

## Features

- Miniature Thermal Cutoff (TCO) device
- Smallest body size, high current type
- Overtemperature and overcurrent protection for lithium polymer and prismatic cells
- Controls abnormal, excessive current instantaneously
- Wide range of temperature options

## Applications

Battery cell protection for:

- Notebook PCs
- Tablet PCs
- Smart phones
- Mobile phones

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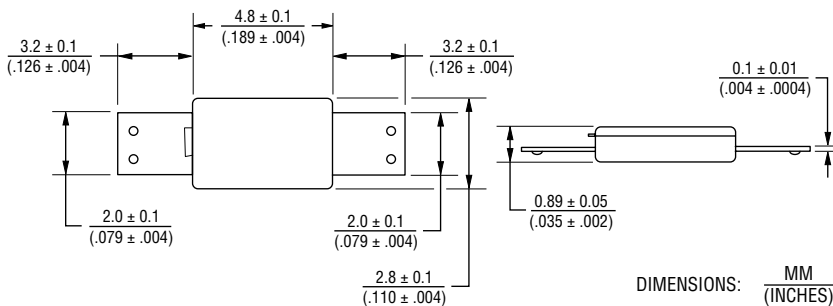
## NR Series Breaker (Thermal Cutoff Device)

### Ratings

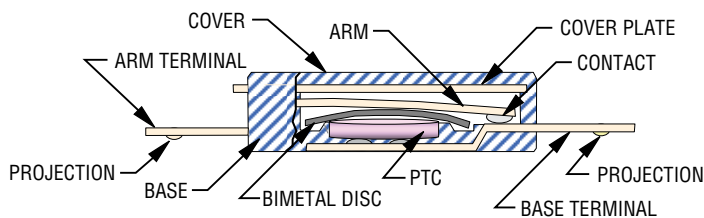
Specification	A-TYPE			
	NR72AB0	NR77AB0	NR82AB0	NR85AB0
Trip Temperature	72 °C ± 5 °C	77 °C ± 5 °C	82 °C ± 5 °C	85 °C ± 5 °C
Reset Temperature	40 °C min.			
Contact Rating	DC12V / 25 A, 6000 cycles			
Maximum Breaking Current	DC5V / 60 A, 100 cycles			
Maximum Voltage	DC28V / 25 A, 100 cycles			
Minimum Holding Voltage	2 V @ 25 °C for 1 minute			
Maximum Leakage Current	200 mA max. @ 25 °C			
Resistance	5 milliohms max.			

Specification	C-TYPE			
	NR72CB0	NR77CB0	NR82CB0	NR85CB0
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	DC12V / 12 A, 6000 cycles			
Maximum Breaking Current	DC5V / 30 A, 100 cycles			
Maximum Voltage	DC28V / 12 A, 100 cycles			
Minimum Holding Voltage	2 V @ 25 °C for 1 minute			
Maximum Leakage Current	150 mA max. @ 25 °C			
Resistance	15 milliohms max.			

### Product Dimensions



### Product Structure



AVAILABLE WITH AND WITHOUT PROJECTIONS.

### Agency Recognition

Description	
UL, cUL	File Number: E215638
TUV	File Number: R50281578

### How to Order

**NR 77 A B 0**

Series Designator	_____
Trip Temperature (±5 °C)	_____
• 72	• 82
• 77	• 85
Arm Material	_____
A = Cu Alloy High Current Type	
C = Cu Alloy Low Current Type	
Terminal Type	_____
B = With Projection	
1 = No Projection	
Manufacturer's Internal Code	_____

\* 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.

Specifications are subject to change without notice.

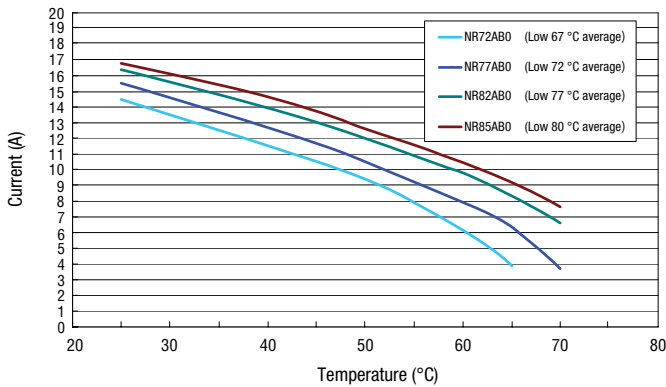
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# NR Series Breaker (Surface Mount Thermal Cutoff Device)

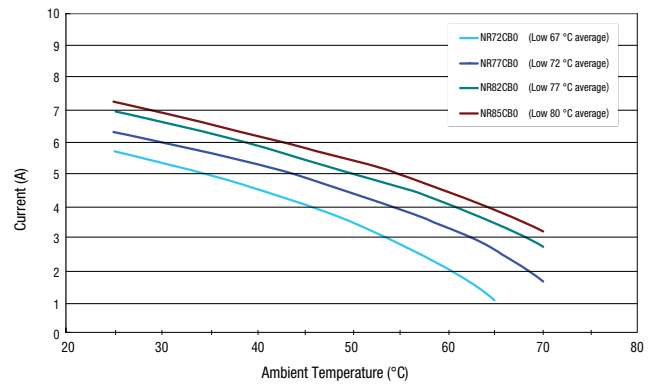
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## Typical Performance

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



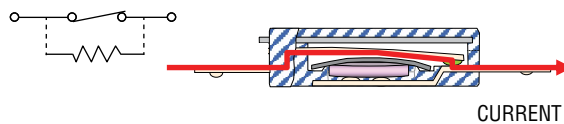
**Current vs. Temperature Curves  
C-Type**



The above curves were derived from placing test samples in an oven at 25 °C, 40 °C, 60 °C and 70°C, increasing current flow through the sample at a rate of 0.1 A/minute and recording the current value when the sample trips.

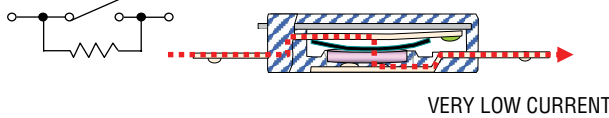
## Operation

**NORMAL CIRCUIT**



**EXCESSIVE  
CURRENT  
AND/OR  
HEAT**

**CIRCUIT  
AFTER OPENING**



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