

Installation Instructions for:	
Vertical	1E30N-910
Snap Action	1E50N-301

## YOUR THERMOSTAT REPLACES

System	Models
Standard Heat Only Systems	
Electric Furnace	1E30N-910
Heat Pump (No Aux or Emergency Heat)	1E50N-301
Gas or Oil Heat	
Millivolt Heat Only Systems	

## 1 PREPARATIONS

Assemble tools required: power drill, flat blade screwdriver, wire cutter/stripper, level.

**Failure to follow and read all instructions carefully before installing or operating this control could cause personal injury and/or property damage.**

## 2 THERMOSTAT FEATURES

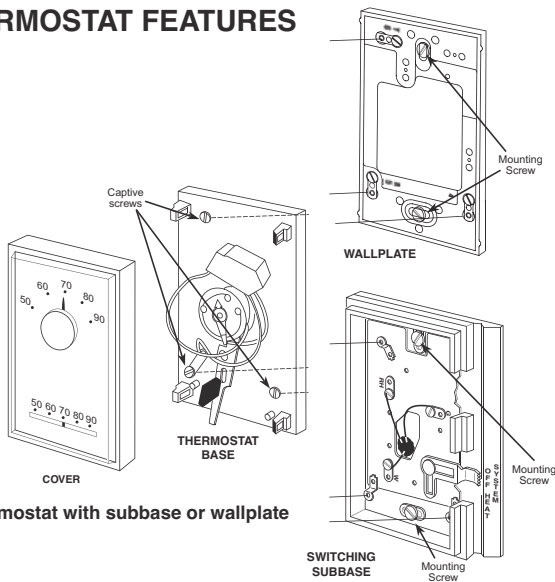


Figure 1. Thermostat with subbase or wallplate

## 3 REMOVING OLD THERMOSTAT

### ⚠ CAUTION

To prevent electrical shock and/or equipment damage, disconnect electrical power to the system at the main fuse or circuit breaker until installation is complete.

Before removing wires from old thermostat's switching subbase, label each wire with the terminal designation it was removed from.

- Remove Old Thermostat:** A standard thermostat consists of three basic parts:
  - The cover, which may be either a snap-on or hinge type.
  - The base, which is removed by loosening all captive screws.
  - The switching subbase, which is removed by unscrewing the mounting screws that hold it on the wall or adaptor plate.

Make a note here  of the anticipator setting on the old thermostat for future reference and use in step 5.

The heat anticipator pointer, if adjustable, will be set at one of a series of numbers representing the current rating of the primary control in your furnace. The number will be one of the following: .2, .4, .8, etc. or 0.2, 0.4, 0.8, etc.

## 3 REMOVING OLD THERMOSTAT (cont'd)

### ATTENTION: MERCURY NOTICE

This product does not contain mercury. However, this product may replace a product that contains mercury. **Mercury and products containing mercury must not be discarded in household trash. Do not touch any spilled mercury. Wearing non-absorbent gloves, clean up any spilled mercury** and place in a sealed container. For proper disposal of a product containing mercury or a sealed container of spilled mercury, place it in a suitable shipping container. Refer to [www.thermostat-recycle.org](http://www.thermostat-recycle.org) for location to send the product containing mercury.

## 4 MOUNTING AND WIRING

### ⚠ WARNING

o not use on circuits exceeding specified voltage. Higher voltage will damage control and could cause shock or fire hazard.

o not short out terminals on gas valve or primary control to test. Short or incorrect wiring will damage thermostat and could cause personal injury and/or property damage.

Thermostat installation and all components of the system shall conform to Class II circuits per the NEC code.

- Remove base from subbase or wallplate:** Loosen the screws on the base and remove.
- Mount switching subbase or wallplate:** Use the screws provided to mount the subbase or wallplate to wall (see Fig. 1).
- Attach wires to appropriate terminals:** Two wire systems Heat Only. Attach one wire to RH and one to wire W.
- Mount Thermostat Base:** Gently push excess wire back into the wall opening and plug hole with a fire-resistant material, such as fiberglass insulation to prevent drafts from affecting thermostat operation. Mount the thermostat base to the subbase or wallplate using the three captive screws on the thermostat base. See Fig. 1) Tighten the screws securely. Proceed to Step #5.

### ⚠ CAUTION

Take care when securing and routing wires so they do not short to adjacent terminals or rear of thermostat. Personal injury and/or property damage may occur.

### TERMINAL CROSS REFERENCE CHART

New Thermostat Terminal Designation	Other Manufacturers' Terminal Designation				
RH	4	RH	M	R5	R
W	W	W	H	4	W

## 5 SET HEAT ANTICIPATOR

Set anticipator to match the setting of your old thermostat you noted in Step 3, or, the anticipator should be set to match the current rating stamped on your main heating control. The heat anticipator is adjustable from 0.15 to 1.2 amps. Adjust the anticipator by rotating the contact arm see fig. 2. The anticipator setting is indicated by the numbers on the base that the pointer points to. If you are unsure where to set the anticipator contact the heater manufacturer for a recommended setting.

Move the pointer **counterclockwise to lengthen** heating system cycles; move **clockwise to shorten** heating cycles. Adjustments should not be greater than 1/2 marking at a time.

For millivolt operation, rotate contact arm to Millivolt Link.

**Snap on Cover:** Carefully align the cover with the base and snap the cover onto the base.

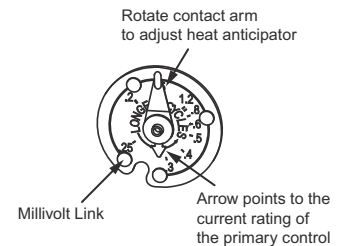


Figure 2. Anticipator adjustment

## 6 NEW THERMOSTAT OPERATION

This thermostat is easy to operate. After power is turned on, use the system switch to select heating, or to turn the heating system off.

## 7 SPECIFICATIONS

### ELECTRICAL DATA

Switch Rating..... 24 VAC (30 VAC max.)

Heating..... 0.15 to 1.2 Amps

### Anticipator Rating:

Heating..... Adjustable from 0.15 to 1.2 Amps

### THERMAL DATA:

Temperature Range..... 50°F to 90°F (10°C to 32°C)

Operating Humidity Range..... 0 – 90% noncondensing

## 8 TROUBLESHOOTING

Symptom	Possible Cause	Corrective Action
<b>No Heat/ No Fan (common problems)</b>	<ol style="list-style-type: none"> <li>Blown fuse or tripped circuit breaker.</li> <li>Furnace power switch to OFF.</li> <li>Furnace blower compartment door or panel loose or not properly installed.</li> </ol>	<p>Replace fuse or reset breaker.</p> <p>Turn switch to ON.</p> <p>Replace door panel in proper position to engage safety interlock or door switch.</p>
<b>No Heat</b>	<ol style="list-style-type: none"> <li>Pilot light not lit.</li> <li>Broken or melted anticipator wire.</li> <li>Loose connection to thermostat or system.</li> <li>Thermostat or heating system requires replacement or service.</li> <li>System Switch not set to Heat.</li> </ol>	<p>Re-light pilot.</p> <p>Excessive current or dead short in system. Have a qualified service person check the system before replacing thermostat.</p> <p>Verify thermostat and system wires are securely attached.</p> <p>Your furnace manufacturer or service person can describe how to test the heating system to verify it is operating correctly. If the heating system is capable of operation and the no heat condition persists, replace the thermostat.</p> <p>Set System Switch to Heat and raise temp above room temp.</p>
<b>Intermittent Heat</b>	<ol style="list-style-type: none"> <li>Furnace Lock-Out Condition</li> </ol>	<p>Many furnaces have safety devices that shut the system down when a lock-out condition occurs. If the heat works intermittently contact the furnace manufacturer or local service person for assistance.</p>
<b>Heat or Fan Runs Constantly.</b>	<ol style="list-style-type: none"> <li>Possible short in wiring.</li> <li>Possible short in thermostat.</li> <li>Possible short in heat/cool/fan system.</li> </ol>	<p>Check each wire connection to the thermostat to verify it is neatly looped under the terminals. No extra wire should stick out from under the terminals.</p>
<b>Furnace Cycles Too Fast or Too Slow Narrow or wide temperature swing</b>	See Step 5, Adjusting the Anticipator.	<p>The anticipation setting is the only adjustment that effects the heating cycle rate. If an acceptable cycle rate is not achieved using the anticipator contact a local service person for additional suggestions. The location of the thermostat, size of the Heat/Cool System and current draw can influence the cycle rate.</p>
<b>Thermostat Setting and Thermostat Thermometer Disagree</b>	<ol style="list-style-type: none"> <li>Thermostat thermometer setting requires adjustment.</li> <li>Thermostat setting lever requires calibration.</li> </ol>	<p>The thermometer can be adjusted by using a standard slotted screwdriver. Turn the thermometer pointer screw located inside the front cover to change the setting. For calibrating the setting lever contact a local heating and cooling service person.</p>
<b>Adjusting Thermometer</b>	<ol style="list-style-type: none"> <li>Thermostat thermometer disagrees with other room thermometers.</li> </ol>	<p>The thermometer on the thermostat is accurately calibrated at our factory but you can adjust it by using a standard slotted screwdriver. Turn the thermometer pointer screw located inside the front cover to change the setting.</p>

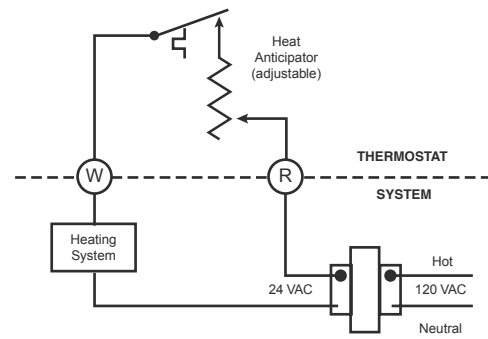


Figure 3. Typical wiring for single transformer heating system

**HOMEOWNER HELP LINE: 1-800-284-2925**