

60F, 61F Series

Snap-Action Temperature Controls



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The 60F and 61F line of 3/4" (19mm) bimetal disc temperature limit controls offer reliable "one shot" operation at temperatures up to 350°F (177°C). Utilizing the same bimetal temperature sensing principle as the 60T automatic reset control, the 60F and 61F permit a uniform approach to the application of temperature limits. A wide variety of terminal and mounting configurations are available to give maximum design flexibility. Rated for electrical loads up to 25 amps at 600VAC (60F) and 48 amps at 600VAC (61F), these temperature limit controls provide unsurpassed over-temperature protection in a non-resettable design.

Features and Benefits

The 60F/61F series features include:

- Single operation for reliable, non-resettable, temperature limiting.
- Special Kapton insulator for application voltages up to 600VAC.
- Snap-action bimetal disc for high-speed contact separation.
- Welded construction for integrity of current-carrying components.
- A wide variety of terminal and mounting options for design flexibility.
- Available with an exposed or enclosed bimetal disc for either increased thermal response or protection from airborne contaminants.

Switch Action and Typical Applications

The 60F and 61F are single pole, single throw (SPST) switches designed to open their electrical contacts on temperature rise. Once the switch has operated, the unique bimetal "fuse" disc prevents reset of the contacts to their original state at temperatures above -31°F (-35°C).

The 60F reflects the same 25 Amp contact rating found in the 60T automatic reset series while the 61F provides a higher current-carrying construction for 48 Amp capability. The Therm-O-Disc 60F and 61F are typically utilized as primary or secondary temperature limits in electric heating equipment.

Mounting Brackets

The 60F and 61F are available in either flangeless (*see figure 1*) or flanged (*see figure 2*) airstream mount configurations. Airstream mounting is typically used in applications where the temperature being sensed is contained within an enclosure such as an air duct or heater box. An optional surface mount configuration is available for applications where the temperature being sensed is the actual mounting surface. Exposed or enclosed bimetal disc mounting versions may be specified with any of the mounting configurations.

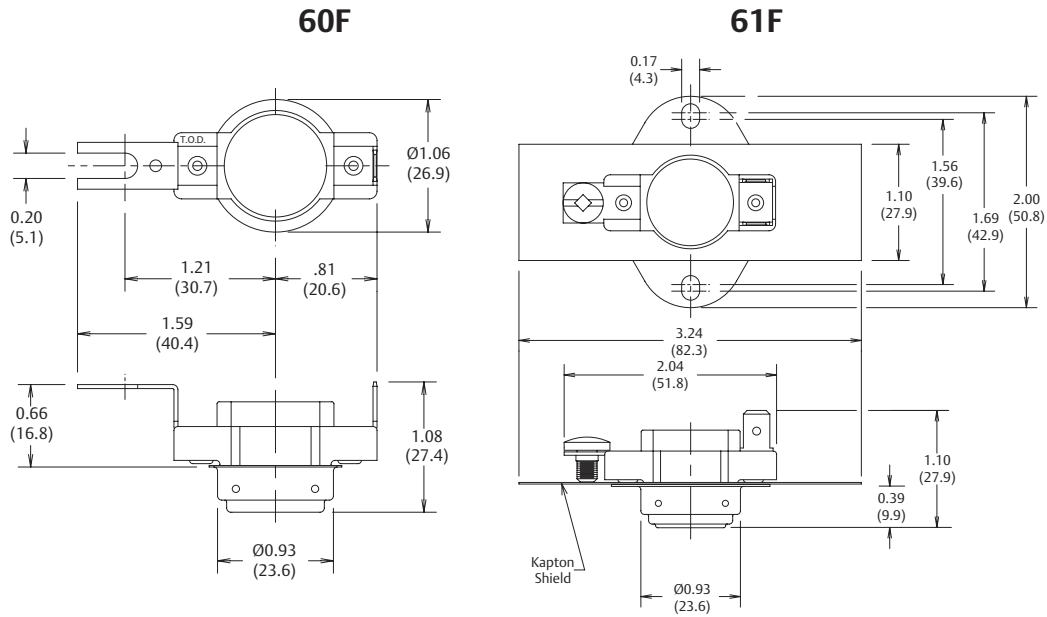


Figure 1

Figure 2

Dimensions are shown in inches and (millimeters).

Terminal Configurations

Standard terminations for the 60F are .250" x .032" (6.35mm x .81mm) tin-plated brass blades. The 61F is provided with a 10-32 screw and double .250" x .032" (6.35mm x .81mm) blade combination. Optional configurations, which include fork, screw and double blade terminations, are available at additional cost.

General Electrical Ratings

The 60F, 61F 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.

Thermostat Type	Contact Arrangement	Inductive Amperes		Pilot duty VA	Resistive Amperes	Volts AC	Agency Recognition
		FLA	LRA				
60F	SPST	—	—	500	25	120-600	UL/CSA
61F	SPST	—	—	1000	48A	120-600	UL/CSA
60F/61F	SPST	14	72	—	—	120-240	UL

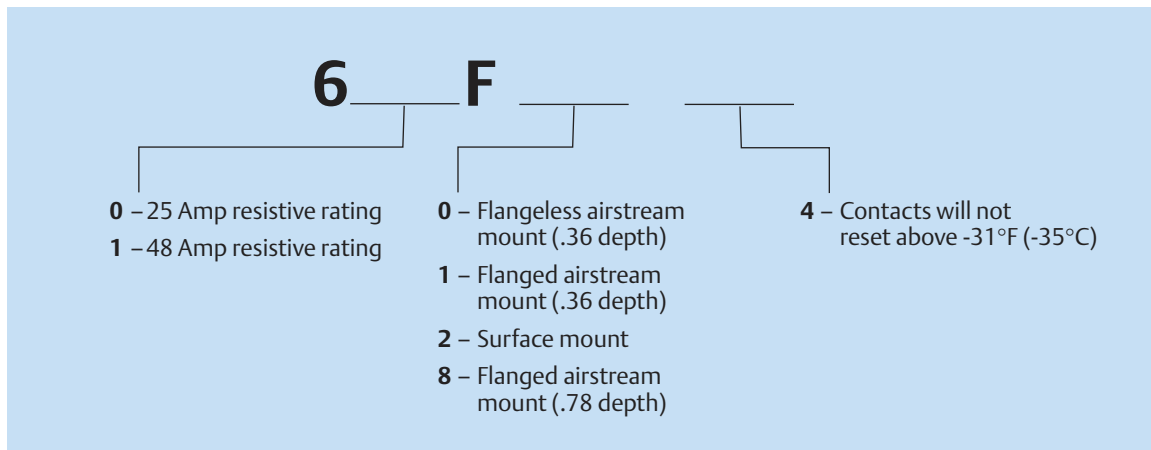
NOTE: For complete ratings information, please contact our Sales Engineering Department. At thermostat end-of-life, the contacts may remain permanently closed or open.



Calibration Temperatures and Tolerances

Thermostat Type	Opening Temperature Tolerances		
	80°-200°F (28°-93°C)	201°-300°F (94°-149°C)	301°-350°F (150°-177°C)
60F, 61F	±8° (±4.5°C)	±10°F (±5.5°C)	±12°F (±6.5°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.