

Installation Instructions for
Heating only
161154



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YOUR THERMOSTAT REPLACES

| Description | | |
|--|-----|--|
| Standard Heating & Cooling Systems - 4 or 5 wires | No | |
| Standard Heat Only Systems | Yes | |
| Millivolt Heat Only Systems - Floor or Wall Furnaces | Yes | |
| Standard Central Air Conditioning | No | |
| Gas or Oil Heat | Yes | |
| Electric Furnace | No | |
| Hydronic (Hot Water) Zone Heat - 2 Wires | Yes | |
| Hydronic (Hot Water) Zone Heat - 3 Wires | No | |
| Heat Pump (No Aux or Emergency Heat) | No | |
| Heat Pump (with Aux or Emergency Heat) | No | |
| Baseboard Electric Heating or Line Voltage (120 or 240 Volt) | No | |

2 THERMOSTAT FEATURES

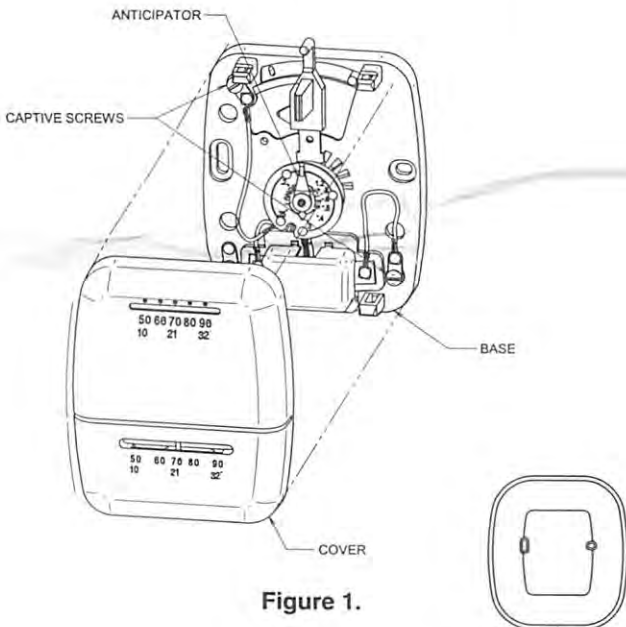
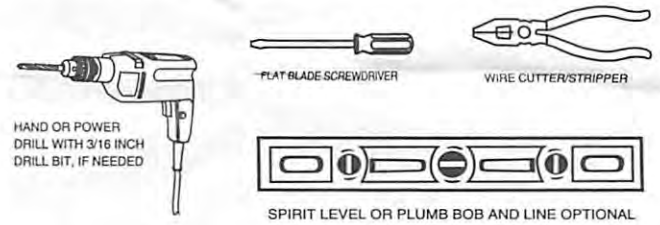


Figure 1.

Adaptor Plate (optional)

1 PREPARATIONS

Assemble tools required as shown below.



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

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. Some models also include an **adaptor plate** to cover unpainted surfaces. Thermostat wires pass through the adaptor plate center opening.

1. Remove Old Thermostat: A standard heat/cool thermostat consists of two basic parts:

- a. The cover, which may be either a snap-on or hinge type.
- b. The base, which is removed by loosening all captive screws.

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.

If no heat anticipator/indication is showing, do not be concerned; move on to the next step.

3 REMOVING OLD THERMOSTAT CONTINUED FROM FIRST PAGE

ATTENTION! This product does not contain mercury. However, this product may replace a unit which contains mercury. Do not open mercury cells. If a cell becomes damaged, do not touch any spilled mercury. Wearing non-absorbent gloves, take up the spilled mercury and place into a container which can be sealed. If a cell becomes damaged, the unit should be discarded. Mercury must not be discarded in household trash. When the unit this product is replacing is to be discarded, place in a suitable container and return to White-Rodgers at 9797 Reavis Road, St. Louis, MO, 63123-5398 for proper disposal.

4 MOUNTING AND WIRING

⚠ WARNING

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

Do 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.

Heat Only Two Wire:

- A. **Mount base and adaptor plate:** Mount base and adaptor plate (optional) to wall using screws provided (see Fig. 1).
- B. **Attach wires:** Attach one wire to R and the other wire to W on base.
- C. **Skip to Step #5.**

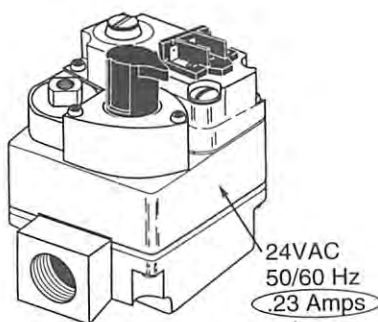
5 SET HEAT ANTICIPATOR

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.

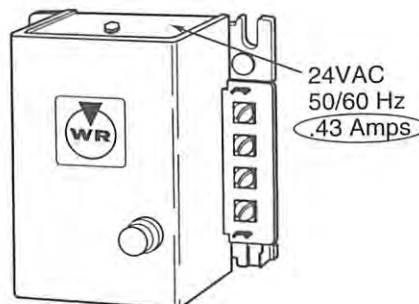
Move the pointer **counterclockwise** to **lengthen** heating system cycles; move **clockwise** to **shorten** heating cycles. Adjustments should not be greater than 1/2 marking at a time.

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

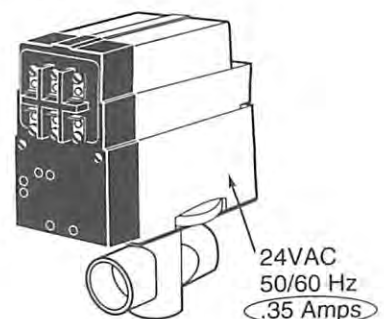
Typical Gas Valve



Typical Oil Primary



Typical Zone Valve



⚠ 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.

6 NEW THERMOSTAT OPERATION

Heat Only – After power is turned on, slide temperature lever to desired setting. To turn heat off, slide lever all the way to the left until it clicks.

7 SPECIFICATIONS

ELECTRICAL DATA

| | |
|----------------------------|----------------------------------|
| Switch Rating | 24 VAC (30 VAC max.) |
| Heating | 0.15 to 1.2 Amps |
| Switch Action | Snap Action |
| 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 |

NOTE
For Millivolt Application:
Rotate contact arm
to rest on this rivet.

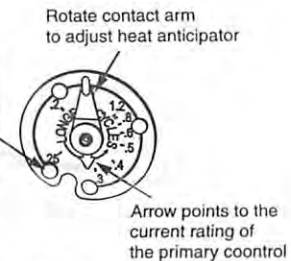


Figure 2. Anticipator adjustment

8 TROUBLESHOOTING

| Symptom | Possible Cause | Corrective Action |
|---|--|---|
| No Heat/No Fan (common problems) | <ol style="list-style-type: none"> 1. Blown fuse or tripped circuit breaker. 2. Furnace power switch to OFF. 3. Furnace blower compartment door or panel loose or not properly installed. | <p>Replace fuse or reset breaker. Turn switch to ON.</p> <p>Replace door panel in proper position to engage safety interlock or door switch.</p> |
| No Heat | <ol style="list-style-type: none"> 1. Pilot light not lit. 2. Broken or melted anticipator wire. 3. Loose connection to thermostat or system. 4. Thermostat or heating system requires replacement or service. | <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> |
| Intermittent Heat | <ol style="list-style-type: none"> 1. Furnace Lock-Out Condition | <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> |
| Heat Runs Constantly. | <ol style="list-style-type: none"> 1. Possible short in wiring. 2. Possible short in thermostat. 3. Possible short in heat/fan system. | <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> |
| Furnace Cycles Too Fast or Too Slow Narrow or wide temperature swing | <p>See Step 5, Adjusting the Anticipator.</p> | <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 Heating System and current draw can influence the cycle rate.</p> |
| Thermostat Setting and Thermostat Thermometer Disagree | <ol style="list-style-type: none"> 1. Thermostat thermometer setting requires adjustment. 2. Thermostat setting lever requires calibration. | <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> |
| Adjusting Thermometer | <ol style="list-style-type: none"> 1. Thermostat thermometer disagrees with other room thermometers. | <p>The thermometer on the thermostat is accurately calibrated at our factory but you can adjusted it by using a standard slotted screwdriver. Turn the thermometer pointer screw located <i>inside the</i> front cover to change the setting.</p> |