

74T Series

Adjustable Temperature Controls



Adjustable Temperature Controls

The 74T line of temperature controls features adjustable fan or limit operation in a versatile 3/4" (19mm) bimetal disc design. Available in calibrations from 110°F to 250°F (43°C to 121°C) and mean differentials from 20°F to 40°F (11°C to 22°C), the 74T allows adjustment of the operating temperature within an approximate 40°F (22°C) thermal range. The snap-action of the temperature sensing bimetal disc provides high-speed contact separation for exceptional life characteristics at electrical loads up to 25 amps at 240VAC. Airstream or surface mounting flanges are available with the 74T.

Features and Benefits

The 74T series features include:

- Adjustable operating temperatures for maximum design or service flexibility.
- Snap-action bimetal disc for high-speed contact separation.
- Welded construction for integrity or current-carrying components.
- Available with an exposed or enclosed bimetal disc for either increased thermal response or protection from airborne contaminants.

Switch Action and Typical Applications

The 74T is an automatic reset single pole, single throw (SPST) switch that can be built to either open or close its electrical contacts on temperature rise. The desired calibration can be adjusted within the thermal range of the pointer set positions. Once the application temperature cools to the specified reset differential, the contacts automatically return to their original state.

Typical applications include fan controls for heating products and regulating controls for appliances. The ability to adjust calibrations also makes the 74T an excellent choice for service or field replacement applications.

Mounting Brackets

The 74T is available in either airstream (*see figure 1*) or surface (*see figure 2*) mount configurations. Exposed or enclosed bimetal disc versions may be specified with any of the mounting configurations.

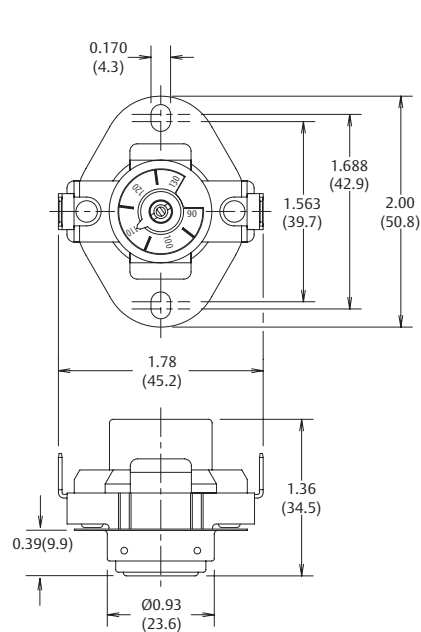


Figure 1

Airstream Mounting

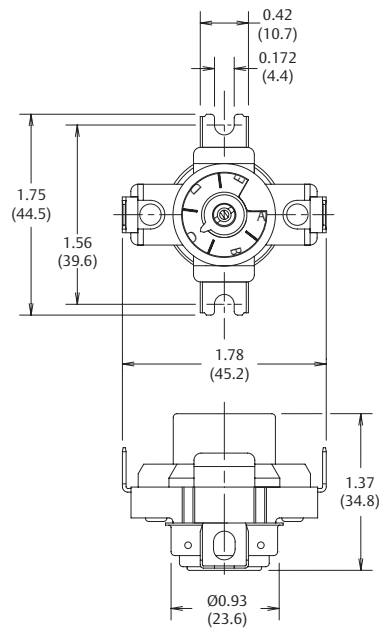


Figure 2

Surface Mounting

Dimensions are shown in inches and (millimeters).

Dial Layout

The standard dial plate layout incorporates alphabetical characters (see figure 2) to identify the calibration set points. Numerical identification (see figure 1) can be provided at added cost.

Thermal Characteristics

Calibration – The 74T can be calibrated at any temperature from 110°F to 250°F (43°C to 121°C). The standard calibration set point is located at mid-dial. Refer to the tabulation block for calibration tolerances.

Differential – The differential is the difference between the nominal open and close temperature. Preferred differentials are 20°F to 40°F (11°C to 22°C).

Range – The range is the difference between the thermostat operating temperatures measured at the extremes of the pointer set positions: extreme clockwise vs. extreme counterclockwise.



Terminal Configurations

Standard terminations for the 74T are .250" x .032" (6.35mm x .81mm) tin-plated brass blades. Terminal form angles of 0, 30, 90 degrees are available.

General Electrical Ratings

The 74T series of controls has been rated by major agencies throughout the world. The agency ratings can be used as a guide when evaluating specific applications. However, the mechanical, electrical, thermal and environmental conditions to which a control may be exposed in an application may differ significantly from agency test conditions. Therefore, the user must not rely solely on agency ratings, but must perform adequate testing of the product to confirm that the control selected will operate as intended in the user's application.

Inductive FLA	LRA	Pilot Duty VA	Resistive Amperes	Volts AC	Cycles of Operation	Agency Recognition
—	—	125	25	120	100,000	UL File E19279
—	—	125	25	240	100,000	
14	72	—	—	120	30,000	CSA File LR10281
10	60	—	—	240	30,000	

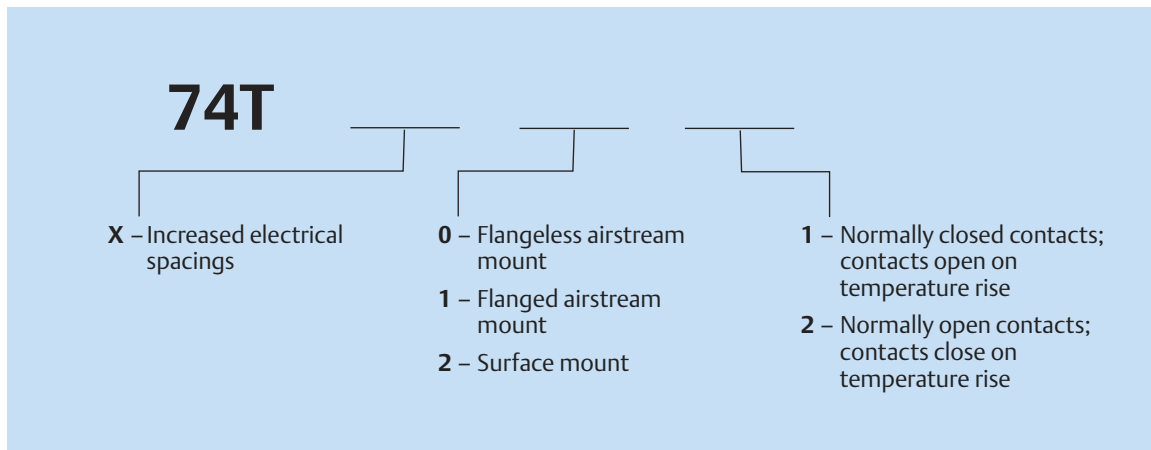
NOTE: For complete ratings information, please contact our Sales Engineering Department.
At thermostat end-of-life, the contacts may remain permanently closed or open.

Calibration Temperatures and Tolerances

Calibration at Set Point	MEAN DIFFERENTIAL							
	20°-29°F (11.1° - 16.1°C)				30°-40°F (16.7° - 22.2°C)			
	Limit		Fan		Limit		Fan	
	Open	Close	Open	Close	Open	Close	Open	Close
110°-200°F (43.3°-93.3°C)	±6°F (3.3°C)	±7°F (3.9°C)	±7°F (3.9°C)	±6°F (3.3°C)	±6°F (3.3°C)	±8°F (4.4°C)	±8°F (4.4°C)	±6°F (3.3°C)
201°-250°F (93.9°-121.1°C)	±7°F (3.9°C)	±8°F (4.4°C)	±8°F (4.4°C)	±7°F (3.9°C)	±8°F (4.4°C)	±9°F (5.0°C)	±9°F (5.0°C)	±8°F (4.4°C)



Part Numbering System



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.