

# Robertshaw

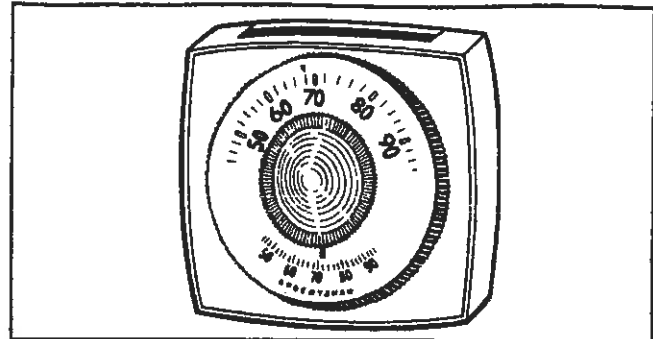
CONTROLS COMPANY  
**Uni-Line North America** A SIEBE COMPANY  
**The Energy Control Company®**

## INSTALLATION DATA 200 SERIES HEATING OR COOLING THERMOSTATS

The 200 Series Thermostats are decorator designed and engineered for outstanding performance. All models feature Uni-Line's famous sealed-in-glass switch which requires NO LEVELING AND OPTIMUM PROTECTION FROM SWITCH CONTAMINATION.

Models are available for 24 volt heating or cooling, millivolt heating, 2 or 3-wire zone, and with energy saving heating or cooling ranges.

Decorative Wall Plate is included with all models to cover old thermostat mounting marks (See photo at right.)



**CAUTION**

THIS DEVICE SHOULD BE INSTALLED BY A QUALIFIED SERVICE TECHNICIAN WITH DUE REGARD FOR SAFETY, AS IMPROPER INSTALLATION COULD RESULT IN A HAZARDOUS CONDITION.

### SPECIFICATIONS

Heat anticipation range	
24 volt heating .....	.18 TO 1.0 amps
Millivolt and 2-wire zone .....	none
Cooling and 3-wire zone .....	4700Ω, fixed
Temperature range .....	
except	48-65°F
200-403 and 503 .....	39-77°F
200-405 and 505 .....	48-65°F
200-406 and 506 .....	39-65°F
200-605 .....	78-86°F
Dimensions .....	
	2-13/16" rounded square
	1-5/16" deep

Electrical rating	
24 volt models .....	30 VAC, max. 1.0 amp, max.
Millivolt models .....	250 to 750 millivolts
Differential .....	2°F (nominal)
Switch action .....	SPST
	except SPDT 200-901

### INSTALLATION INSTRUCTIONS

**Shut off power to equipment before servicing**

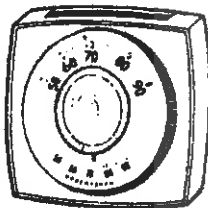


FIGURE 1 - COVER

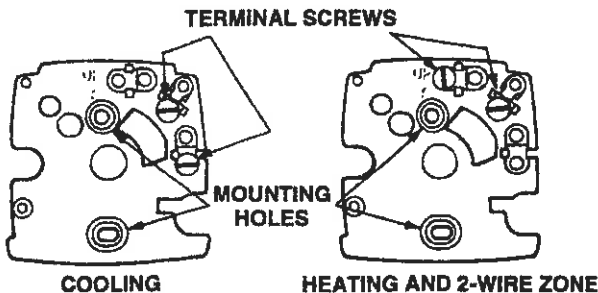


FIGURE 2 - SUBBASE

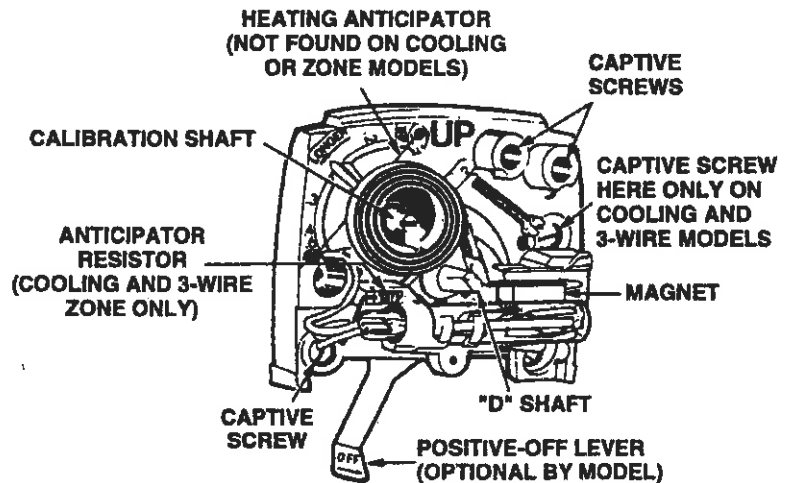


FIGURE 3 - BODY

### LOCATING THERMOSTAT

Your thermostat is a sensitive instrument. For accurate temperature control and comfort, correct location is very important.

On new installations, the guidelines listed below should be followed as closely as possible. When replacing an old thermostat, install the new one in the same location unless these conditions suggest otherwise.

1. Locate the thermostat on an inside wall about five feet off the floor, where it is easy to install, service, and adjust. It should be in a room that is used often, such as a living room or family room.

2. Do *not* install it where there are unusual heating conditions, such as in direct sunlight, close to a lamp, radio, television, radiator, register, near a fireplace, or other heat producing appliance. Also, check for hot water pipes within the wall, and stove on other side of wall.
3. Do *not* locate in unusual cooling conditions, such as on an outside wall, or one separating an unheated room, or in drafts from stairwells, doors, or windows.

## INSTALLATION INSTRUCTIONS (Cont'd)

- Do not locate in a damp or humid area. This can shorten thermostat life due to rust or corrosion.
- Do not locate where air circulation is poor, such as a corner, alcove, or behind an opened door.
- Do not install until all construction work and painting is complete.

## MOUNTING THERMOSTATS

- Remove old thermostat, if any. **Caution:** Do not let wires fall back out of reach into wall cavity.
- Remove cover, figure 1, (friction fit) from thermostat body by gripping at top and bottom and lifting from thermostat body. Use extreme care not to damage working parts.
- Remove subbase from the thermostat body by loosening captive screws. (See figure 3.)
- Pull approximately 3 inches of wire through the wall and thread the wire through the center of the subbase.
- Hold the subbase level and against the wall so that the old holes, etc. are covered. **Note:** If thermostat will not cover all existing holes, the decorative wall plate should be used during assembly. It is not necessary to accurately level subbase, merely position for

appearance. With a pencil, mark the wall where the screws will attach the subbase to the wall. Use designated mounting holes only. Now lay the subbase to one side. Drill the new mounting holes with a 3/32" drill bit.

- Mount decorative wall plate, if needed, and subbase to wall using enclosed screws.
- Connect wires to applicable terminal screws. (See schematic diagrams below.) Push excess wire back into hole.
- Mount thermostat body on subbase using three captive screws (figure 3.) Captive screw in lower left hand corner of body is self-threading into subbase. Use care not to overtighten.
- Replace thermostat cover being careful to align "D" shaped dial shaft with matching shaped hole in hub of setting dial. Press cover on to the thermostat body.

**Note:** Some heating and / or cooling appliances are supplied with a time delay feature incorporated in the electrical circuit of the appliance controls. If the appliance is so equipped, there may be a delay of as much as three minutes, depending on the device used, after the thermostat calls for heat or cooling before the appliance is actually in operation.

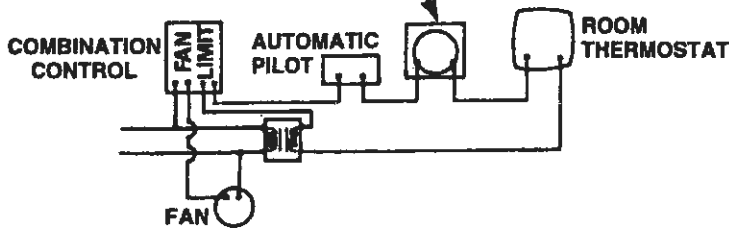
## WIRING

### CAUTION

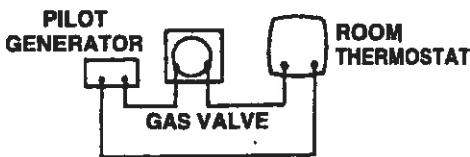
ALL WIRING MUST CONFORM TO LOCAL CODES AND ORDINANCES. DO NOT SHORT GAS VALVE TERMINALS. THIS WILL DAMAGE WALL THERMOSTAT AND VOID WARRANTY. A SUITABLE LIMIT CONTROL IS REQUIRED IN THE 24 VOLT OR 120 VOLT SIDE OF TRANSFORMER.

### MODELS 200-401, 402, 403, 405 AND 406

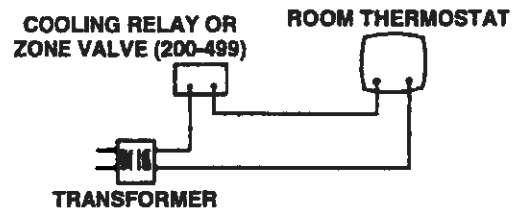
#### GAS VALVE OR TWO-WIRE OIL BURNER OR STOKER RELAY



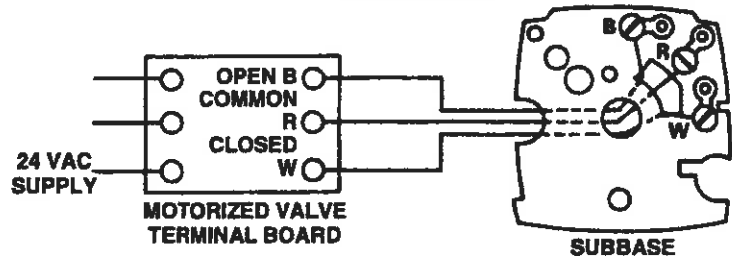
### MODELS 200-501, 502, 503, 505 AND 506



### MODELS 200-499, 200-601, 602 AND 605



### MODEL 200-901



FOR COOLING SYSTEM INSTALLATION  
TRANSPOSE WIRING ON TERMINALS  
"B" AND "W" ON SUBBASE

## SERVICE INSTRUCTIONS - CALIBRATION

The thermostat is accurately calibrated before leaving the factory, and no further calibration should be necessary. If however, it is necessary to recalibrate the thermostat, a qualified serviceman can proceed as follows:

- Allow the thermostat contacts to stay in the "OFF" position for at least 10 minutes until the internal temperature is stabilized. During this time the thermostat must not be influenced by heat from the hands or any other heat source.
- Turn the temperature selector dial indicator to the actual room temperature measured using a reliable mercury thermometer.
- Carefully remove the thermostat cover. (Noted under installation.)
- With a small crescent wrench, hold dial shaft (figure 3). Being careful that the shaft does not rotate from position it had when cover was removed.

**Note:** Hold wrench at angle so that steel tool does not interfere with magnet travel.

- Keep hands and breath away from bimetal temperature sensing element (figure 3.) Turn calibration shaft in center of bimetal coil

with screwdriver counterclockwise until lever touches stop. Continue to turn counterclockwise until, when pressure of screwdriver is released, magnet is away from glass switch.

- Slowly rotate calibration shaft clockwise until magnet snaps to glass switch.
- Thermostat is in calibration - replace thermostat cover.

**Note:** If magnet is away from glass switch when the thermostat is removed, omit step 5.

### Heat Anticipation Adjustment

(Not applicable to cooling and zone models.)

For average conditions, set the adjustable anticipator (upper left of thermostat body, figure 3) to match the current rating of the primary heating control. Move anticipator approximately 1/2 division in direction indicated by arrows on the thermostat for longer "ON" cycles, or move lever in opposite direction for shorter "ON" cycles. Allow at least 24 hours to determine if setting provides satisfactory operation before making any further adjustments.