

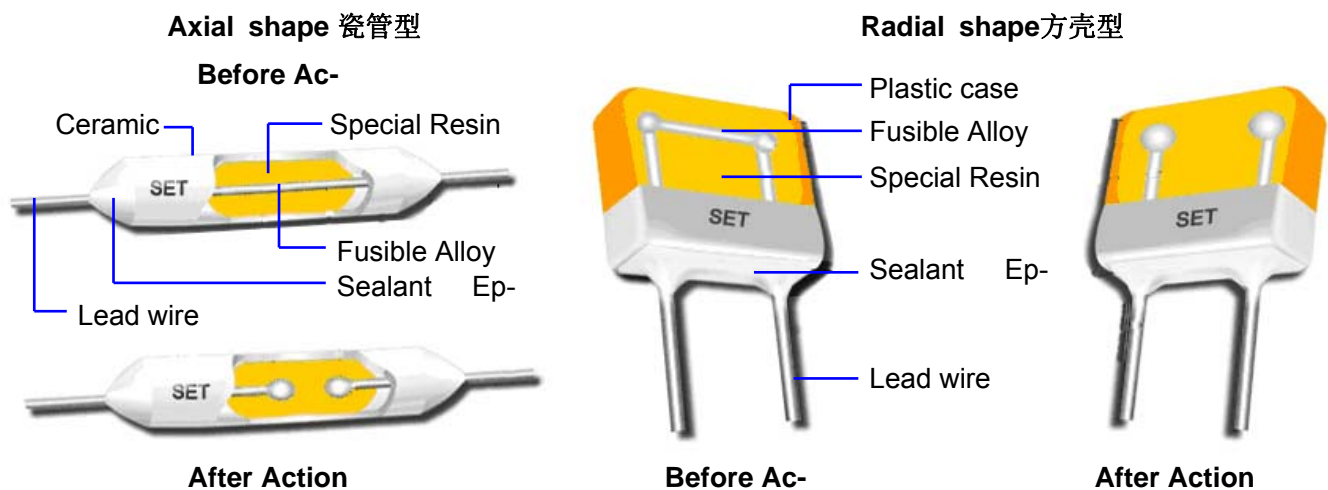


## Principle of Thermal cutoff 温度保险丝原理

**SET®** Alloy thermal cutoffs, defined as non-resettable, are single action devices that are widely used for the electrical equipments against over temperature. The thermal cutoffs are composed of the fusible alloy with low melting point and special resin, encapsulated in a plastic or ceramic housing. Under normal operating, the fusible alloy is joined by the two lead wires within the housing. When the thermal cutoff senses an abnormal heat and reach a preset temperature, the fusible alloy melts and disconnects the circuit completely with the aid of the special resin. Both Axial and Radial shapes are available, with rated current from 1A to 100A, functioning temperature 76C~221C, certificated including UL, CUL, VDE,TUV,PSE, KTL, CCC and ROHS, REACH compliant.

**赛尔特®** 合金型温度保险丝是一次性不可复位的熔断装置，广泛应用于电器设备的过温保护。温度保险丝由具有低熔点的易熔合金和助熔断剂构成，封装在塑料或陶瓷的外壳内。在正常工作情况下，易熔合金与两根引脚保持连接。当温度保险丝感受到异常发热并达到预定的熔点温度时，易熔合金熔化，并在助熔断剂的作用力下快速彻底断开电路。有电阻型和方块型两种外形供选择，额定电流1A~100A，动作温度76C~221C，安全认证包括UL，CUL，VDE，TUV，PSE，KTL，CCC和环保RoHS、REACH认证。

## Construction of Thermal cutoff 温度保险丝结构



## Key Features 关键特性









- High accuracy of cutoff temperature  $\pm 2^{\circ}\text{C}$  精确断开温度  $\pm 2^{\circ}\text{C}$
  - Rated current: 1A~100A /250V ac 额定电流 1A~100A /250V ac
  - Functioning temperature  $76^{\circ}\text{C} \sim 221^{\circ}\text{C}$  动作温度  $76^{\circ}\text{C} \sim 221^{\circ}\text{C}$
  - Resin-sealed construction 树脂密封结构
  - Low intrinsic resistance 低内阻
  - Compact size and small size 结构紧凑，尺寸小
- Withstand transient surge current up to 5kA~100kA(8/20 $\mu$ s) UL1449 3rd standard 承受大浪涌电流5KA~100KA(8/20us) , UL1449-3 标准



## Terminology 术语

- **Thermal-link:** also known as thermal cutoff or thermal fuse, all are the same in this context, function one only, non-resettable.  
热熔断体也称为热断路器或温度保险丝，在本文中这些不同名词都代表同样的产品，为一次性动作而不可复位的装置。
- **Rated functioning temperature (Tf):** -额定动作温度  
The temperature of the Thermal-link which causes it to change its state of conductivity with a detection current up to 10mA as the only load. 通10mA的负载电流时，加热使温度保险丝断开的温度。  
General tolerance 允许偏差 : +0, -10C (UL, VDE, CSA, IEC标准)  
PSE tolerance PSE 允许偏差 : ±7C (only) (仅限PSE标准)
- **Fuse temperature (Fuse-temp):** 实测熔断温度  
The temperature is measured with silicone oil bath of which temperature is increased at the rate of 0.5~1C/min, with a detection current up to 10mA as the only load.  
置于油池中，通10mA以下的负载电流，每分钟升温0.5~1度，测断开温度。
- **Holding temperature (TH):** 保持温度  
The Max. temperature at which a TCO will not change its state of conductivity when conducting rated current for 168H. 持续通额定电流168H不断开的最高温度。
- **Max. temperature limit (TM):** 极限温度  
The Max. temperature at which the TCO can maintain its mechanical and electrical properties without being impaired for 10 mins. 不破坏机械和电气特性所能承受的最高温度。
- **Rated current (Ir):** 额定电流  
The current used to classify a Thermal-link, which is the Maximum current that thermal cutoffs allow to carry and are able to cutoff the circuit in safety. 温度保险丝分类用，允许用于电路并安全断开的最大电流。
- **Rated voltage (Ur):** 额定电压  
The voltage used to classify a Thermal-link, which is the Maximum voltage that is allowed to apply to the circuit in which the thermal cutoff is used. 温度保险丝分类用，允许用于电路并安全断开的最高电压。
- **Transient overload current (Ip):** 瞬态过载电流

## Safety Approval 安全认证

Agency		Country	standard	File NO.	Category
	UL	USA	UL60691	E214712	XCQM2
	CUL	Canada	UL60691	E214712	XCQM8
	TUV	Germany	EN60691	R50161772	
	VDE	Germany	IEC60691	40017055	
	PSE	Japan	J60691	PSE09020139/40/41/42/43/44	
	KTL	Korea	K60691	SU05023-6001/2/3	
	CCC	China	GB9816-2008	2009010205346083	
 ※ RoHS and REACH compliant					