



Description

SETsafe | SETfuse 3CT Series is Auto Reset Thermal Protector. The main part is the miniature bimetal disc that can sense both current and temperature. When the temperature of the bimetal disc reaches its predetermined calibration point, Thermal Protector takes function, no matter the temperature rise is caused by current or outer heating or both of them.

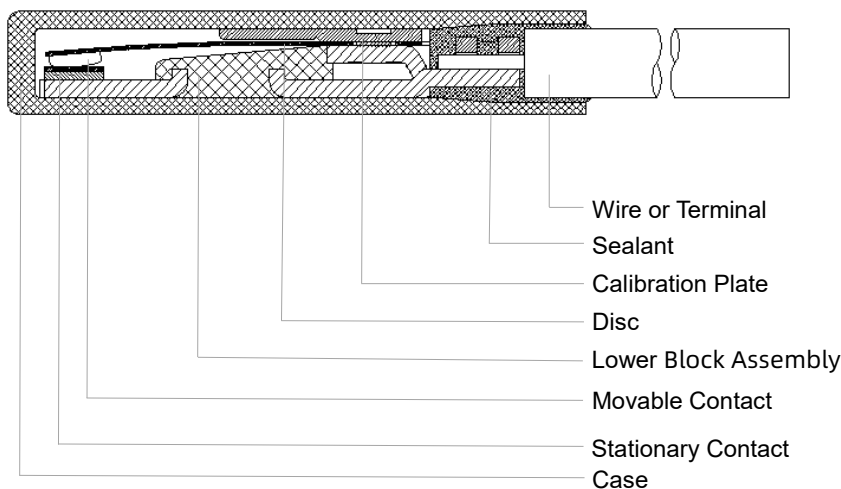
Features

- Low Contact Resistance
- Snap Action Disc
- RoHS & REACH Compliance





Applications

- Battery Packs
- Motors
- Transformers
- Heating Appliances
- Power Tools
- Solenoids

Structure Diagrams



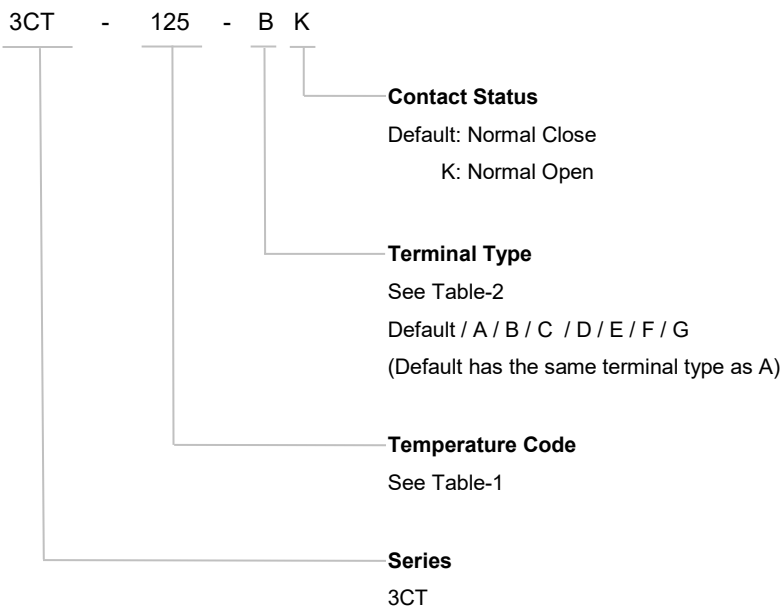
Agency Approvals

Agency	Standards	File No.
	UL 60730-1 UL 60730-2-22	E516554
	UL 60730-1 UL 60730-2-9	E516553
	CSA E60730-1	E516554
	CSA E60730-1 CSA E60730-2-9	E516553
	EN 60730-1 EN 60730-2-22	R 50481203
	EN 60730-1 EN 60730-2-9	R 50480598
	GB/T14536.1-2008 GB/T14536.3-2008	CQC20002266233
	GB/T14536.1-2008 GB/T14536.10-2008	CQC20002266231

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Part Number System



Glossary

Item	Description
Operating Temperature	Operating Temperature The actual temperature at which the thermal protector contacts are closed (normal open) or disconnected (normal close).
Recovery Temperature	Recovery Temperature After the thermal protector contact is closed or disconnected, the contact produces the actual temperature value corresponding to the open (normal open) or closed (normal close) contact.
Rated Current (I_r)	Rated Current (I_r) The current used to classify a thermal protector, which is the maximum current that Thermal Protector allows to carry and is able to cut off the circuit safely.
Rated Voltage (U_r)	Rated Voltage (U_r) The voltage used to classify a thermal protector, which is the maximum voltage that Thermal Protector allows to carry and is able to cut off the circuit safely.
Cycle Life	Cycle Life The number of periodic changes in the temperature of a bimetal element from its original state to its open (or closed) state.
Delta Temperature	Delta Temperature Is the difference between the zero current calibrated opening temperature and ambient temperature at the protector location.

Specifications

Contact Capacity	Cycle Life	Rated Voltage (U _r)	Rated Current (I _r)
	Cycles	(V)	(A)
	≥ 10,000	AC 277	3
	≥ 10,000	AC 125	5
	≥ 10,000	DC 24	5
≥ 10,000	DC 12	8	
Contact Resistance	≤ 30 mΩ		
Operating Temperature	30 ~ 155 °C in increments of 5K		
Long-term Service Temperature	-20 °C ~ 160 °C		
Electric Strength	1700 V.r.m.s. 60 Hz, 1 minute, Lead to case		
Lead Wire Type	UL3266 22 AWG 300 V (other wire size is also available)		

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TABLE-1 Temperature Code

Temperature Code	Operating Temperature	Recovery Temperature
	±5 (°C)	±15 (°C)
30	30	≥ 20
35	35	≥ 25
40	40	≥ 30
45	45	≥ 35
50	50	≥ 35
55	55	≥ 35
60	60	45
65	65	45
70	70	50
75	75	50
80	80	55
85	85	60
90	90	60

Temperature Code	Operating Temperature	Recovery Temperature
	±5 (°C)	±15 (°C)
95	95	65
100	100	70
105	105	70
110	110	75
115	115	75
120	120	80
125	125	85
130	130	90
135	135	90
140	140	95
145	145	100
150	150	100
155	155	105

TABLE-2 Terminal Type

Type	Dimensions (mm)	Type	Dimensions (mm)														
A	<p>Tinned Copper Insulation</p>	B	<p>Tinned Copper Insulation</p>														
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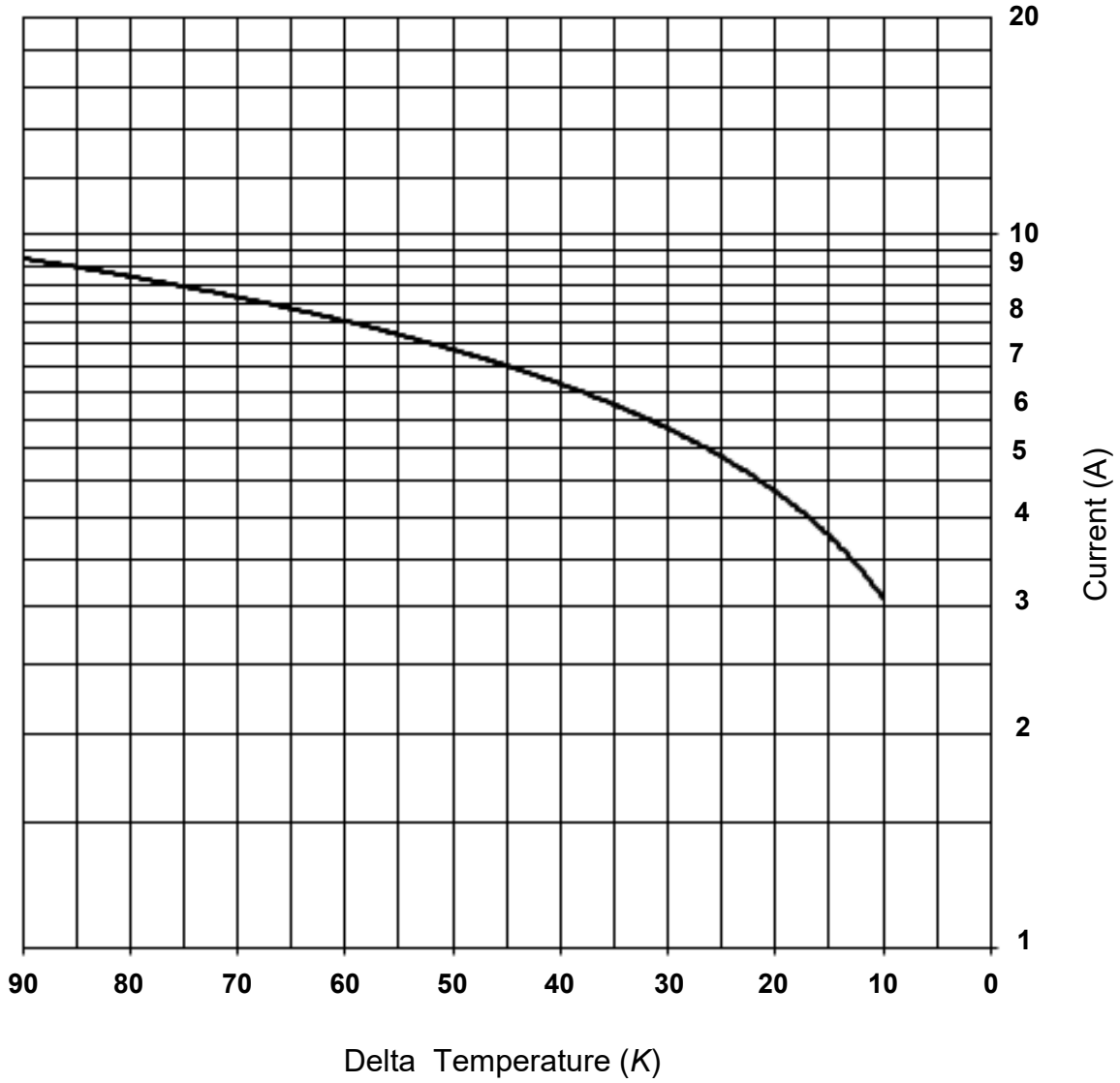
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Ultimate Trip Current & Ambient Temperature



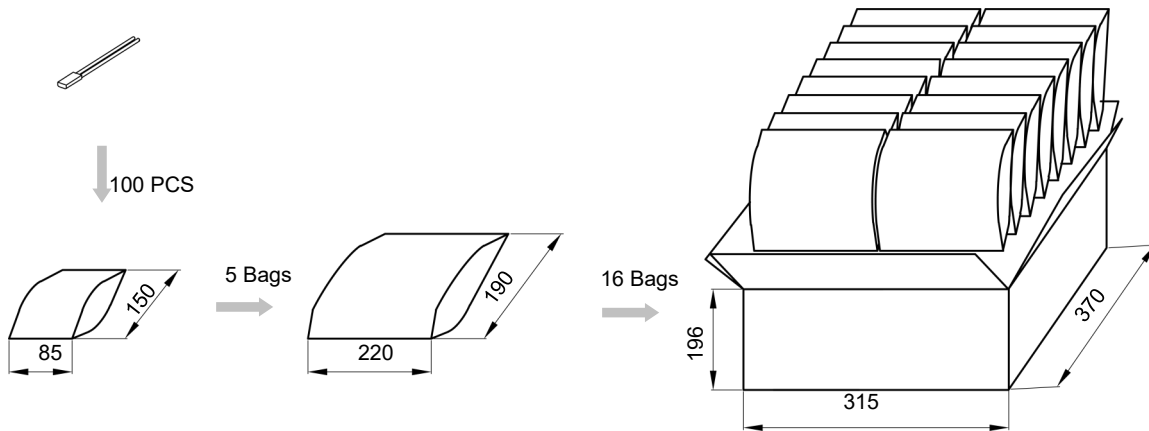
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Packaging Information

Bulk (take 3CT Table-2 type A, $L_1 = L_2 = 70$ mm as an example)

Item	PE Bag	PE Bag	Carton
Dimensions (mm)	150 × 85	220 × 190	370 × 315 × 195
Quantity (PCS)	100	500	8000
Remark: The dimensions and quantity of packaging is for reference only			



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Usage

1. These devices are not intended for use as service or repair components, strictly for use by Original Equipment Manufacturer. This product is not rated as explosion proof and should not be applied in any application where flammable vapors or dust is present. End of life failure of this device may result in either open or closed circuit condition, and as such, OEMs must apply end of life protection in series, per agency requirements.
2. Users are solely responsible for proper design, application and function of this product in the end product or system. Users must evaluate the suitability of these devices in their application with respect to Temperature Settings, Mechanical and Electrical Life Cycles, Electrical loads and Environmental conditions.
3. When atmosphere press is from 80 kPa to 106 kPa, the related altitude shall be from 2000 meter to -500 meter.

Replacement

The product is a non-repairable product. For safety sake, it shall be replaced by an equivalent part and mounted in the same way.

Storage

Do not store the product at high temp, high humidity or corrosive gas environment, avoid influencing the solder-ability or contact resistance of the lead wires. The product shall be used up within 1 year after your receiving goods.

Installation Position

1. The product should be as close to the protected parts as possible. For example, in the motor, the product should be embedded in the upper end of the motor stator coil. If the test conditions are met, the temperature field of the motor should be measured to determine the highest temperature point.
2. During the installation of the product, it is forbidden to strike by gravity, and the product shall not be extruded at the installation position, so as to avoid deformation of the product shell, which will seriously affect the protection performance of the product.

Warnings

Risk of Material Damage and Hot Enclosure

1. The product's side panels may be hot, allow the product to cool before touching.
2. Follow proper mounting instructions including force values. Failure to follow these instructions can result in serious injury, or equipment damage. Hazard of Electric Shock, Explosion or Arch Flash.
3. Verify all connections and replace all covers before turning on power. Failure to follow these instructions will result in death or serious injury.
4. Disconnect all power before installing or working with this equipment.