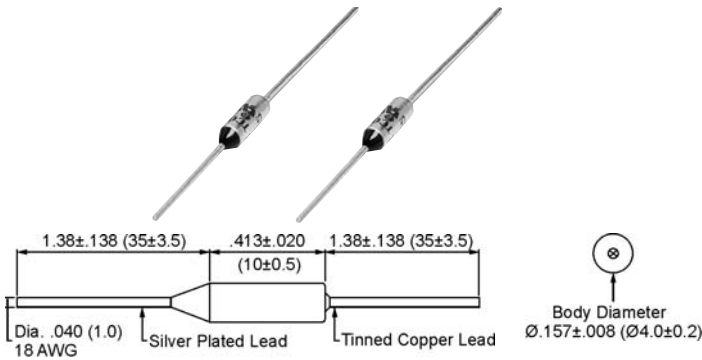


# One Shot Thermal Cutoffs

## SWTC3 Series



- Special lead lengths are available
- Color Band does not denote temperature group
- Stock models have 35mm ± 3.5mm lead lengths

### Models available from stock - subject to availability

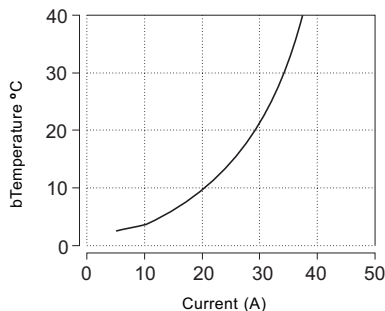
Model Number	Functioning Temperature (T <sub>F</sub> )		Tolerance (T <sub>F</sub> )	Holding Temperature (T <sub>H</sub> )		UL/cUL	VDE
	°C	°F		°C	°F		
SWTC3-162-3535	72	162	A	47	117		
SWTC3-171-3535	77	171	A	52	126		
SWTC3-183-3535	84	183	B	59	138		
SWTC3-199-3535	93	199	B	68	154	●	●
SWTC3-208-3535	98	208	A	73	163		
SWTC3-212-3535	100	212	B	75	167		
SWTC3-230-3535	110	230	B	85	185	●	●
SWTC3-250-3535	121	250	B	96	205	●	●
SWTC3-262-3535 <sup>1</sup>	128	262	B	103	217		
SWTC3-291-3535	144	291	B	119	246	●	●
SWTC3-306-3535	152	306	A	127	261	●	●
SWTC3-333-3535	167	333	A	142	288	●	●
SWTC3-363-3535	184	363	C	159	318	●	●
SWTC3-383-3535 <sup>1</sup>	195	383	C	170	338		
SWTC3-421-3535 <sup>1</sup>	216	421	C	200	392		
SWTC3-442-3535 <sup>1</sup>	228	442	C	200	392		
SWTC3-464-3535	240	464	C	200	392	●	●

T<sub>F</sub> - Functioning Temperature: Temperature at which the thermal cutoff will open + A, B or C tolerances

T<sub>H</sub> - Hold Temperature: The maximum temperature at which a thermal cutoff can be maintained while conducting rated current for 168 hours which will not cause a change in state of the conductivity to open the circuit

<sup>1</sup> UL/cUL, VDE Approval Pending

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**

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### 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.

### SPECIFICATIONS

**Electrical ratings** 125/250VAC, 20 Amps, Continuous Duty  
125/250VAC, 31.5 Amps, Interrupting Current

**Temperature tolerance**  
A = +0°F/-7°F (+0°C/-4°C) (refer to p/n chart)  
B = +0°F/-9°F (+0°C/-5°C) (refer to p/n chart)  
C = +0°F/-11°F (+0°C/-6°C) (refer to p/n chart)

**Approvals** Contact Selco for Agency Approvals

**\* Due to the TCO body being electrically live, Selco offers an insulation sleeve. Consult Selco for details.**

#### 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>  $T_F - T_H = T_S$   
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

$$TP + TS + TD + a = \text{Applicable Temperature}$$

#### Installation Instructions

The performance of 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 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.