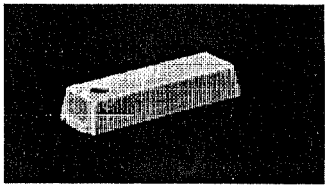

Learn Mode Freeze Sensor
ITI Part # 60-504
Doc. # 46-550-A

INSTALLATION INSTRUCTIONS

OVERVIEW:

The ITI Learn Mode (LM) Freeze Sensor contains a thermal couple wired to a transmitter. The LM Freeze Sensor detects a furnace failure in a home or business. It activates a switch (thermal couple) when the surrounding temperature drops to about 45°F. A 55°F to 60°F temperature is necessary after the sensor is tripped for device to send a restore signal.

The LM Freeze Sensor:

- contains an RF transmitter capable of transmitting over 500 feet.
- powered by a 3.5-Vdc lithium battery, which lasts 5 to 8 years.
- sends a Trouble (Low Battery) report to the CPU.
- sends a supervisory signal to CPU every 64 minutes.
- has an operating range of 10°F to 120°F.
- contains a built-in tamper switch. By removing the sensor cover, this switch trips, the sensor then transmits a "TROUBLE" signal to the CPU.
- has a tamper switch, which cannot be disabled.
- monitors an open area of about 900 square feet (30' x 30').

INSTALLATION CONSIDERATIONS:

DO

- Try to keep sensors within 100 feet of the CPU. The 100-foot distance recommendation is given as a starting guideline. The transmitter has an open-air range of over 500 feet, but the installation environment may influence this range.
- Locate the sensor in an area that is likely to get cold first.
- Locate the sensor on an interior wall where there is free movement of air.

DO NOT

- Locate the sensor in the same room as a furnace, water heater, or any other heat source that may stay warm after the furnace fails.
- Locate the sensor on an outside wall or near the basement floor.
- Place in areas with excessive metal or electrical wiring, these may inhibit the sensor's signals from reaching the CPU.
- Place sensor in an area where it will be exposed to moisture.
- Place sensor in a location where the temperature will exceed the sensor's operating limits of 10°F to 120°F.

INSTALLATION:

CAUTION: You must be free of all static electricity when handling transmitters. Touch a grounded metal object before handling the circuit board. Handle the circuit board by the edges and never set the circuit board on any metallic surface.

1. Remove the transmitter cover by pressing on the cover end to disengage the top of the cover from the slot in the sensor base.

2. Remove circuit board from transmitter base by pushing back on the base release tab. (See Figure 1.)
3. Place transmitter in sensor cover to protect circuit board against static damage.
4. Secure the sensor base to mounting surface by using #6 pan head screws or #18 x 1/2 wire nails (brads). If mounting on plaster, use the appropriate fasteners. Use the slotted mounting hole for alignment. (See Figure 2.)
5. Replace the sensor circuit board on base. Place reed switch end in first, then snap the board in place at the base release tab.
6. Do not replace sensor cover at this time.

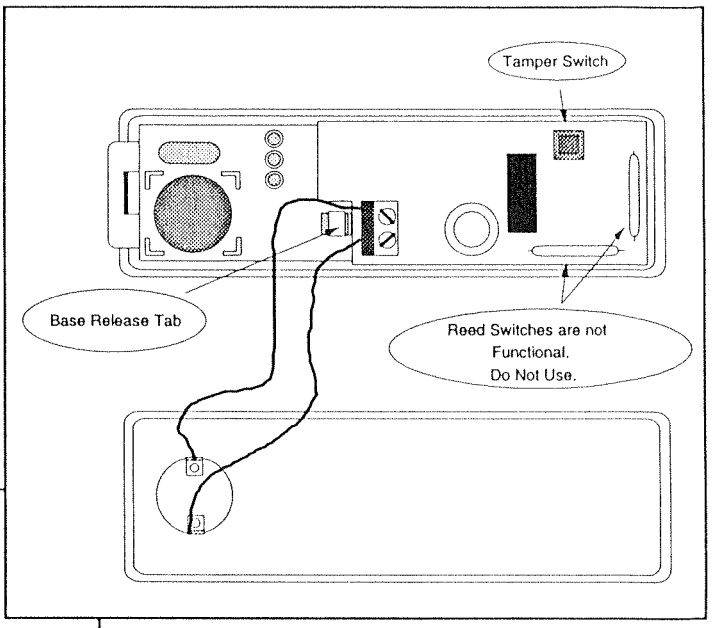

Figure 1. Base release tab location

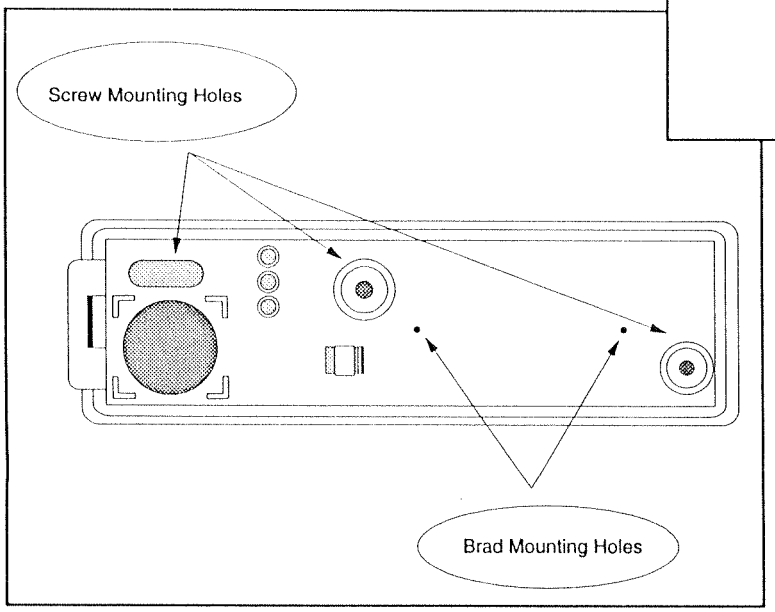

Figure 2. Mounting holes locations

PROGRAMMING:

General guidelines for programming this device are:

1. Set the CPU to program mode.
2. Trip the device's tamper switch. (See Figure 1.)
3. Replace sensor cover at this time.

NOTE: Refer to the appropriate CPU Installation Manual for specific instructions on programming this device into the CPU.

TESTING:

General guidelines for performing a Dealer Signal Strength Test are:

1. Using the appropriate touchpad for the CPU, enter the applicable dealer sensor test code.
2. Cool thermal couple with a piece of ice that is placed in a plastic bag. When the thermal couple reaches approximately 45°F, the transmitter sends an RF signal to the CPU.
3. Note the number of beeps indicating the device's signal strength.
4. To reset the device, the surrounding temperature must reach 55°F to 60°F.