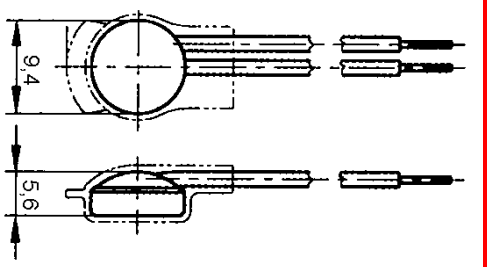
THERMAL PROTECTORS
WITH PTC-self-hold-system SP1



	Electrical-self-hold-functionality with connection leads
Thermal-Protectors	SP1
Contact type, normally closed	NC
With insulation cap	yes
Nominal switching temperature (NST) in steps of 5°C	70 °C – 180 °C
Standard tolerance	± 5K
Reset temperature range below NST after disconnect the electric system (not automatic reset) *	VDE: ≥35°C UL: -35K ± 15K
Operating voltage ...AC Attention! Only for AC possible!	100 V up to 250 V~ (UL 277 V)
Rated voltage U_{AC}	250 V (VDE) 277 V (UL)
Rated current AC cos φ = 1,0 (ohmic load) / switching cycles	Standard 2,5 A / 1.000 max. load 10A /1.000 (needs special request)
Rated current AC cos φ = 0,6 acc. / switching cycles	1,6 A / 1.000
Max. switching current at 250 VAC und cos φ = 1,0 / switching cycles	10,0 A / 1.000 (Attention! Please attend the cross section of the lead wire!)
Max. switching current at 250 VAC und cos φ = 0,6 / switching cycles	6,3A / 1.000 (Attention! Please attend the cross section of the lead wire!)
Contact bounce time	< 1 ms
Contact resistance (acc. to MIL-Std. R 5757)	< 50 mΩ
Impregnation resistance with- or without resin	suitable (corresponding to the internal test configuration)
Vibration proof at 10...60 Hz	100 m/s²
Pressure stability of housing	-
High voltage insulation	2 kV
Protection class	suitable for protection class I (Protection class II possible)
Standard wiring connection	lead wire 0,25 mm² / AWG22
Diameter d (mm)	9,4 mm
Height h (mm)	5,2 mm
Length of insulation cap	17,0 mm
Approvals available (according to design)	IEC; VDE; UL; CSA standard approval: VDE. other approval please mention in your order

*
An integrated PTC-resistor is mounted parallel to the switching device. After opening of contacts the switching device is held open above the resetting switching temperature gained by heating power of heating resistor. This functionality is applied, when automatic reset after overheating and following cooling-down is not desired or even allowed. Service and support will be necessary. Other application is to mount instead of manual-reset-thermostat, when place of the thermostat is narrow and the reset button could never be reached.

THERMAL PROTECTORS FOR LOW CURRENT (2,5A)

Benefits & Advantages

The outstanding quality level of our Temperature Controls satisfies highest demands for safety and reliability. They are provided with a patented, fully developed and reliable switching device system.

Compact and pressure stable	✓ Ideal for installation in limited spaces ✓ Very suitable for mounting into and onto windings
Save, reliable, and durable	✓ Constant contact pressure over the whole temperature range ✓ More than 70 tests conducted over the production process ensures reliability ✓ Very fast switching; therefore short arcing influence on the contacts
Temperature sensitive	✓ Reproducible switching temperature induced by mechanically unstressed and electrical unloaded bimetallic disc
Fast	✓ Excellent thermal coupling induced by small-scaled, low-weight switching device
Flexible	✓ Wide band mains supply range ✓ Large assortment of lead wires and solid wires for connection.

Functions & Types

Bimetal switch

After reaching its factory-adjusted NominalSwitchingTemperature (NST) the bimetal disc suddenly turns over from its stable initial position into a stable end position and thereby activates the switching device.

Normally closed (NC)

Contacts open and switch off the supply ⇒ direct disconnection

Normally open (NO)

Contacts close and activate the supply (switching on of signal units)

Resetting

After cooling down to below its factory-adjusted resetting temperature, the switching device suddenly snaps back into its initial position.

Technical Data

The listed specifications and information are based on tests and test series. They are of a standard nature and therefore deviations may occur in connection with specific applications. The suitability for a specific application must be individually tested by the user. Please contact us for advice and support.

Typical current sensitivity characteristics

A special feature of the series 01 is that the switch is a temperature sensitive switch. In normal operation and loads up to the nominal current, self heating of the switch is extremely low. Therefore the lowering of the switching temperature caused by self-heating will be within the nominal switching temperature tolerance.

Configuration with our article number

sample 1 is for a SP1 NC (normally close type) at 100°C ±5K as standard with 300mm standard wire
sample 2 is for a SP1 NC (normally close type) at 80°C ±5K as UL-version with 250mm wire

1. count	2.-4. count	5. count	6.-8. count	9.-11. count	12.-13. count	further counts
A=NC-type B=NO-type	temperature		version	temperature	tolerance	Wire length/ Special approvals
A	**100**	**-**	**SP1**	**100**	**05**	**0300**
A	**080**	**-**	**SP1**	**080**	**05**	**0250-UL**

The manufacturing and production of our Thermostats is DIN ISO 9001 certified.
By maintaining the current RoHS-conformity the products correspond also to the WEEE 2012/19/EU.

You can use the Thermal Protectors to have a solid and high quality switching device to check and limit a thermal overflow in your applications, machines or systems. We would like to offer you a wide spectrum of different solutions to protect your applications. Of course, we would also like to offer you special solutions with duplex, triplex or personality configurations with long wires and additional insulations, also like special cables with thermostats or fuses.

Our friendly team would give you specialist advice and detailed information for all the products. Of course, we want to help you, to find the best solution for your application. Please call us for further information. You are welcome.

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