

Information 311e

Thermal protectors series CH6/SH6

Application:

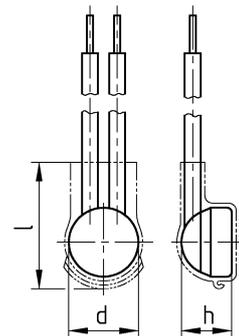
Thermal Protectors (TP) of type H6 are specially designed to the requirements of middle-sized standard electric motors where a high short-circuit current appears and if after overheating and subsequent cooling an automatic resetting is required.

Design:

The temperature limiting switches H6 are based on the well proven mechanism of Thermik's product series 06. Due to a reinforced contact system the SH6-protectors are adapted to higher currents.

Versions :

- SH6 with insulation cap
- CH6 without insulation cap



Diameter $d_{max.}$ (with / or without insulation cap)	9.8 / 9.3 mm
Height $h_{max.}$ (with / or without insulation cap)	7.6 / 7.2 mm
Lengths of insulation cap $l_{max.}$	17 mm

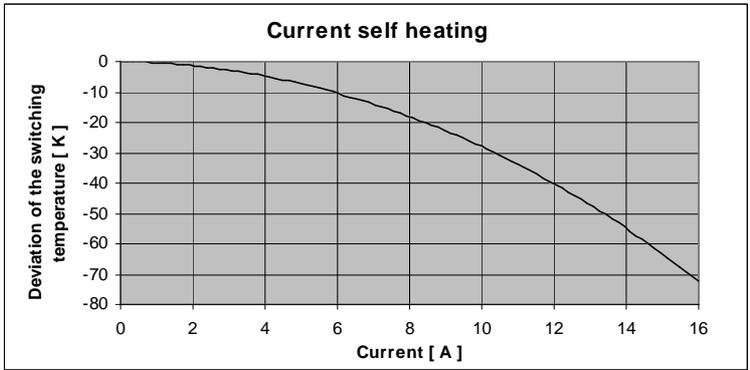
Operation:

If, in the case of overheating, the rated switching temperature of the bimetallic disc is reached, this suddenly snaps over and opens the contacts. After cooling down beyond its resetting temperature, the bimetallic disc resets to close the contacts.

Features:

High performance	: maximal switching current 42 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 bouncing times	: < 1 ms
Instantaneous switching	: with constant contact pressure over the whole temperature range
Temperature resistance	: by use of high temperature resistant materials and components

Technical Data

Contact type	NC
Nominal switching temperature (NST)	70 °C – 200 °C
Standard tolerance	±10 K
Resetting temperature (RST) Standard:	NST 70°C - 200°C: > 35°C
CSA:	NST 70°C - 200°C: RST = NST –10K to NST –50K
UL:	NST 70°C - 130°C: RST = 35°C – 65°C
UL:	NST 135°C - 200°C° RST = NST – 85K ±15K
Operating voltage...AC /..DC	..500V~ / DC ratings available, corresponding values on inquiry
Rated Voltage (at 50Hz – 60Hz)	250 V AC (VDE,IEC,CSA) 277V (UL)
Rated current I_{NOM} (approved Values)	13.5 A $\cos \varphi = 1.0$; 9A $\cos \varphi = 0.6$ 10,000 switching cycles
Max. switching current at 250 V ~	42 A
Contact bounce time	< 1 ms
Impregnation resistance	suitable acc. to Thermik-Test
Contact resistance	< 50 mΩ acc. to MIL–STD. R 5757
Vibrations proof bei 10 .. 60 Hz	100 m/s ²
Pressure stability of the housing	600 N max. to Thermik-Test
Basic insulation (SH6)	Insulation cap: Mylar - Nomex ® ®: Trade mark Du Pont
Dielectric strength of the insulation cap	2 kV _{r.m.s}
Connection leads	Multi strand wire: 1.0 mm ² / AWG 18
Approvals acc. to design for	VDE with reference to EN 60730-1;EN 60730-2-9 (VDE 0631 CB**) with reference to IEC 60730-1; IEC 60730-2-9 UL according UL 2111 c-UL for Canada
Current sensitivity characteristic at I_{Nom} :	 <p style="text-align: center;">Current self heating</p>
Dependent of...	
<ul style="list-style-type: none"> - Thermal coupling - Application area - Built-in conditions - Outer influences - Wiring length / wiring diameter 	

***) The "European Accreditation CB Scheme" Certificate, named CB- Certificate, covers virtually almost all national approbations.

The data of this table refers to the standard version. For others - please inquire.

Marking example:	
Trade mark _____	
Type and versions _____	thermik
NST [°C] . _____	SH6
	130.10

Ordering example:	
	SH6 . 130 . 10 0100 / 0100
Type and version _____	
NST [°C] _____	
Tolerance [K] _____	
Lead length [mm] _____	