



## Features

- Miniature Thermal Cutoff (TCO) device
- Surface mount, smallest body size
- Overtemperature and overcurrent protection
- Controls abnormal, excessive current virtually instantaneously, up to rated limits
- Wide range of temperature options
- High corrosion resistance
- Two height options: low profile & high force withstand

## Applications

- Battery cell protection for:
  - Notebook PCs
  - Tablet PCs
  - Smart phones
- Overtemperature protection for:
  - USB Type C cables (e.g. smart phone cables, notebook AC adapters)
  - Electronic cigarettes
  - Medical heaters\*\*\*

## SC Series Breaker (Surface Mount Thermal Cutoff Device)

### Ratings

| Specification            | A-TYPE                    |                  |                  |                  |
|--------------------------|---------------------------|------------------|------------------|------------------|
|                          | SC72AAA, SC72AAB          | SC77AAA, SC77AAB | SC82AAA, SC82AAB | SC85AAA, SC85AAB |
| Trip Temperature         | 72 °C ± 5 °C              | 77 °C ± 5 °C     | 82 °C ± 5 °C     | 85 °C ± 5 °C     |
| Reset Temperature        | 40 °C min.                |                  |                  |                  |
| Contact Rating           | DC9 V / 25 A, 6000 cycles |                  |                  |                  |
| Maximum Breaking Current | DC5 V / 50 A, 100 cycles  |                  |                  |                  |
| Maximum Voltage          | DC28 V / 25 A, 100 cycles |                  |                  |                  |
| Minimum Holding Voltage  | 3 V @ 25 °C for 1 minute  |                  |                  |                  |
| Maximum Leakage Current  | 200 mA max. @ 25 °C       |                  |                  |                  |
| Resistance               | 5 milliohms max.          |                  |                  |                  |

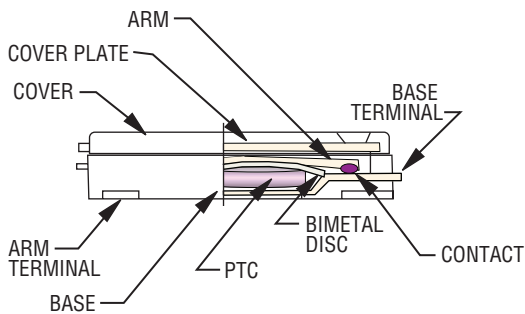
Mini-breaker TCOs reset when the following conditions are met:

- The ambient temperature has dropped by 10 °C below the minimum trip temperature; and
- Power to the TCO has been cycled (off/on)

### Agency Recognition

| Description |  |
|-------------|--|
| UL, cUL     | File Number: E215638<br>(UL 60730)                       |
| TUV         | File Number: R 50411018 0001~0002<br>(EN 60730 2-9-2010) |

### Product Structure

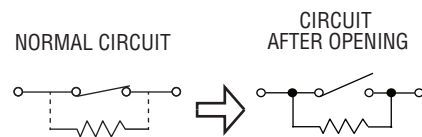


- Model SCxAAB is the low profile 0.94 mm height version.
- Model SCxAAA is designed with a reinforced cover to withstand higher forces during the USB cable manufacturing injection molding process.

### How to Order

|                          |  |
|--------------------------|--|
| Series Designator        | SC 77 A A B                              |
| Trip Temperature (±5 °C) | 72<br>77<br>82<br>85                     |
| Arm Material             | A = Cu Alloy, High current type          |
| Body Material            | A = PPS                                  |
| Body Thickness           | A = 1.07 ± 0.05 mm<br>B = 0.94 ± 0.05 mm |

### Circuit Diagram



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

\*\*\* Excluding life-saving, life-critical or life-sustaining applications.

Specifications are subject to change without notice.

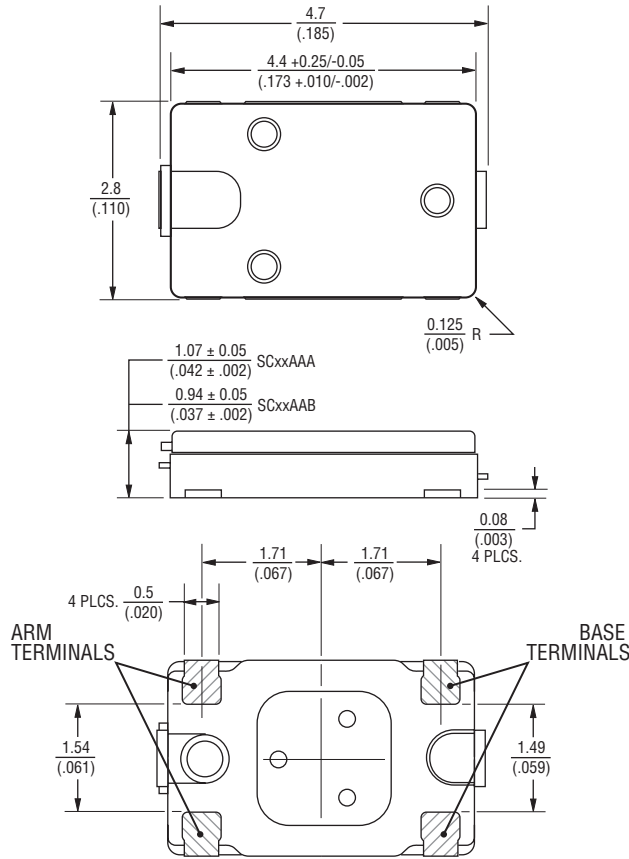
Users should verify actual device performance in their specific applications.

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**BOURNS®**

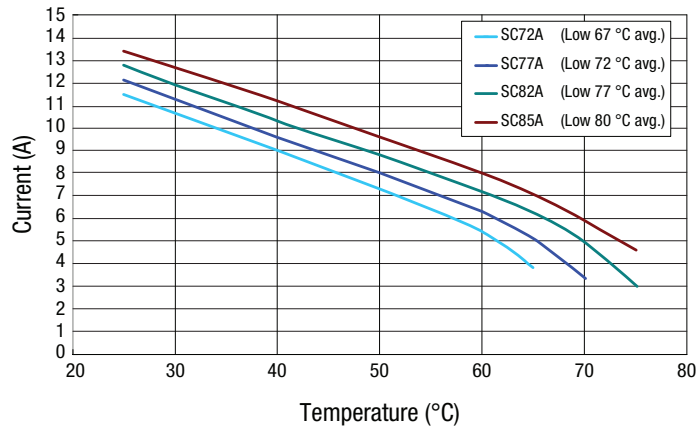
## Product Dimensions



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Typical Performance

**Current vs. Temperature Curves  
A-Type**



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