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INSTALLATION INSTRUCTIONS FOR ZONE SENSORS WITH COMMERCIAL TOUCH SCREEN THERMOSTATS: 20K SENSOR (47W36) & 10K SENSOR (47W37)

When the Zone 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 disassembly

A snap-fit locking mechanism is used to attach the cover of the zone sensor to its subbase. To disassemble the cover from the subbase:

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).

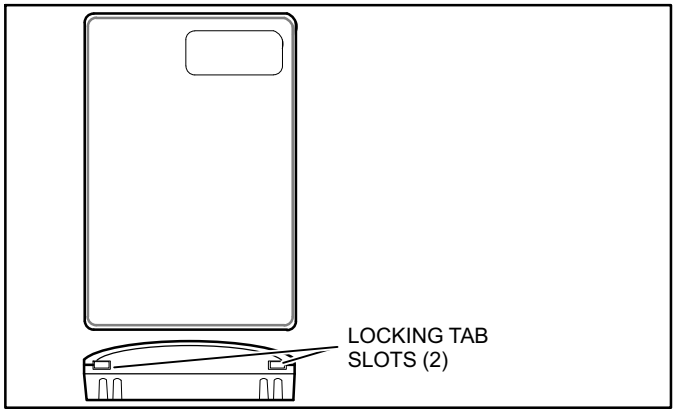

Figure 1. Cover disassembly

2. Tilt the cover out and away from the subbase 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.

Keep wiring at least one foot away from large inductive loads such as motors, line starters, lighting ballasts, and large power distribution panels.

Shielded cable is required in installations where these guidelines cannot be met.

Ground shield only to grounded controller case.

Zone sensor wiring can be sized from 16 to 22 AWG (1.31 to .34 mm^2) depending on the application.

The maximum length of wire from a device to a zone sensor is 1000 feet (305 meters).

Twisted pair wire is recommended for wire runs longer than 100 feet (30.5 meters).

INSTALLATION

***NOTE**: Use thermostat wiring only for remote indoor temperatures sensors when connecting to a ComfortSense 7500 thermostat.*

Install the zone sensor on an inside wall approximately 54 inches (1372 mm) from the floor (or in the specified location) to allow exposure to the average zone temperature. Do not mount the zone 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 zone 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 zone sensor dimensions.

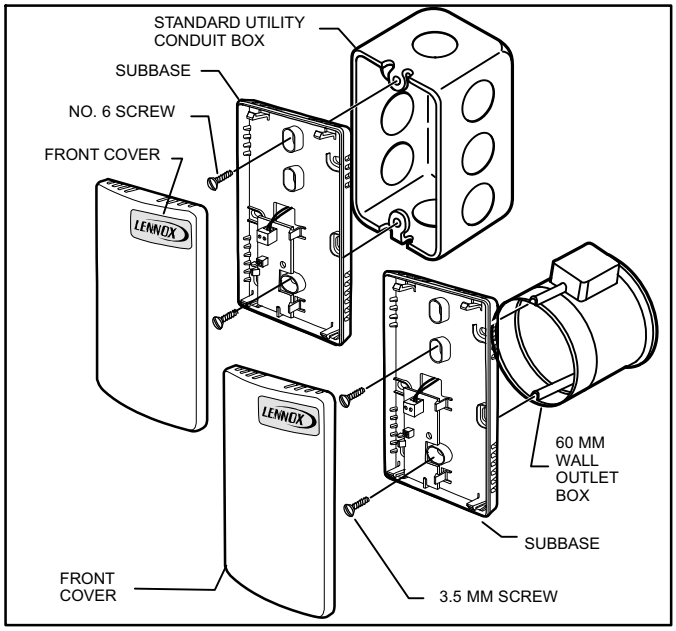

Figure 2. Installing zone sensor on standard utility conduit box or 60 mm wall outlet box

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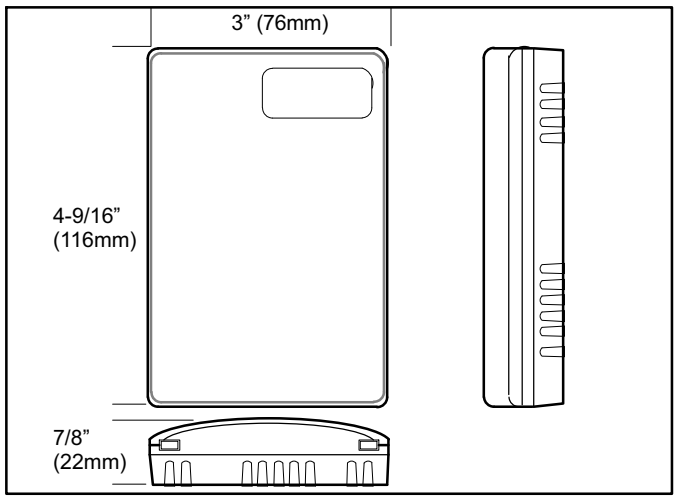

Figure 3. Zone sensor dimensions

WIRING

Attach the wires from the device sensor terminals to the appropriate zone 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. mm^2) conductor.

Connect multiple wires that are 16-18 AWG **(1.31 to .82 mm^2) 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.

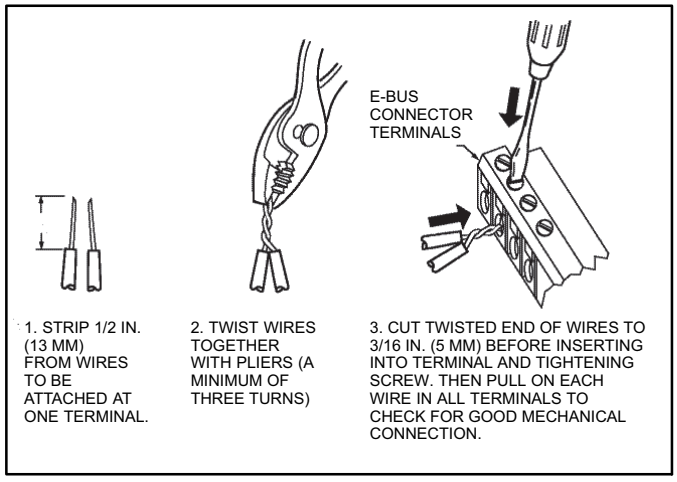

Figure 4. Multi-wire installation

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 zone sensor wiring per figure 5. Check that thermistor is in place.

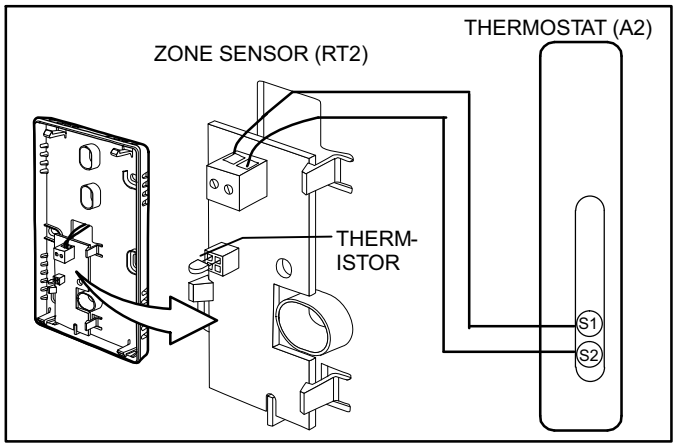

Figure 5. Zone sensor wiring

When all wiring is complete, attach the cover of the zone sensor by pressing the cover straight down onto the subbase 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).

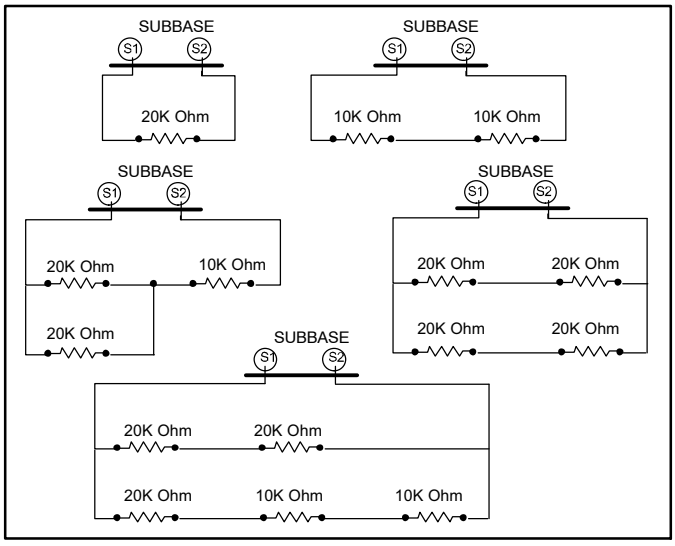

Figure 6.Sensor Wiring for Temperature Averaging