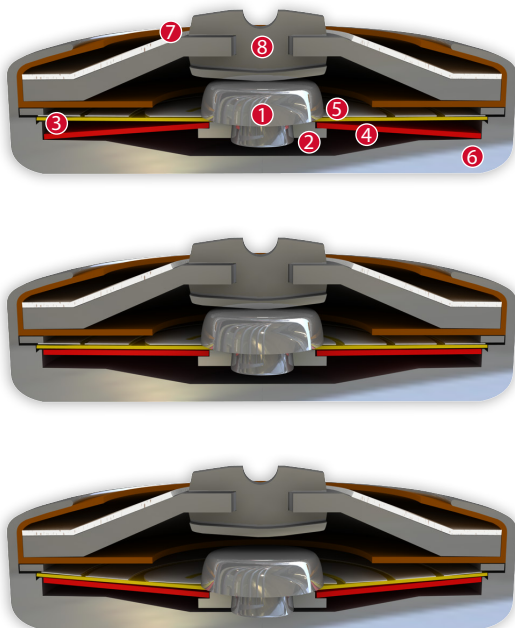


# DATASHEET

## Thermal Protector SXO

### Type series XO



#### Construction and function

Switchgear consisting of a movable silver contact (1), a contact bearing pin (2), a spring snap-in disc (3), a bimetallic disc (4) and a contact tongue (5) which is riveted into one another, undetachable and fixed in a positive lock and self-aligning between a conductive, heat transferring housing (6) and a contact cap (7) made of steel that is insulated from it, plus a stationary countercontact (8). At the same time, the switchgear is supported by the contact tongue (5) acting as a transfer element for electric current which is held between a supporting collar and a circumferential ring. As such, the switchgear underlying it, that is also stuck out from the movable contact (1), can continuously work (exposed) by mechanical loads without the contact pressure defined by the spring snap-in disc (3) diminishing. As soon as the bimetallic disc (4) reaches its rated switching temperature, it effectively springs against the throw force of the spring snap-in disc (3) into its inverted position. The contact is abruptly opened. The temperature will now fall. The bimetallic disc (4) will only snap back upon reaching a defined spring back temperature and the contact is abruptly closed again.



#### Features:

Excellent long term performance

due to instantaneous switching, fine-silver contacts, constant contact resistance and to electrically as well as mechanically unstressed bimetallic disc, reproducible switching temperature values

Very short bouncing times

< 1 ms

Instantaneous switching

with always constant contact pressure up to the nominal switching point, resulting in low contact stress

Temperature resistance

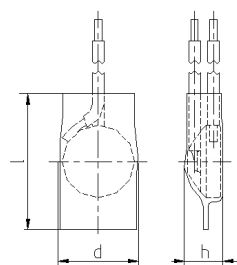
by use of high temperature resistant materials and components

## Technical Data Type SXO

The listed products are an extract from our standard range. Other versions and customised manufacturing are available upon request.

### SXO

Type: Normally closed; resets automatically; with connector cables; with epoxy; insulation: Mylar®-Nomex®



Installation height h	from 6,3 mm
Diameter d	17,6 mm
Length of the insulation cap l	35,0 mm

Nominal switching temperature (NST) in 5 °C increments	70 °C - 180 °C
Tolerance (standard)	±10 K
Reverse switch temperature (RST) below NST (defined RST is possible at the customer's request)	UL ≥ 35 °C VDE ≥ 35 °C
Installation height	from 6,3 mm
Diameter	17,6 mm
Length of the insulation cap	35,0 mm
Resistance to impregnation *	suitable
Suitable for installation in protection class	I + II
Pressure resistance to the switch housing *	600 N
Standard connection	Lead wire 1,75 mm² / AWG14
Available approvals (please state)	IEC; VDE UL; CQC; ENEC
Operating voltage range AC/DC	up until 500 V / 14 V
Rated voltage AC	250 V
Rated current AC cos φ = 1.0/cycles	50 A / 10.000
Rated current AC cos φ = 0.6/cycles	25 A / 3.000
Max. switching current AC cos φ = 1.0/cycles	75 A / 3.000
Rated voltage DC	12 V
Rated current DC/cycles	63,0 A / 10.000
Max. switching current DC/cycles	100 A / 3.000
High voltage resistance	2,0 kV
Total bounce time	< 5 ms
Contact resistance (according to MIL-STD. R5757)	≤ 5 mΩ
Vibration resistance at 10 ... 60 Hz	100 m/s²

#### Ordering example:

SXO - 125. 10 0100 / 0100

Type / version	_____	_____	_____	_____
NST [ °C ]	_____	_____	_____	_____
Tolerance [ K ]	_____	_____	_____	_____
Lead lengths [ mm ]	_____	_____	L <sub>1</sub>	L <sub>2</sub>

#### Marking example:

Trade mark  thermik  
Type / version \_\_\_\_\_ SXO  
NST [ °C ] . Tolerance [ K ] — 125.10

#### More varieties of the type series XO:

• CXO – with connector cables; with epoxy; without insulation

[www.thermik.de/data/CXO](http://www.thermik.de/data/CXO)

\*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.