Your new thermostat has been designed to provide accurate control and display of room temperature. In addition, it will also display all relevant information pertaining to your system. The clearly marked buttons and informative display make it extremely easy to understand and simple to use. Please take a few moments to read the brief instructions and familiarize yourself with the various functions in order to obtain maximum benefit from this truly unique electronic control.

User Controls

MODE:
Select the desired mode of operation by repeated pressing of the MODE button:
- controls Cooling system only (the word “Cool” is displayed for 5 seconds).
- controls Heating system only (the word “Heat” is displayed for 5 seconds).
- controls both heating and cooling (auto changeover) (the word “Auto” is displayed for 5 seconds).
- OFF - disables thermostat so equipment will not operate. Avoid using the OFF mode during extremely cold weather to prevent damage from freezing.

COOLING: 
Select the temperature you want your equipment to maintain while in the cooling mode by pressing and holding the or buttons. The control setpoint temperature is displayed for 5 seconds.

HEATING: 
Select the temperature you want your equipment to maintain while in the heating mode by pressing and holding the or buttons. The control setpoint temperature is displayed for 5 seconds after releasing the button.

FAN: 
The fan will come on automatically when the system is operating, but there is no indication of this on the display. To select continuous Fan operation, press the FAN button and the display will show . This is recommended for electronic air filters or continuous ventilation requirements.

NOTE: The thermostat never allows less than 2°F (1°C) difference between the heating and cooling setpoints.

TEMPERATURE ACCURACY
Full temperature accuracy will only be realized after the thermostat has been installed and powered for at least one hour.

General Information
The thermostat normally displays room temperature, mode of operation and whether Cooling or Heating is currently on. The six buttons on the front of the unit allow complete control of the equipment. You may select different heating and cooling setpoints for the system to maintain, eg. 70° in heating and 75° in cooling. Raising or lowering the setpoints in heating or cooling is as simple as pushing a button. In addition, you may choose °F or °C for the display. The thermostat also allows you to select continuous fan operation, (useful when using an air cleaner) or have the fan come on with the equipment.

POWER FAILURES
Your thermostat employs the latest developments in solid state electronic technology. One of the unique features of your thermostat is that there is no battery required to maintain your selected temperature setpoints. Power failures of any duration will not affect the memory of the thermostat.

Avoid using the OFF mode during extremely cold weather to prevent damage from freezing.

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On October 1st, 2009, TAC became the Buildings business of its parent company Schneider Electric. This document reflects the visual identity of Schneider Electric, however there remains references to TAC as a corporate brand in the body copy. As each document is updated, the body copy will be changed to reflect appropriate corporate brand changes.

Model TC97-M
Doc #ALT0138B
F-26404-4
97342
Installation Procedures

LOCATION:
To ensure proper operation, the thermostat should be mounted on an inside wall in a frequently occupied area of the building. In addition, its position must be at least 18" (46 cm) from any outside wall, and approximately 5' (1.5 m) above the floor in a location with freely circulating air of an average temperature.

BE SURE TO AVOID THE FOLLOWING LOCATIONS:
– Behind doors or in corners where freely circulating air is unavailable.
– Where direct sunlight or radiant heat from appliances might affect control operation.
– On an outside wall.
– Adjacent to, or in line with, conditioned air discharge grilles, stairwells, or outside doors.
– Where its operation may be affected by steam or water pipes or warm air stacks in an adjacent partition area, or by an unheated/uncooled area behind the thermostat.
– Where its operation will be affected by the supply air of an adjacent unit.
– Near sources of electrical interference such as arcing relay contacts.

1. Lift the thermostat cover and insert a flat blade screwdriver or a coin 1/8” into the slot located in the bottom center of the thermostat case. Twist 1/4 turn (please refer to step 1 of the figure to the right) to pop the thermostat from its backplate.
2. Swing the thermostat out from the bottom and lift the thermostat up and off the subbase (refer to steps 2 and 3 of the figure to the right).
3. Place the rectangular opening in the base over the equipment control wires protruding from the wall. Using the base as a template, mark the location of the two mounting holes (exact vertical mounting is necessary only for appearance).
4. Use the supplied anchors and screws for mounting on drywall or plaster; drill two 3/16” (5mm) diameter holes at the marked locations; use a hammer to tap the nylon anchors in flush to the wall surface and fasten.
5. Connect the wires from your system to the thermostat terminals as shown in the wiring diagrams. Carefully dress the wires so that any excess is pushed back into the wall cavity or junction box. Ensure that the wires are flush to the mounting plate. The access hole should be sealed or stuffed to prevent drafts from the wall affecting the thermostat’s performance.

6. Before the thermostat is re-installed on the subbase, install the optional clock/timer, indoor/outdoor remote sensors, if used. Refer to the installation instructions supplied with each option. Also, check the position of the slide switches on the back of the thermostat.

Replacing The Thermostat On The Subbase
1. Position the thermostat on the hinged tabs located at the top of the subbase.
2. Gently swing the thermostat down and press on the bottom center edge until it snaps in place.

Specifications

| Rated Voltage | 20-30 Vac, 24 nominal |
| Rated A.C. Current | .050 Amps to 0.75 Amps |
| Rated D.C. Current @ ‘R’ | continuous per output with surges to 3 Amp Max. |
| Control Range | Heating: 38 to 88°F in 1° steps, 5 to 30°C in 1° steps |
| | Cooling: 60 to 108°F in 1° steps, 16 to 40°C in 1° steps |
| Thermostat Measurement Range | 28 to 124°F or 0 to 48°C |
| O.D.T. Measurement Range | -40 to 124°F or -40 to 48°C |
| Control Accuracy | ±.5°C at 20 °C, ±1°F at 68°F |
| Minimum (between heating and cooling) 2°F or 1°C |

Note: This thermostat contains electronic circuitry replacing the conventional mechanical anticipator.

Output Terminal Functions

| Y2 | Energizes on a call for 2nd stage cooling |
| W1 | Energizes on a call for first stage heat |
| Y1 | Energizes on a call for first stage cool |
| G | Fan is energized with a call for heating or cooling or selected by fan button |
| R | Independent switching voltage |
| 24 Vac | 24 Vac |
| 24 Vac (c) | 24 Vac (Common) |
| W2 | Energizes on a call for second stage heat. |
| LED1, LED2 | Free lights for status or function indication |
| CLK1, CLK2 | Use with remote clock/timer for alternate setpoints |
| RS2, RS1, RS+V | Use to connect Outdoor Temperature Sensor option and/or Indoor Remote Sensor option. Refer to the instructions included with the sensors |

Note 1: If jumper is removed, a dedicated transformer is required at the ‘R’ terminal to power the loads.

Note 2: This thermostat may be used with 24 Volt DC. The negative side of the DC supply must be wired to the 24V (c) terminal.

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