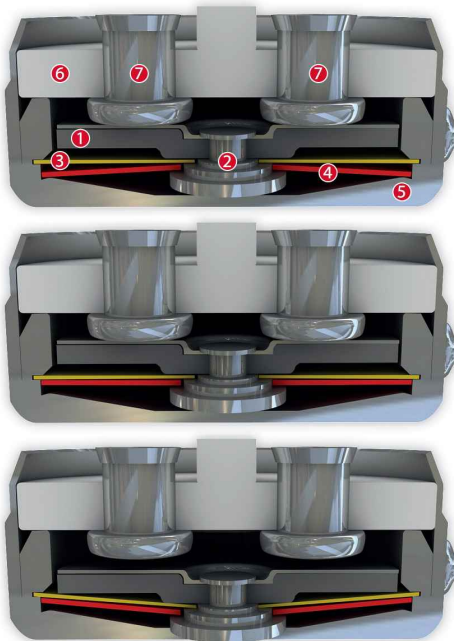


DATASHEET

Thermal Protector SXH

Type series XH

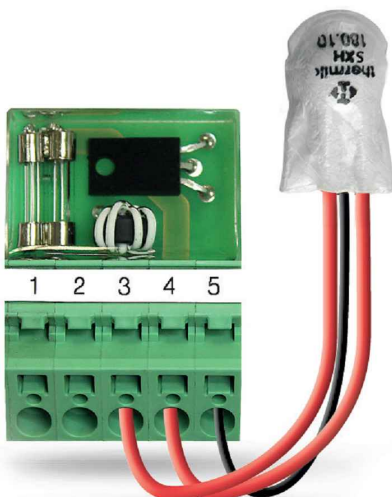


Construction and function

Switchgear consisting of a mobile and circumferential contact bridge (1), a contact bearing pin (2), a spring snap-in disc (3) and a bimetallic disc (4) which is riveted into one another, undetachable and fixed in a positive lock and self-aligning between the floor of a conductive housing (5) and an insulating ceramic bearing (6) with two integrated stationary contacts (7). At the same time, the switchgear is supported by the spring snap-in disc (3) with the contact bridge (1) acting as a transfer element for electric current which is held between a supporting collar and a circumferential ring. As such, the bimetallic disc (4) underlying it, that is also stuck out from the contact bearing pin (2), 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 contacts are abruptly opened. The temperature will now fall. The bimetallic disc (4) will only snap back upon reaching a defined reset temperature and the contacts will be abruptly closed again. As a result of the parallel connection of the three pin switch using a controllable semiconductor valve (Triac), the arc sparks that usually occur in a millisecond range during processes are extinguished. Ideal, zero-crossing switching is created through which enormous power ratings are generated, even in the smallest of assemblies.

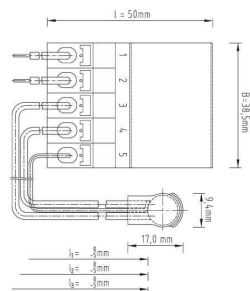
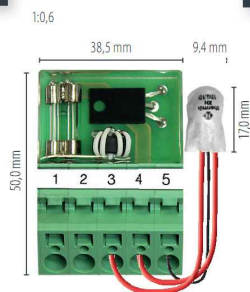
Features:

High switching performance	Maximum switching current 75 A
Quick response sensitivity	Featured by small protector mass and the brass-housing
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 bounce times	< 10 µs
Instantaneous switching	Almost arc free circuit
Temperature resistance	Due to the using of high temperature resistant materials and components



SXH

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

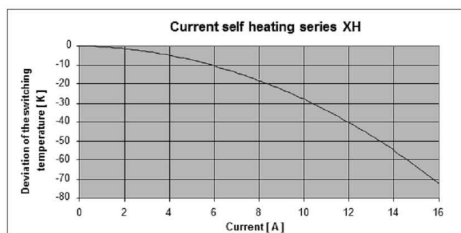


Nominal switching temperature (NST) in 5 °C increments	70 °C - 180 °C
Tolerance (standard)	±10 K
Reverse Switch Temperature (defined RST is possible at the customer's request)	UL $\geq 35^{\circ}\text{C}$ ($\leq 130^{\circ}\text{C}$ NST) VDE $-85\text{ K} \pm 15\text{ K}$ ($\geq 135^{\circ}\text{C} \leq 190^{\circ}\text{C}$ NST) $\geq 35^{\circ}\text{C}$
Construction, two parts	SH6 standard
Lead wire length	customer specific
Electronic arc extinction	38,5 x 50,0 mm
Resistance to impregnation *	suitable
Suitable for installation in protection class	I + II
Standard connection	Lead wire 1,00 mm ² / AWG18
Available approvals (please state)	IEC; ENEC; VDE
Operating voltage range AC	up until 250 V AC
Rated voltage AC	250 V
Rated current AC $\cos \varphi = 1.0/\text{cycles}$	13,5 A / 10.000
Max. switching current AC $\cos \varphi = 1.0/\text{cycles}$	75 A / 10.000
High voltage resistance	2,0 kV
Total bounce time	< 10 μs
Contact resistance (according to MIL-STD. R5757)	< 25 m Ω
Vibration resistance at 10 ... 60 Hz	100 m/s ²
maximum ambient temperature T _a of the electronic arc extinction, outside the winding (e.g. terminal box)	80 °C

Current sensitivity characteristic at I_{nom} :

dependent of...

- Thermal coupling
- Application area
- Built-in conditions
- Outer influences
- Wiring length / wiring diameter



Ordering example:

SXH - 130, 10 0100 / 0100

Type / version _____

NST [°C] _____

Tolerance [K] _____

Lead lengths [mm] _____ l_1 l_2

Marking example:



Trade mark _____ **thermik**
Type / version _____ **SXH**
NST [°C] . Tolerance [K] — **130.10**

More varieties of the type series XH:

- CXH – with connector cables; hybrid; without insulation

www.thermik.de/data/CXH

*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/ tolerances, 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, approvals, approvals, etc. can be supplied upon request.