

**INSTALLATION INSTRUCTIONS FOR INDOOR REMOTE TEMPERATURE SENSORS
 — 10K OHM (47W37) AND 20K OHM (47W36)**

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.

Installation and service must be performed by a licensed professional HVAC installer (or equivalent) or service agency.

When the remote indoor sensor is installed with a commercial touch screen thermostat, use these instructions to install the sensor. Also see the touch screen instructions for more on wiring the sensor to the thermostat.

PRE-INSTALLATION

Cover Removal

A snap-fit locking mechanism is used to attach the cover of the remote indoor sensor to its sub-base. To remove the cover from the sub-base:

1. Insert a thin, flat blade screwdriver into each of the two slots at the bottom of the module to release the two locking tabs (see figure 1).

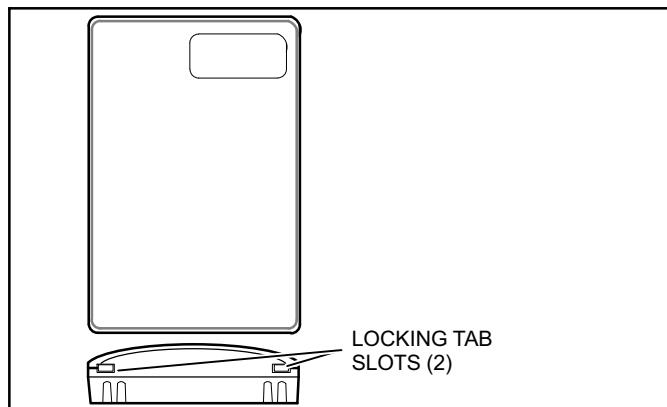


Figure 1. Cover Removal

2. Tilt the cover out and away from the sub-base to release the two locking tabs.

Electrical Wiring Practices

⚠ CAUTION

Erratic System Operation Hazard.

Failure to follow proper wiring practices can introduce disruptive electrical interference (noise).

⚠ IMPORTANT

All wiring must comply with local electrical codes and ordinances, or as specified on installation wiring diagrams.

Typical Commercial Touch Screen Thermostats

The following items are recommended for indoor remote sensor installations:

1. Keep wiring at least one foot away from large inductive loads such as motors, line starters, lighting ballasts, and large power distribution panels.
2. Shielded cable is required in installations where these guidelines cannot be met.
3. Ground shield only to grounded controller case.
4. When connecting to all other thermostats, remote indoor sensor wiring can be sized from 16 to 22 AWG (1.31 to .34 mm²) depending on the application.
5. The maximum length of wire from a thermostat or remote indoor sensor to another remote indoor sensor is 1000 feet (305 meters).
6. Twisted pair wire is recommended for wire runs longer than 100 feet (30.5 meters).

ComfortSense 7500 Commercial Thermostat (13H15)

1. Must keep wiring at least one foot away from large inductive loads such as motors, line starters, lighting ballasts, and large power distribution panels.
2. Only use thermostat wiring for remote indoor temperature sensors. Do not use shielded cabling.
3. Wire run should not exceed 300 feet (100m) between devices.

INSTALLATION

Install the remote indoor sensor on an inside wall approximately 54 inches (1372 mm) from the floor (or in the specified location) to allow exposure to the average room temperature. Do not mount the remote indoor sensor on an outside wall, on a wall containing water pipes or near air ducts. Avoid locations that are exposed to discharge air from registers or radiation from lights, appliances, or the sun.

The remote indoor sensor may be installed on a wall, on a standard utility conduit box using no. 6 (3.5 mm) screws or on a 60 mm wall outlet box (see figure 2). When installing directly on a wall, use the type of screws appropriate for the wall material. See figure 3 for remote indoor sensor dimensions.

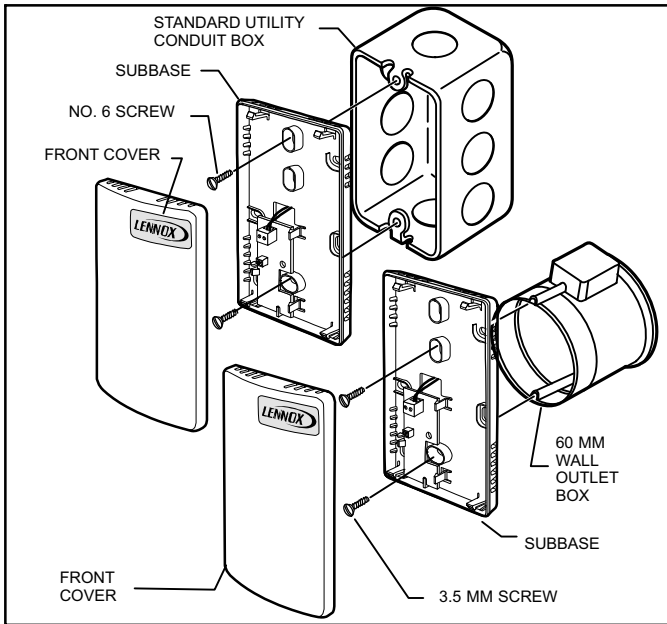


Figure 2. Installing Remote Indoor Sensor on Standard Utility Conduit Box or 60 mm Wall Outlet Box

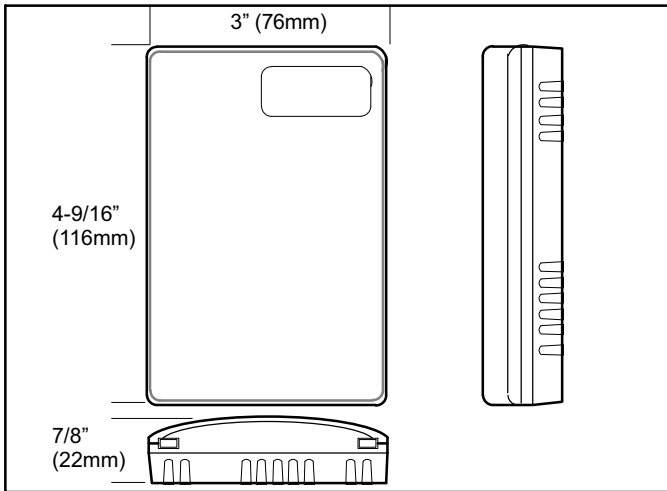


Figure 3. Room Sensor Dimensions

WIRING

Attach the wires from the device sensor terminals to the appropriate remote indoor sensor terminals on the thermostat (see figure 5).

CAUTION

Improper Electrical Contact Hazard.

Screw type terminal blocks are designed to accept no more than one 16 AWG (1.31 sq. mm²) conductor.

Connect multiple wires that are 16-18 AWG (1.31 to .82 mm²) with a wire nut. Include a pigtail with this wire group and attach the pigtail to the individual terminal block.

Wire the terminal blocks as follows:

1. For single wires, strip 3/16" (5mm); for multiple wires going into one terminal, strip 1/2 in. (13 mm) insulation from the conductor.
2. If two or more wires are being inserted into one terminal, twist the wires together before inserting.

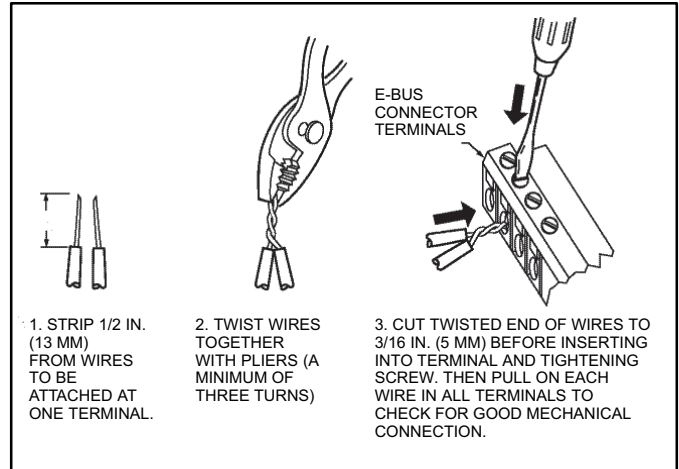


Figure 4. Multi-wire Installation

NOTE: When two or more wires are being inserted into one terminal, be sure to twist them together. Deviation from this rule can result in improper electrical contact (see figure 4).

3. Insert the wire in the required terminal location and tighten the screw to complete the termination.
4. Verify remote indoor sensor wiring per figure 5. Check that thermistor is in place.

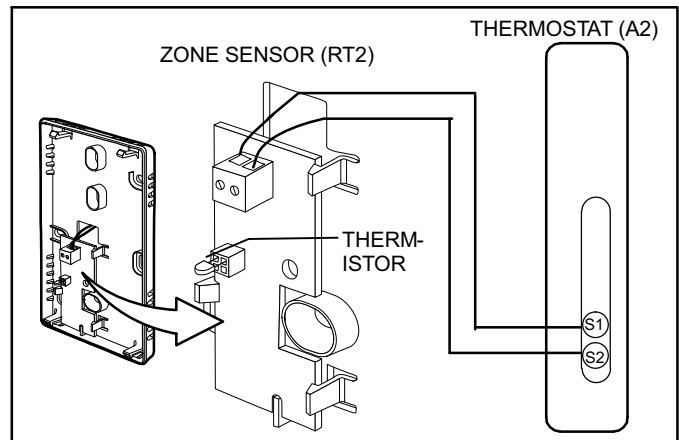


Figure 5. Room Sensor Wiring

When all wiring is complete, attach the cover of the remote indoor sensor by pressing the cover straight down onto the sub-base until it snaps into place.

Multiple-sensor Installations

When using more than one sensor, maintain an equivalent resistance of 20K ohms at the thermostat (see figure 6).

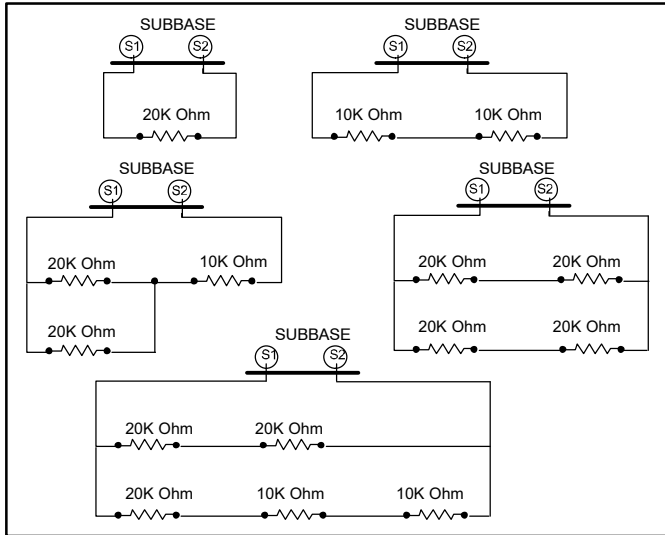


Figure 6. Sensor Wiring for Temperature Averaging

SENSOR SPECIFICATIONS

Application

To be used with Honeywell W7760C DDC Controller (29M4801) and thermostats 14W81 or 13H15.

Temperature Sensor Operating Range

45 to 99°F (10 to 37.2°C)

- 100959-02 (47W37) is furnished with a 10K ohm nonlinear NTC temperature sensor that follows a specific temperature resistance curve as shown in figure 7.
- 100959-03 (47W36) is furnished with a 20K ohm nonlinear NTC temperature sensor that follows a specific temperature resistance curve as shown in figure 7.

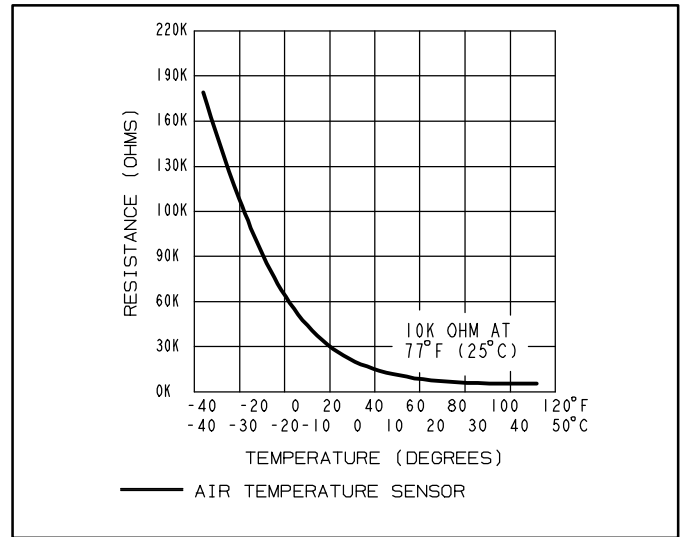


Figure 7. 10K Ohm Temperature Sensor (47W37)

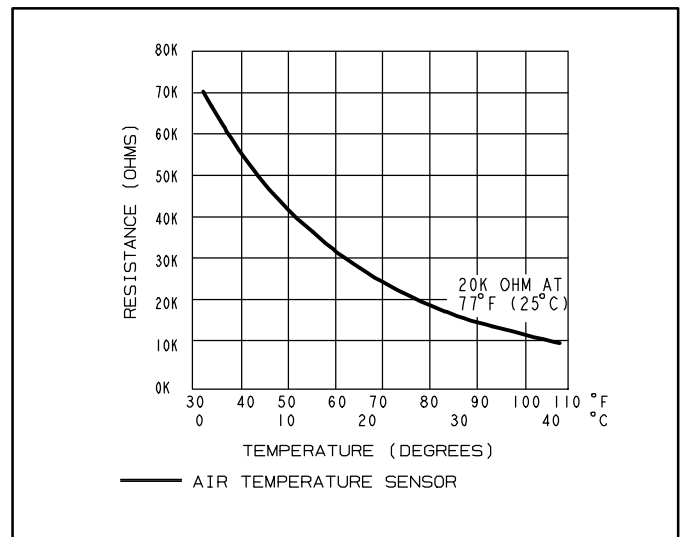


Figure 8. 20K Ohm Temperature Sensor (47W38)

Operating Temperature

45 to 99°F (7.2 to 38.2°C)

Relative Humidity

5% to 95% non-condensing

Dimensions

3" W x 4.56" H x .88" D