

SUPER TRADELINE

T651A MULTIVOLTAGE THERMOSTAT

APPLICATION

The T651A SUPER TRADELINE Multivoltage Thermostat controls heating, cooling, and heating-cooling systems. The multivoltage anticipator provides cycling action in 120, 208, 240, or 277 volt applications. A Q473A subbase can be used with the thermostat to provide HEAT-OFF-COOL switching in heating-cooling systems. A Q473B subbase provides AUTO-OFF switching in heating only or cooling only systems.

When selecting a replacement thermostat, make certain electrical ratings and scale range match the original. The table below lists competitive and Honeywell thermostats that the SUPER TRADELINE T651A replaces.

ELECTRICAL RATINGS:

V AC	HEATING/ COOLING		HEATING ONLY
	AFL	ALR	RESISTIVE AMPERES
120	8	48	7.2
208	4	24	7.2
240	4	24	7.2
277	4	4	7.2

Pilot Duty—125 VA.

SUPER TRADELINE T651A REPLACES:

HONEYWELL	CONTROLS CO.	BARBER	PENN	WHITE-
T10B	OF AMERICA	COLMAN	822	RODGERS
T44	301 Series	TA101	822A2 826X	170-4
T45	303N	TA103	822A7 874A01	179-1
T451A,B		TA191	822X 875A01	180-1
T666A		TC129	822X2 877	180-2
T651A		TC133	822X3 5C100	181-1
T42A,B		TC192	822X4 5D100	182-102
	GENERAL/ PERFEX		823 T26A-1	183-102
	75A100	MERCROID	823A2 T26J-1	
	75R101	855	825A2 T26	
	100D Series	855MS	872A T75A8	
DETROIT/ AMERICAN	T71A	RA	872A01C T75A100	ITT GENERAL
STANDARD	T71H	HA	872A11C T70A-8	75A100
CA401	T71J		872X A2	75R101
CB44000	T72A		873 A7	100D Series
CB44001	T72H	ROBERTSHAW		T71A
CB44002	T72J	TA500		T71H
CB44003	T75A100	TH71		T71J
CB44004	T75R101	TH72		T72A
	T220A	TH500		T72H
		TH75		T72J
		TX550		T75R101
		TH70		T220A
		TH79		T699D

INSTALLATION

CAUTION

1. Installer must be a trained, experienced serviceman.
2. Disconnect power supply before installation to prevent electrical shock and equipment damage.
3. All wiring must comply with applicable codes and ordinances.
4. Do not exceed the ratings listed on the nameplate of the device.
5. Always conduct a thorough checkout when installation is complete.

LOCATION

Locate the thermostat about 5 feet [1.5 metres] above the floor in an area with good air circulation at average temperature.

Do not mount the thermostat where it may be affected by—

- drafts, or dead spots behind doors and in corners
- hot or cold air from ducts,
- radiant heat from the sun or appliances,
- concealed pipes and chimneys,
- unheated (uncooled) areas behind the thermostat

MOUNTING PLATE/SUBBASE MOUNTING

The mounting plate is designed for mounting to a vertical outlet box. The mounting plate provides a base to hang the thermostat or subbase on.

To mount the plate, fasten the mounting plate to the outlet box. Do not tighten the screws. See Fig. 1.

Level plate, then tighten screws.

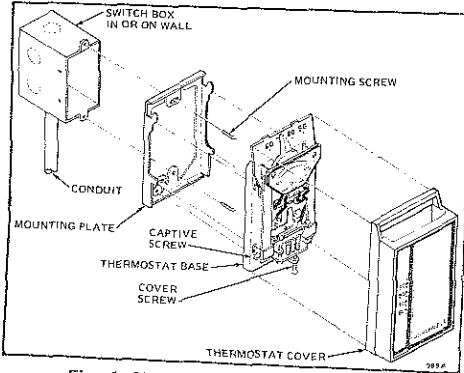


Fig. 1—Mounting on vertical outlet box.

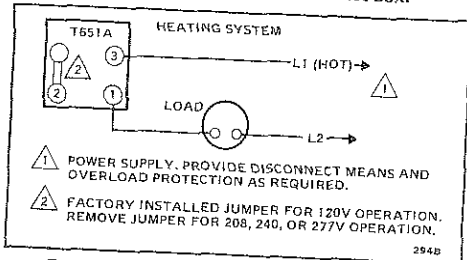


Fig. 2—T651A heating system wiring diagram.

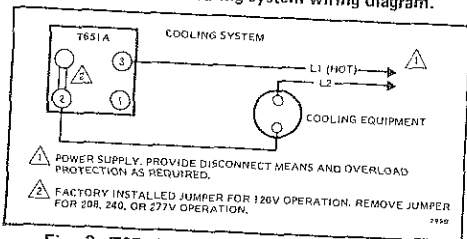


Fig. 3—T651A cooling system wiring diagram.

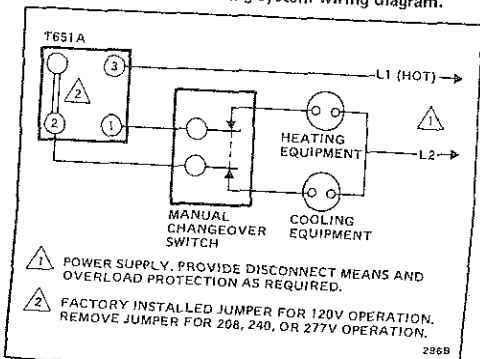


Fig. 4—T651A heating-cooling system with manual changeover switch.

WIRING AND MOUNTING THERMOSTAT

All wiring must comply with local electrical code. Disconnect power supply before wiring to prevent electrical shock and equipment damage. When using Q473 subbase, refer to the instructions packed with the subbase.

Do not remove the thermostat cover until wiring complete.

1. Wire terminals as shown on Figs. 2-6.

2. T651A thermostats are shipped with factory installed jumper between terminal 2 and an unnumbered terminal for 120 volt operation. This jumper must be removed for 208, 240, or 277 volt operation.

3. Remove the cover by loosening the screw at the bottom of the thermostat cover. Then pull the cover outward and lift it off the scaleplate. Remove the cardboard packing insert.

4. Hang thermostat on the mounting plate hooks. Fasten thermostat by tightening the captive screw (Fig. 1)

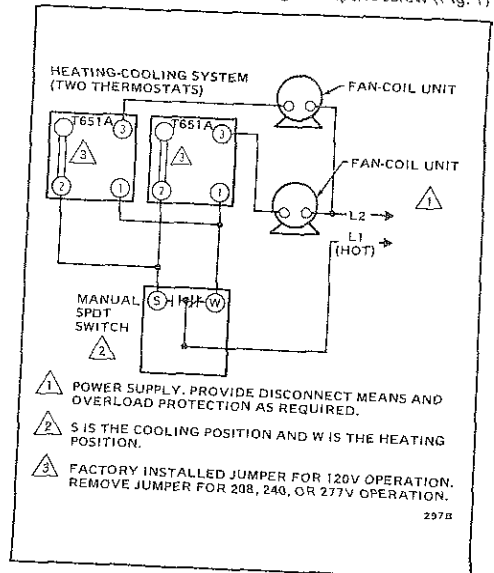


Fig. 5—Heating-cooling system wiring diagram using two thermostats and manual changeover switch.

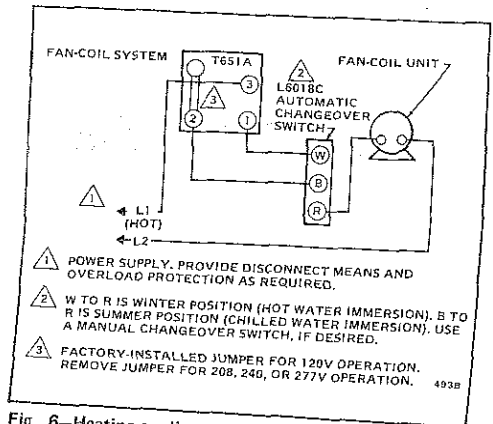


Fig. 6—Heating-cooling system using L6018C to provide automatic changeover.

SETTING

Move temperature control lever at top of thermostat to desired temperature setting for heating or cooling. If using Q473A subbase, move switch lever to HEAT or COOL. On Q473B, move lever to AUTO.

LOCKING LEVER

The temperature control lever can be locked at a set temperature. To use, insert screw in lever locking hole (Fig. 7), then set the control lever to the desired temperature and tighten the lever locking screw.

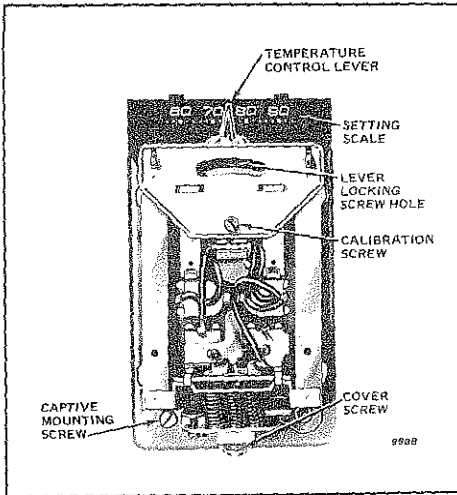


Fig. 7—Internal view of T651A.

BLANK FACEPLATE

A blank faceplate is furnished for use where the cover thermometer is not desired. Replace the faceplate as follows:

1. Inside thermometer cover, bend faceplate tabs parallel to side of cover and remove. See Fig. 8.
2. Insert blank faceplate and twist tabs to fasten.

LOCKING COVER

To discourage unauthorized tampering, a hex-head cover screw and wrench are included. Remove slotted screw and replace with hex-head screw. Use wrench to tighten screw after cover is mounted.

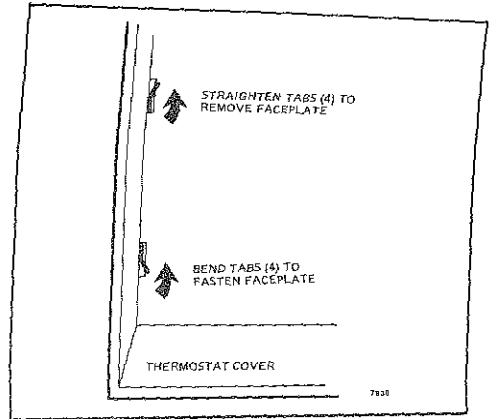


Fig. 8—Replacing cover faceplate.

CALIBRATION

The T651A thermostat is accurately calibrated at the factory under controlled conditions. If field calibration appears necessary, proceed as follows:

1. Remove cover. Place cover as close to installed thermostat as possible. Allow the temperature of the thermostat and the cover thermometer to stabilize.
2. Turn the calibration screw (Fig. 7), clockwise until snug.
3. Set the temperature control lever on the mark of the scale that corresponds to the cover thermostat reading (Fig. 7).
4. Turn the calibration screw counterclockwise very slowly until the contacts make.

NOTE: The thermostat is a very sensitive device. Turning the calibration screw 1/4 turn changes the temperature control point approximately 9 degrees.

5. Check calibration by moving the temperature control lever to the left (opening the contacts). Move lever slowly to the right until the contacts make. The indicated temperature and the cover thermometer temperature should match.

CHECKOUT

After all wiring and mounting have been completed put the system into operation. Set the thermostat to the desired setting for heating (or cooling) and let the system operate one complete cycle to make certain the thermostat and all other equipment are functioning properly.