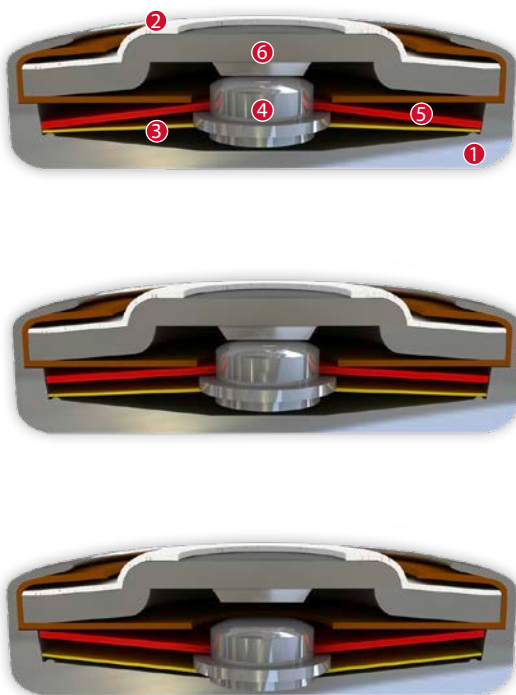


# DATASHEET

## Thermal Protector 01-SMD

### Type series 01



### Construction and function

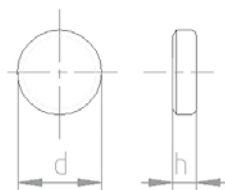
The switchgear of type series 01 is fixed in a positive lock and is self-aligning between the floor of a conductive housing (1) and a contact cap which is made of steel (2) and insulated from it, plus an integrated stationary silver contact (6) which closes the housing like a button cell. At the same time, the spring snap-in disc (3) which forms the current transfer element bears the movable contact (4) and discharges the flow of current and self-heating from the bimetallic disc (5) by exercising consistent, steady contact pressure. The bimetallic disc (5) is held on the one movable contact (4) which sticks out through this without having to be welded or fixed. As such, it can continually work (exposed) and only reacts to the ambient temperature in the device to be protected. When the rated switching temperature is reached, the bimetallic disc (5) snaps into its inverted position and pushes the spring snap-in disc (3) downwards. The contact is abruptly opened and the temperature rise of the device to be protected is disrupted. If the ambient temperature now falls, the bimetallic disc (5) snaps back into its start position when reaching the defined reset temperature and the contact is closed again.



### Features:

- SMT assembly
- SMD Reflow Solder
- Optimized PCB- layout
- Normally closed switch
- Automatic resetting
- Overheat protection
- Silver contacts, excellent thermal stability
- Free of electrical / mechanical loads
- RoHS compliant

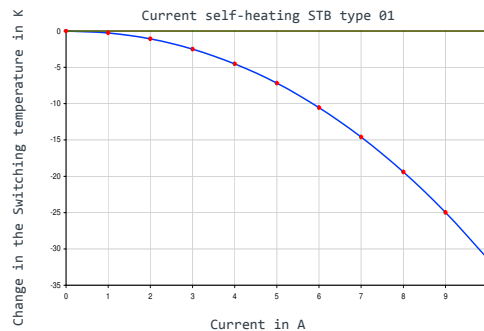
01-SMD



Diameter d 9,0 mm  
Installation height h from 2,5 mm

Type: Normally closed; resets automatically; without cables; without insulation; minimum batch sizes

Nominal switching temperature (NST) in 5 °C increments	70 °C - 150 °C
Tolerance (standard)	±2,5 K / ±5 K
Reverse Switch Temperature (defined RST is possible at the customer's request)	VDE ≥ 35 °C
Installation height	from 2,5 mm
Diameter	9,0 mm
Resistance to impregnation *	upon request
Suitable for installation in protection class	I
Pressure resistance to the switch housing *	450 N
Available approvals (please state)	IEC; ENEC; VDE
Operational voltage range AC/DC	up until 250 V AC / 14 V DC
Rated voltage AC	250 V (VDE)
Rated current AC cos φ = 1.0/cycles	2,5 A / 10.000
Rated current AC cos φ = 0.6/cycles	1,6 A / 10.000
Max. switching current AC cos φ = 1.0/cycles	6,3 A / 3.000 7,5 A / 300
Rated current AC cos φ = 0.4/cycles	1,8 A / 10.000
Max. switching current AC cos φ = 0.4/cycles	7,2 A / 1.000
Rated voltage DC	12 V
Max. switching current DC/cycles	15,0 A / 10.000
Total bounce time	< 1 ms
Contact resistance (according to MIL-STD. R5757)	≤ 50 mΩ
Vibration resistance at 10 ... 60 Hz	100 m/s <sup>2</sup>



\*In accordance with the Thermik test. Specifications relating to part applications (on the part of the buyer) which deviate from our standards, are not checked for their capacity to support an application and/or conformity with standards. The responsibility for testing the suitability of Thermik products for such applications falls upon the user. Slight deviations are possible in terms of dimensions/values, depending on the embodiment of the product. We reserve the right to make technical changes in the course of further development. Details concerning certain data, measurement methods, applications, approvals, etc. can be supplied upon request.

Ordering example:

101 - 125.05  
Type / version  
NST [ °C ]  
Tolerance [ K ]

Marking example:

  
Trade mark  
Type / version **101**  
NST [ °C ] . Tolerance [ K ] — **125.05**

More varieties of the type series 01:  
[www.thermik.de/en/products/baureihen-en/01/](http://www.thermik.de/en/products/baureihen-en/01/)