

Electric Room Thermostats, Two Position with Adjustable Heat Anticipation General Instructions

For on-off control with heat anticipation of low current devices such as actuators, relays and motor coils.

Bimetal operated snap action SPST switch. Color coded 6" leads. .2 to 1 amps adjustable heat anticipation. Differential 2°F. Units have plastic covers as standard. Mounts on flush or surface switch box, or directly on wall (24 volt only).

Dimensions: 4-3/8" high x 2-7/8" wide x 1-5/8" deep.

OPTIONS

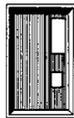
Add "dash-number" (-XXX) suffix to base part number for desired option.



Standard



-400



-401



-402



-403



-404

-601 10°F Night Depression 120V Standard Cover†

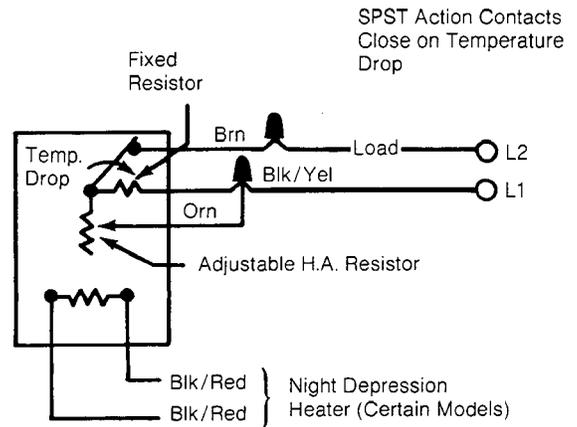
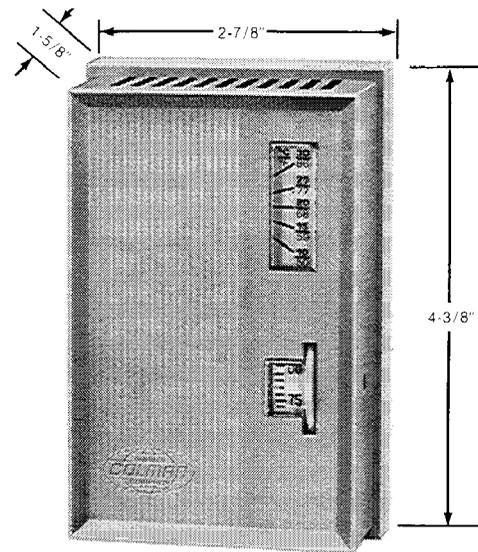
-602 10°F Night Depression 24V Standard Cover†

-603 10°F Night Depression 240V Standard Cover†

†Normally, night depression is controlled by a centrally located time clock such as AE-174 or AE-178, or by selector switch sub-bases (AT-602 or AT-603).

ACCESSORIES

- AT-101 Lock cover kit
- AT-104 Dial stop pins (note: pins included with each unit)
- AT-136 Title plates (day, night, heat, cool)
- AT-504 Plaster hole cover kit (small)
- AT-505 Surface mounting base
- AT-546 Auxiliary mounting plate
- AT-602 Selector switch sub-base DP4T
- AT-603 Selector switch sub-base one DP4T, one DPDT
- AT-1103 Wire guard
- AT-1104 Cast aluminum guard
- AT-1105 Plastic guard
- AT-1155 Plastic guard
- AT-1165 Plastic guard
- Tool-11 Calibration wrench
- Tool-13 Contact burnishing tool



| Part Number | Control* Dial Range | Full Load Amps | | Locked Rotor Amps | | Pilot Duty VA |
|-------------|---------------------|----------------|---------|-------------------|---------|----------------|
| | | 24/120 Vac | 240 Vac | 24/120 Vac | 240 Vac | 24/120/240 Vac |
| TA-1501 | 55-85°F (13-29°C) | 1 | 1 | 6 | 6 | — |
| TA-1502 | 45-75°F (7-23°C) | | | | | |

* Units dual marked in °F and °C; dial stop pins included to limit control range.

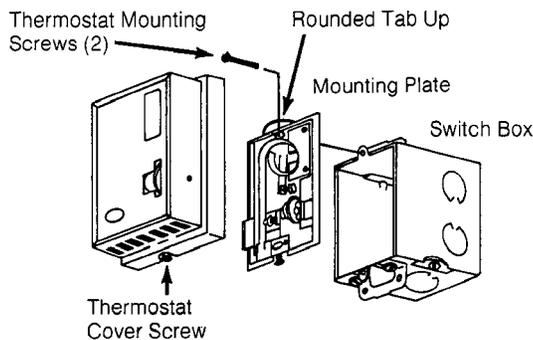
INSTALLATION

Requirements

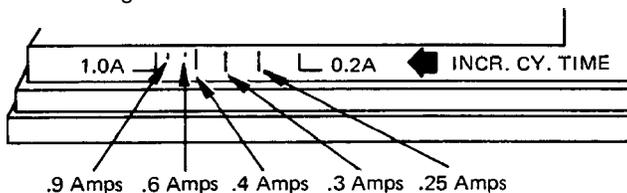
Physically, these thermostats require upright mounting on a properly flat vertical surface. Locate the thermostat where it will be exposed to unrestricted circulation of air which represents the average temperature of the controlled space. Do not locate the thermostat near sources of heat or cold, such as lamps, motors, sunlight or concealed ducts or pipes. The thermostat is designed for service in any normally encountered human environment.

Installation Procedure

1. Pull all wires. (Use copper wire only.)
2. Make all electrical connections to thermostat. Make all connections in accordance with the job wiring diagram and in compliance with national and local electrical codes. Class I wiring is required unless all circuits to contacts are powered from a Class II source.
3. Remove thermostat cover and fasten thermostat to box or wall.



4. Set adjustable heat anticipator (.2 to 1 amp) at the ampere rating of the device being controlled. See below and Figure 1.



If it is necessary to increase the time per cycle of the controlled device, move the pointer to a higher ampere value. Slightly larger variations in room temperature may occur.

If it is necessary to decrease the time per cycle of the controlled device, move the pointer to a slightly lower ampere value (.1 amp maximum change).

Do not move the scale pointer above the 1 amp value.

5. Install the thermostat cover.

CHECKOUT

After installing a thermostat, make an initial check of the switching action. Verify the switch action by listening to and watching the switch contacts, using a voltmeter between the proper sides of the switch, or observing the controlled device.

1. Run the setpoint dial to a temperature above ambient. This should cause the thermostat to switch, calling for heat.
2. Turn the setpoint dial setting dial setting down gradually. The switch should break contact.

CALIBRATION

All thermostats are calibrated at the factory and normally will not require any such attention. However, if recalibration is necessary for any reason, proceed as follows:

1. Turn off control power and power to night depression circuit, where applicable.
2. Set setpoint dial to correspond to actual stable room temperature, as read from an accurate thermometer.
3. Remove thermostat cover. Do not breathe on the thermostat or handle excessively as this will affect the accuracy of the final calibration.
4. If contact is not made, turn calibration screw CCW until contact is made, then turn CW until contact just breaks. If contact is made, turn calibration screw CW until contact just breaks.
Note: Each complete turn of screw changes calibration approximately 15°F.
5. Replace thermostat cover.
6. Turn on control power.
7. Recheck calibration about 30 minutes later to be sure heat from handling of or breathing on bimetal element did not result in an erroneous setting.

MAINTENANCE

Be sure that the air convection holes in the thermostat cover do not become clogged or covered. This causes improper temperature sensing.

After long periods of continual use, it may become necessary to clean the contacts of any excess contact build-up. Before proceeding, be sure that either the electrical connections to the thermostat are disengaged or that the power to the circuit is broken. Now clean the contacts using TOOL-13 contact burnishing tool.

REPAIR

Field repair of the thermostat is not recommended. If the system is not operating correctly and the reason is traced to the thermostat, it should be replaced.

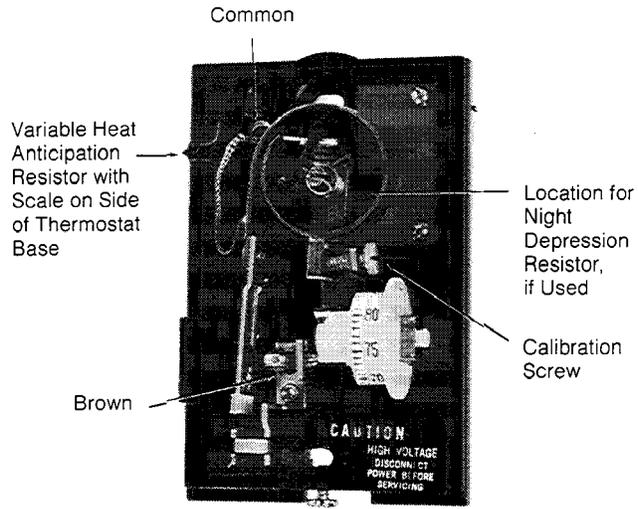


Figure-1

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