

Thermal Fuse

Axial Leaded

multicomp PRO

**RoHS
Compliant**



Description

The BTT thermal cutoff fuses are non-resetting single-pole and normally closed devices and provide accurate, reliable protection for high temperature applications against overheating through interrupting electric current. With their metal body and strong leads these fuses offer a sturdy built and high rated currents such as 10 or 15 Amperes.

Applications

Thermal cutoff fuses are widely used in various applications such as transformers, adapters, secondary batteries, household appliances, gas water heaters, lighting and other heating equipment

Features

- Metal casing, epoxy sealing material
- Small size, $\Phi 4\text{mm} \times 10\text{mm}$
- 1mm lead wires made of tin or silver plated copper
- Protection against harmful over-temperature in primary and secondary applications
- Lead-free and Halogen-free
- Designed according to IEC 60691, UL 60691, EN 60691, etc

Specifications

| | |
|-----------------------|---|
| Operating Temperature | : -55°C to +125°C |
| Storage Conditions | : +10°C to +60°C |
| Relative Humidity | : $\leq 75\%$ yearly average without dew, maximum 30 days at 95% |
| Vibration Resistance | : 24 cycles at 15 min. each 10-60Hz at 0.75mm amplitude 60-2000Hz at 10g acceleration |

Electrical Characteristics at 25°C

| Part Number | Tf (°C) | Operating Temperature (°C) | Th (°C) | Tm (°C) | Ir (A) | Voltage (V) |
|-------------|---------|----------------------------|---------|---------|--------|-------------|
| MP001618 | 73 | 69 \pm 2 | 50 | 150 | 10A | 250V AC |

| Ratings | Indicator | Description |
|-------------------------------|-----------|--|
| Rated Functioning Temperature | Tf | The temperature at which the thermal cutoff fuse changes its state of conductivity and opens the circuit with detection current of <10mA as the only load. The temperature tolerance for UL CSA and VDE standards is +0. -10°C |
| Hold Temperature | Thold | The maximum temperature at which a thermal cutoff can be maintained while conducting rated current for 168 hours without causing a change in the conductivity to open the circuit. |
| Maximum Temperature Limit | Tm | At the rated voltage, the temperature the fuse can withstand for 10 minutes at highest temperature rating without change in the conductivity |

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Thermal Fuse

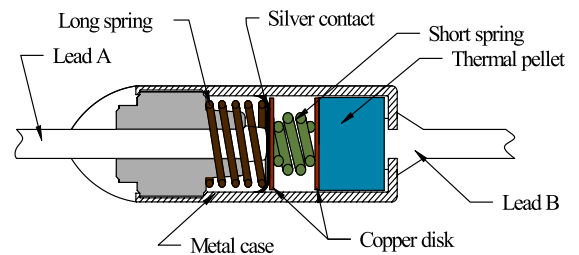
Axial Leaded

| Ratings | Indicator | Description |
|---------------|----------------|---|
| Rated Current | I _r | The maximum current which the thermal cutoff fuse is able to carry and not affect its electrical characteristics. |
| Rated Voltage | V _r | The maximum voltage which the thermal cutoff fuse is able to carry and not affect its electrical characteristics. |

Operation Principle

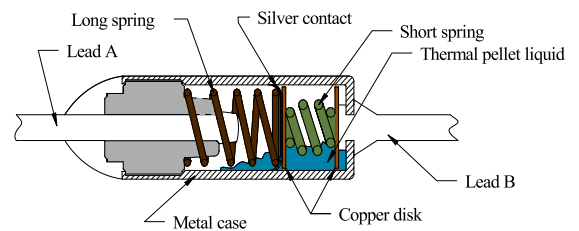
Before action:

In normal condition the thermal pellet keeps the Short Spring in tension, which provides contact between the copper disk and the silver contact. All parts, lead A, silver contact, metal case and lead B are connected and electric circuit current can pass freely through the thermal fuse.

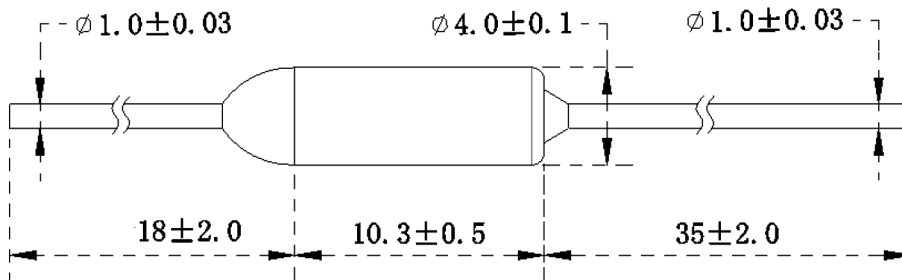


Cut off:

When the temperature increases and reaches the Rated Functioning Temperature (T_f), the thermal pellet starts to melt and liquefies. This will release the Long Spring and separates the silver contact from the lead, cutting off the current.



Diagram



Dimensions : Millimetres

Part Number Table

| Description | Part Number |
|--|-------------|
| Thermal Fuse, 73°C, 10A, 250V AC, Axial Leaded | MP001618 |

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