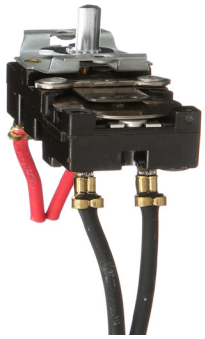
58T Series
Adjustable Temperature Controls

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.

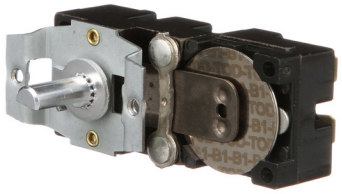
Thermal Characteristics

Calibration – The 58T can be calibrated at any temperature from 30°F (-1°C) to 165°F (74°C). Our preferred calibration tolerance is ±5°F (±2.8°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) ±5°F (±2.8°C). Tighter differentials are available at extra cost.

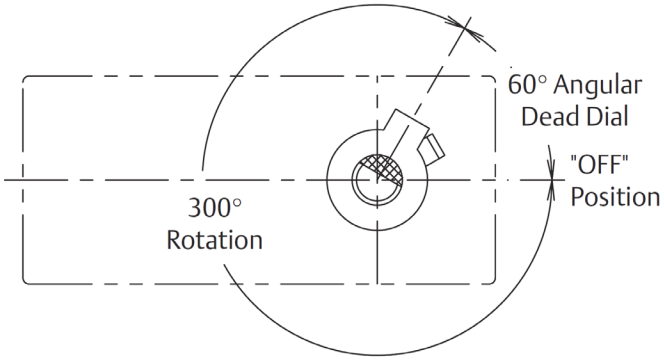
Range – The range is the difference between the thermostat operating temperatures measured

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).

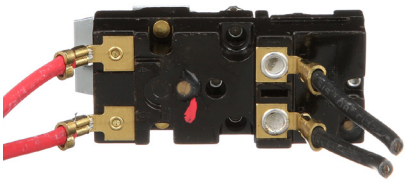


Stop and stem flat are shown in standard extreme clockwise position.
High Position- open on rise switching (electic heat). Low Position- close on rise switching (air conditioning).
Figure 1

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).



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.

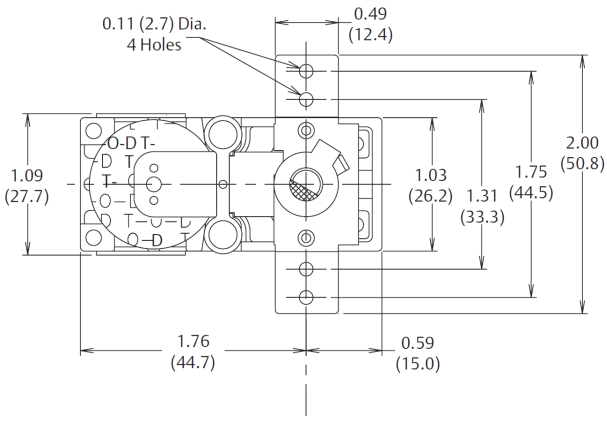


Figure 3

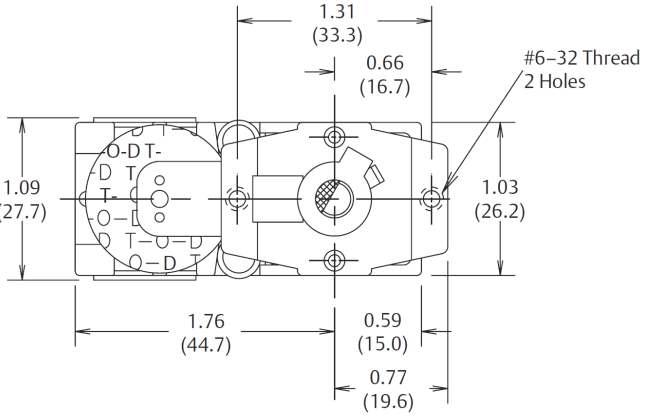


Figure 4

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.

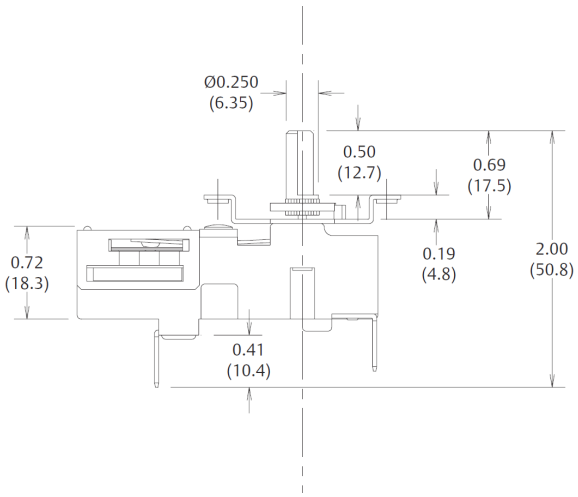
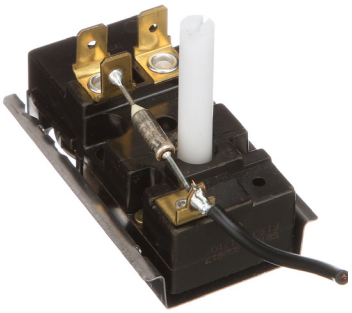


Figure 4

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	CSA FILE# LR010281
	240	10	-	-	-	165°F (74°C)	30,000	
	600	10	-	-	-	150°F (65.5°C)	30,000	

Product Numbering System

58T

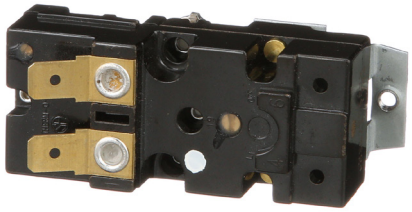
1 – Cycling contacts-open on temperature rise

2 – Cycling contacts-close on temperature rise

V – (Max. 22 Amp. construction)

D – Auxiliary contacts, positive off

S – Single pole, positive off



Important Notice

Users must determine the suitability of the control for their application, including the level of reliability required, and are solely responsible for the function of the end-use product.

These controls contain exposed electrical components and are not intended to withstand exposure to water or other environmental contaminants which can compromise insulating components. Such exposure may result in insulation breakdown and accompanying localized electrical heating.

A control may remain permanently closed or open as a result of exposure to excessive mechanical, electrical, thermal or environmental conditions or at normal end-of-life. If failure of the control to operate could result in personal injury or property damage, the user should incorporate supplemental system control features to achieve the desired level of reliability and safety. For example, backup controls have been incorporated in a number of applications for this reason.