over the switch pad before installing the button.
7. Connect wiring to sensor and thermostat wiring terminals. Be sure to follow color coding scheme. See Fig. 2. Connect RS GND terminal on remote temperature sensor circuit board to RS GND terminal on thermostat. Connect RS terminal on remote temperature sensor circuit board to RS1 terminal on thermostat. Connect RS+V terminal on remote temperature sensor circuit board to RS+5 terminal on thermostat.
8. Install the remote temperature sensor top case onto the wall plate using the screw provided.
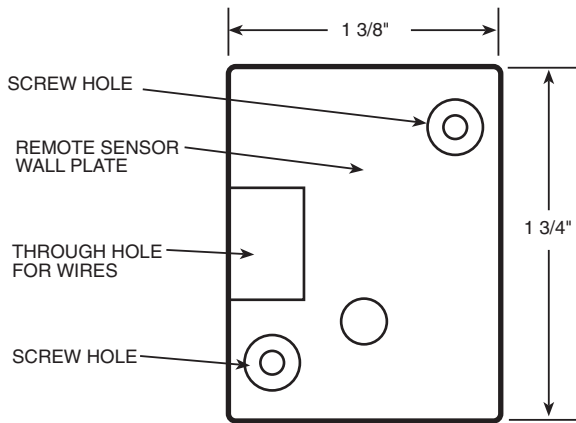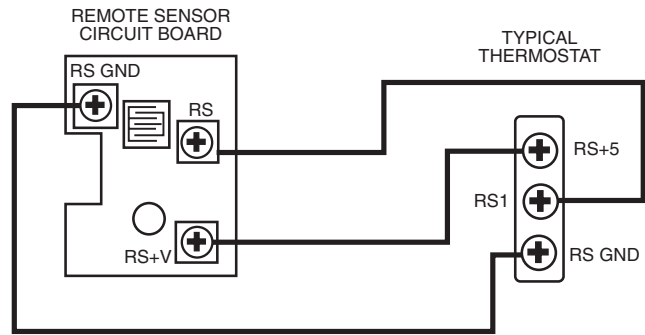
Fig. 1 — Wall Plate Mounting

1 3/8"

SCREW HOLE

REMOTE SENSOR
WALL PLATE

THROUGH HOLE
FOR WIRES

SCREW HOLE

1 3/4"

REMOTE SENSOR
CIRCUIT BOARD

RS GND

RS

RS+V

TYPICAL
THERMOSTAT

RS+5

RS1

RS GND

Fig. 2 — Remote Temperature Sensor Wiring

Step 4 — Configure the Thermostat — Depending on the type of thermostat, the thermostat may need to be configured for use with the remote temperature sensor.

Some thermostats will automatically detect the sensor wired to the thermostat terminal block and use the temperature sensor output. Other thermostats may need to be configured for use with a remote temperature sensor. Refer to the Advanced Setup section in the thermostat installation instructions for thermostat configuration information.

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