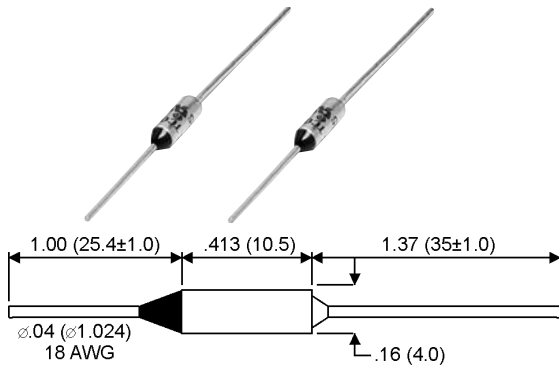


# One Shot Thermal Cutoffs

## STC Series



\* Some stock models have an overall length of 3.15"  
 \*\* Special lead lengths are available

### FEATURES

- Low cost
- Excellent contact rating
- Quick and easy installation

### APPLICATIONS

- Motors
- Appliances
- Personal care

Thermal cutoffs are designed to provide upper limit temperature protection for many electronic products. Under normal operating temperature, the solid pellet compresses a spring which holds the star contact against the isolated lead. When a fault temperature is reached, the pellet melts and the circuit is opened permanently.

It is important to allow sufficient time to determine the proper and best location for a thermal cutoff. The location will affect the cutoff's ability to protect your product. Placing in the highest temperature area is usually best.

Models available from stock - subject to availability

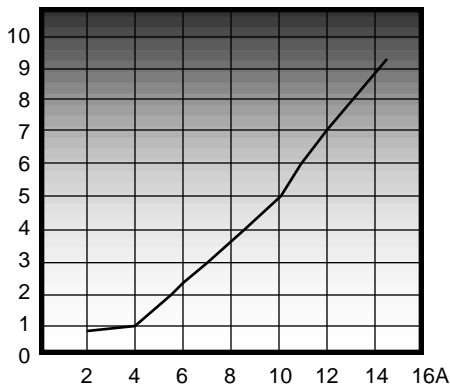
Model Number	Functioning Temperature (T <sub>F</sub> )		Holding Temperature (T <sub>H</sub> )		Maximum Temperature (T <sub>M</sub> )		UL/cUL	VDE
	°C	°F	°C	°F	°C	°F		
STC-162	72	162	50	122	115	239	●	●
STC-170-LL	77	171	55	131	120	248	●	●
STC-183	84	183	60	140	125	257	●	●
STC-196	91	196	67	153	135	275	●	●
STC-208	98	208	76	169	140	284	●	●
STC-219	104	219	80	176	150	302	●	●
STC-230	110	230	88	190	140	284	●	●
STC-250	121	250	95	203	170	338		
STC-262	128	262	106	223	155	311	●	●
STC-286	141	286	117	243	171	340	●	●
STC-291	144	291	120	248	250	482	●	●
STC-306	152	306	128	262	176	349	●	●
STC-333	167	333	142	288	210	410	●	●
STC-338	170	338	146	295	300	572	●	●
STC-363	184	363	160	320	300	572	●	●
STC-378	192	378	162	324	290	554	●	●
STC-421	216	421	191	376	241	466		●
STC-464	240	464	200	392	290	554	●	●

T<sub>F</sub> - Functioning Temperature: Temperature at which the thermal cutoff will open +0°F, -9°F (+0°C, -5°C)

T<sub>H</sub> - Hold Temperature: The maximum continuous exposure temperature

T<sub>M</sub> - Maximum Temperature: The maximum temperature the thermal cutoff can withstand without changing state

Temperature/Current Correlation Curve



It is the customer's sole responsibility to specify and determine the suitability of a particular control or component based on their unique individual applications and requirements

### SPECIFICATIONS

Electrical ratings	120/250VAC, 10 Amps, Continuous Duty 120/250VAC, 15 Amps, Interrupting Current
Temperature tolerance	+0°C/-5°C
Approvals	UL, CSA, VDE, RoHS Compliant

### Determining The Proper Series

- **T<sub>P</sub>** The highest temperature of the product to which a cutoff is to be attached
- **T<sub>H</sub>** The safe temperature range for use of the cutoff
- **T<sub>S</sub>** **T<sub>F</sub> - T<sub>H</sub> = T<sub>S</sub>**  
Where T<sub>F</sub> = the functioning temperature (24°C less than or equal to T<sub>S</sub> less than or equal to 40°C)
- **T<sub>D</sub>** The heating temperature caused by electrical load
- **+a**
  1. Self heating of lead wire
  2. Structure of ventilation or air tightness
  3. Location of connecting terminal
  4. Thickness of insulated covering material
  5. Best condition value, electric voltage changes considered

$$T_P + T_S + T_D + a = \text{Applicable Temperature}$$

### Installation Instructions

The performance of the thermal cutoff requires proper handling during installation for it to operate in its intended manner. These instructions are intended to be used to reduce the risk of malfunction of the thermal cutoff which may result from improper installation during forming of leads, splicing, welding and soldering.

#### 1. Bending Leads

Care should be taken when forming the Thermal Cutoff (TCO) leads. The TCO leads must be supported 1/8" from bend and case; and 1/8" from bend and epoxy. This will prevent the epoxy seal from cracking which may result in premature degradation of the pellet. A close visual inspection should be performed to make sure that the TCO leads have not been cut, nicked, folded sharply, fractured or burned.

#### 2. Mechanical Forces During Appliance Connection

- When installing the TCO, avoid unnecessary bending, twisting, pulling or pushing on the TCO leads. Care should be taken to avoid cracking or chipping of the epoxy, which may result from sharp twisting, or bending of the lead.
- The TCO body must maintain its cylindrical shape to function properly. Excessive clamping could cause denting or crushing of the TCO body, which may lead to failure. X-ray and visual inspection of the TCO will determine if the fuse body has been damaged.
- Note that the TCO body is electrically live and must be insulated before applying a metal clamp over the TCO body.
- Care should be used when pushing the epoxy end lead to avoid the lead being forced into the TCO body. This could result in a failure.

