

**Non-Digital, On/Off Thermostat
General Instructions**

Applications

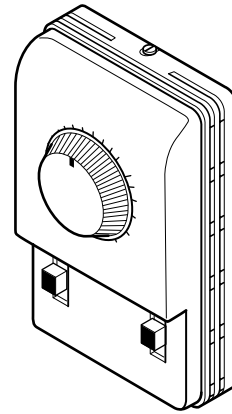
The T500 series thermostats are available in four basic models for low and line voltage control of valves, relays, and fan motors in fan coil and packaged units for commercial, industrial, and residential installations. Special order option allows heating and/or cooling pilot light indication.

Features

- Set point dial stop (optional)
- Bellows type sensor for constant and close temperature differential
- System and fan switches

Applicable Literature

680 Series Changeover Switch General Instructions,
F-27017

**T500 Series**

SPECIFICATIONS

Inputs

Power Input: 24 to 250 Vac @ 50/60 Hz.

Connections:

Power, Up to 18 AWG wire.

Control, Up to 18 AWG wire.

Outputs

Electrical:

Thermostatic Switch Rating,

Heating, 6 amp resistive, 1.5 amp inductive.

Cooling, 6 amp resistive, 1 amp inductive.

Fan Switch Current Rating, 6 amp resistive, 3 amp inductive.

Operating Differential, 2F degree (1.1C degree).

Setpoint Adjustment Range, 50 to 85°F (10 to 30°C).

Mechanical:

Sensing Element, Vapor filled bellows.

Material, Molded ABS.

Finish, Bone white.

Environment

Temperature Limits:

Shipping & Storage, -30 to 130°F (-34 to 55°C).

Operating, 32 to 130°F (0 to 55°C).

Humidity: Non-condensing.

Shipping Weight: 0.35 lbs (160 g).

Location: NEMA Type 1.

Agency Listings

CE: Compliant.

MODEL CHART

Table-1 Model Chart.

Model	Outputs	Dial	Fan Control	System Switches
T511	Two-pipe	Celsius	3-speed	On/Off
T511F	Two-pipe	Fahrenheit	3-speed	On/Off
T513	Four-pipe	Celsius	3-speed	Heat/Off/Cool
T513F	Four-pipe	Fahrenheit	3-speed	Heat/Off/Cool

Accessories

WP500 5-1/2" x 5-1/2" (140 x 140 mm) adapter plate.

680-243-6 Auto seasonal changeover switch (use with two pipe models only).

INSTALLATION

Inspection

Inspect the package for damage. If damaged, notify the appropriate carrier immediately. If undamaged, open the package and inspect the device for obvious damage. Return damaged products.

Requirements

- Training: Installer must be a qualified, experienced technician.
- Other accessories as appropriate.
- Tools (not provided):
 - Screwdriver
 - Drill
 - Digital multimeter

Precautions

General

▼ **WARNING**

- Electrical shock hazard! Disconnect power before installation to prevent electrical shock or equipment damage.
 - Make all connections in accordance with the electrical wiring diagram and in accordance with national and local electrical codes.
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▼ **CAUTION**

- Avoid locations where excessive moisture, corrosive fumes, explosive vapors, or vibration are present.
 - Avoid electrical noise interference. Do not install near large conductors, electrical machinery, or welding equipment.
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Federal Communications Commission (FCC)

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy and may cause harmful interference if not installed and used in accordance with the instructions. Even when instructions are followed, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio and television reception—which can be determined by turning the equipment off and on—the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/television technician for help.
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Canadian Department of Communications (DOC)

NOTE

This class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Standard EN 55022

▼ **WARNING**

This is a class B (European Classification) product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Mounting

The T500 series can be surface mounted or secured to a standard 2" x 4" (75 x 75 mm) electric box. Refer to Figure-1.

Mount the thermostat approximately five feet above the floor on an inside wall. Do not mount near cold or warm air drafts from doorways, windows, or discharge air vents. Do not mount near lights, lamps, or indirect sunlight. Do not mount behind doors or furniture. Do not mount on inside walls.

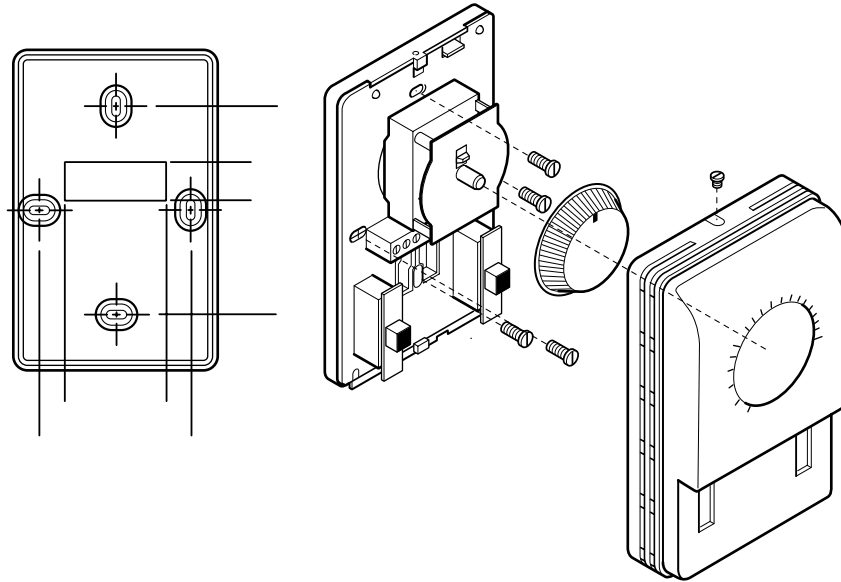


Figure-1 Mounting the T500.

Wiring

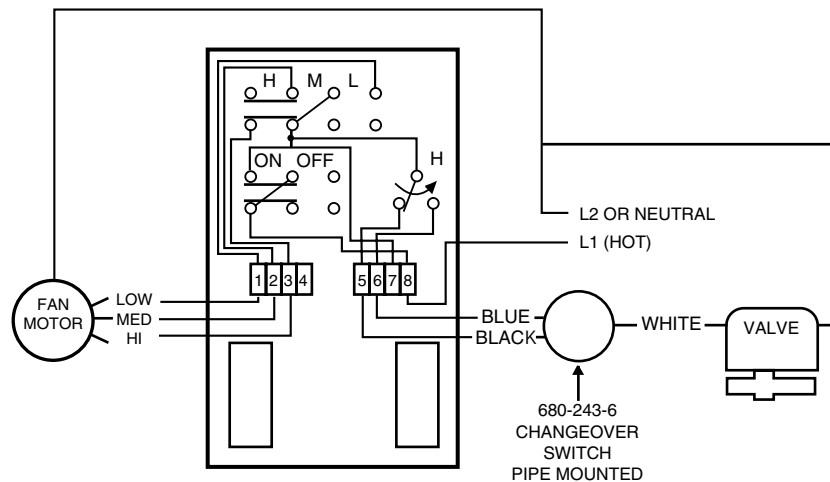


Figure-2 T511, 2-Pipe Heating/Cooling with Changeover Switch.

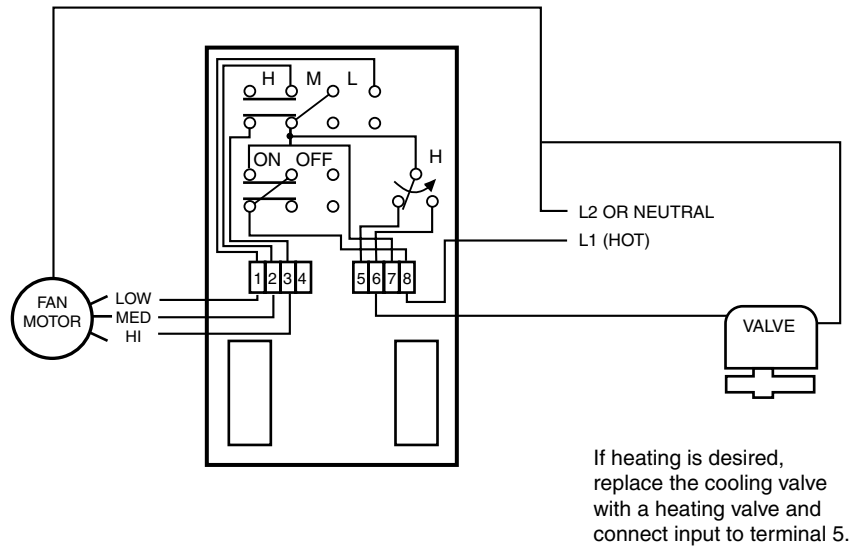


Figure-3 T511/T511F with Two-Pipe Cooling.

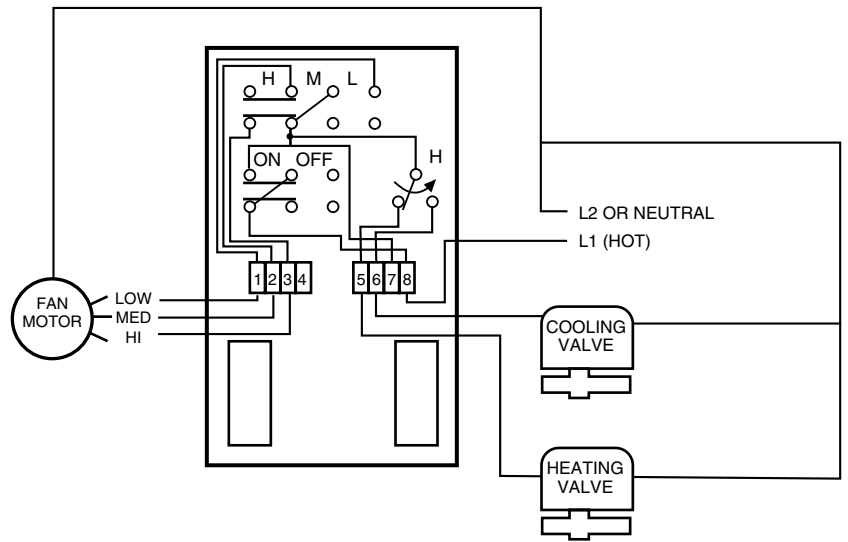


Figure-4 T513/T513F with Four-Pipe Heating/Cooling.