

58T Series Adjustable Temperature Controls



Adjustable Temperature Controls

The 58T line of adjustable temperature controls from Therm-O-Disc is designed for applications requiring accurate calibration tolerances and narrow temperature differential. The bimetal disc design of the 58T provides instantaneous “snap-action” contact operation, which offers excellent reliability under heavy electrical load conditions – 277VAC, 25 amps resistive and 20 amps inductive.



Features and Benefits

The 58T series features include:

- Tight calibration and differential tolerances provide accurate temperature control.
- Instantaneous contact separation provides excellent reliability for use in applications with heavy inductive or resistive electrical loads.
- A wide variety of mounting brackets, adjusting stems, terminals and lead wires provide excellent design flexibility.

Typical Applications

Typical applications include electric baseboard heaters, room air conditioners, portable and built-in electric heaters and attic ventilator fans.

Switch Actions

The 58T cycling contacts are single pole, single throw (SPST). They can be provided to open on temperature rise and close on temperature fall, as required for electric heat applications; or to close on temperature rise and open on temperature fall, as required for ventilator fans or room air conditioners.

The 58T is available with auxiliary mechanically operated contacts to provide either a double pole break in the “off” position for electric heat applications or a “fan on only” feature.

Thermal Characteristics

Calibration – The 58T can be calibrated at any temperature from 30°F (-1°C) to 165°F (74°C). Our preferred calibration tolerance is $\pm 5^\circ\text{F}$ ($\pm 2.8^\circ\text{C}$), with tighter tolerances available when required.

Differential – The differential is the difference between the nominal open and close temperatures. Our preferred differential is 7°F (4°C) $\pm 5^\circ\text{F}$ ($\pm 2.8^\circ\text{C}$). Tighter differentials are available at extra cost.

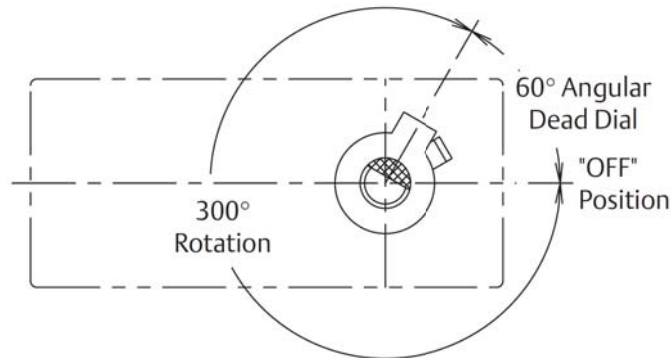
Range – The range is the difference between the thermostat operating temperatures measured at extremes of the set positions of the adjusting stem – full clockwise vs. full counterclockwise. The preferred range for the 58T is 60°F (35°C).

For more information on calibration, differentials and ranges not mentioned above, please consult one of our sales engineers.



Calibration Positions

The desired calibration can be specified at any point on the dial. The preferred calibration position is when the adjusting stem is located clockwise against the positive stop (see figure 1).



***Stop and stem flat are shown in standard extreme clockwise position.
High Position- open on rise switching (electric heat). Low Position- close on rise switching (air conditioning).***

Figure 1

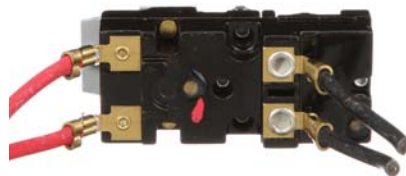
Positive Off Feature

Positive off means that when the adjusting stem is turned to the off position, the contacts will not close regardless of ambient temperature. This is accomplished by a mechanical shuttle mechanism that prevents the bumper from moving and closing contacts.

58T'S with positive off will have 270 degrees of usable rotation (vs. 300° without positive off).

All 58T's with 4 terminals have the mechanically operated auxiliary contacts and also have the positive off feature.

58T's with 2 terminals, (without the mechanically operated auxiliary contact) are not provided with the positive off feature unless requested by the customer. For those 58T's there is an S in the Type nomenclature designating positive off. Example: 58TIS.



Mounting Configurations

There are a variety of mounting brackets available for the 58T. A centerline (see figure 3) or transverse (see figure 4) bracket can be used depending upon the orientation to the temperature control specified.

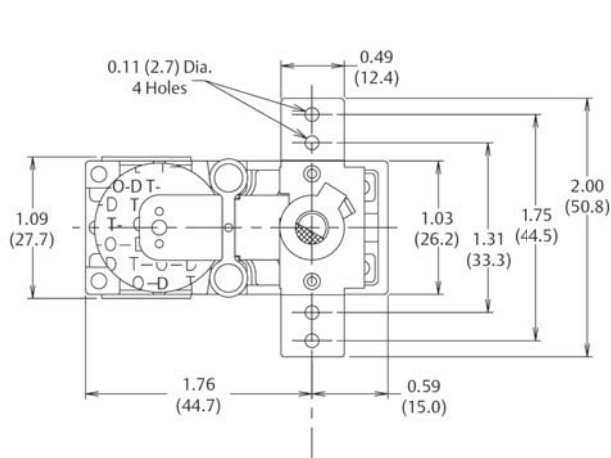


Figure 3

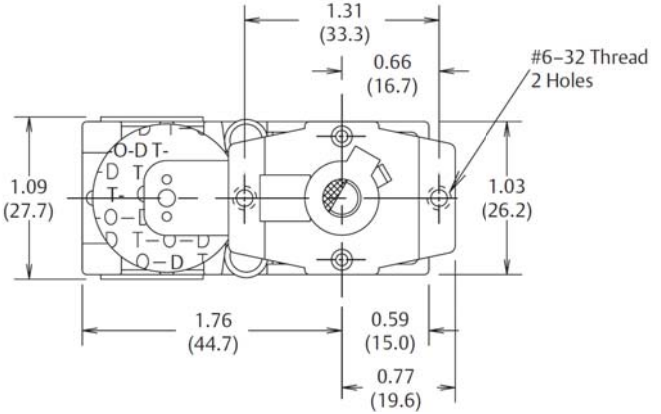


Figure 4

Dimensions are shown in inches and (millimeters).

Adjusting Stem

The adjusting stem of the 58T is available in three different standard heights: 3/8" (9.53mm), 1/2" (12.7mm) and 5/8" (15.9mm) (see figure 5). The adjusting stem can also be provided with or without a flat. The stem flat can be oriented per a specific dial requirements relative to the pointer.

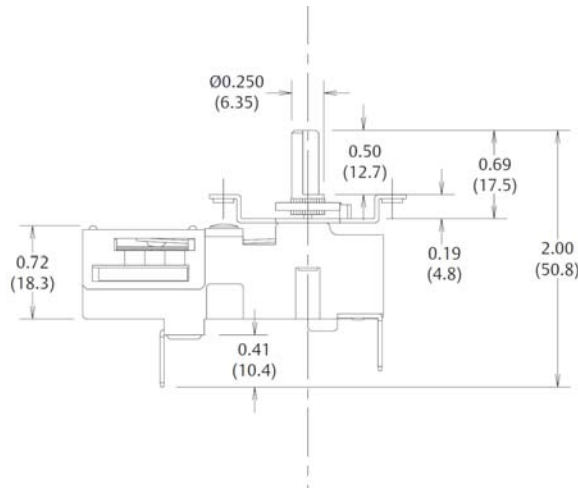


Figure 4

Dimensions are shown in inches and (millimeters).

Terminal Selection

1/4" (6.35mm), 90°, unplated brass terminals are preferred for the 58T. A variety of other blade and screw terminals, and lead wires are available.



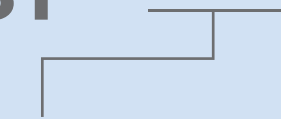
General Electrical Ratings

The 58T series from Therm-O-Disc is both UL and CSA recognized.

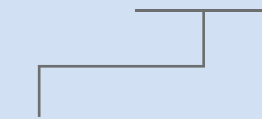
| Thermostat Type | Volts AC | Resistive Amperes | Inductive Amperes | | Pilot Duty VA | Max. Temperature | Cycles | Agency Recognition |
|-----------------------|----------|-------------------|-------------------|-----|----------------|------------------|---------|--------------------|
| | | | FLA | LRA | | | | |
| 58T (Max 25 Amps) | 277 | 25 | 20 | 90 | 720 | 150°F (65.5°C) | 100,000 | UL E19279 |
| | 240 | 10 | - | - | - | 165°F (74°C) | 30,000 | |
| | 480 | 10 | 10 | 45 | 720 | 150°F (65.5°C) | 30,000 | |
| 58TV (Max 22 Amps) | 120 | - | 9 | 48 | - | 150°F (65.5°C) | 30,000 | |
| | 277 | 22 | - | - | - | 150°F (65.5°C) | 30,000 | |
| | 350 | 15.5 | - | - | - | 150°F (65.5°C) | 30,000 | |
| | 600 | 10 | - | - | - | 150°F (65.5°C) | 30,000 | |
| | 240 | 22 | - | - | - | 150°F (65.5°C) | 100,000 | |
| 277 | 18 | - | - | - | 150°F (65.5°C) | 100,000 | | |
| 58T,TV | 277 | 25 | 20 | 90 | 720 | 150°F (65.5°C) | 30,000 | |
| | 240 | 10 | - | - | - | 165°F (74°C) | 30,000 | |
| | 600 | 10 | - | - | - | 150°F (65.5°C) | 30,000 | |

Part Numbering System

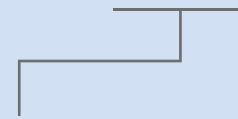
58T



- 1-** Cycle contacts - open on temperature rise
- 2-** Cycling contacts - close on temperature rise



V- (Max. 22 Amp. construction)



- D-** Auxiliary contacts, positive off
- S-** Single pole, positive off

