

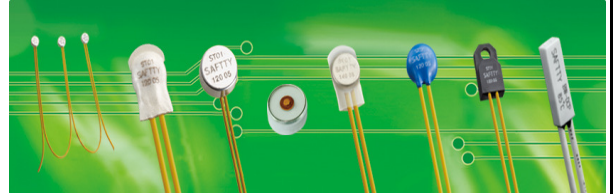
## TECHNICAL DATA

## ST01 SERIES THERMAL CUT-OUT/THERMAL PROTECTOR



### APPLICATIONS

ST01 Series Thermal Cut-Outs are designed for the over-heat protection of electric motors, transformers and all types of coils, as well as electronic components and printed circuit boards.



### OPERATION




The ST01 Series operates by means of a thermally sensitive bimetal disk which switches when reaching a pre-set response temperature and thus opening the contacts.

After cooling below its resetting temperature, the bimetal disk automatically resets and closes the contacts.

### ADVANTAGES

- UL, cUL, CQC & TUV certified
- Small dimensions, suitable for embedding into windings
- Sealed metal case, suitable for vacuum pressure impregnation (VPI)
- Metal case resists up to 50Kg of force during coil shaping process
- Metal case has high thermal conductivity
- Silver plating of metal case & spring greatly reduces contact resistance
- Wide range of insulation/housings available
- Wide range of lead types and lengths available

### CERTIFICATION

Certification mark	Agency	Standard No.	File No.	Application
	CQC	GB14536.3	CQC12002072538	Motor protector
	TUV	IEC 60730-2-9	R50230650	Thermostat
	UL	2111	E336150	Motor protector

### MARKING



ST01 = Model No.

SAFTTY = manufacturer

120 = Switching temperature

05 = ± 5K tolerance

® Registered trademark.

Statements, technical information and recommendations contained herein are based on tests we believe to be reliable but they are not to be construed in any manner as warranties expressed or implied. The user shall determine the suitability of the product for their intended use and the user assumes all risk and liability whatsoever in connection therewith.

**ST01 SERIES THERMAL CUT-OUT/THERMAL PROTECTOR**



**PRODUCT CODE SYSTEM**

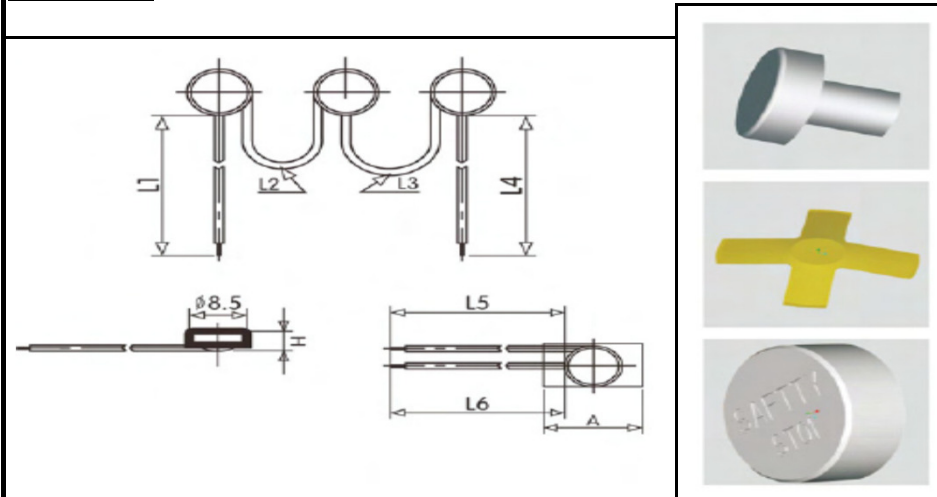
	<b>ST01</b>	<b>A</b>	<b>150</b>	<b>5</b>	<b>Y3</b>	<b>100</b>	<b>100</b>	<b>U1</b>
Model: ST01								
A: Normally closed contacts								
B: Normally open contacts								
Switching temperature °C								
Tolerance: 05 = ±5K, 08 = ±8K, 10 = ±10K								
Lead wire: Y1 = AWG22 Yellow UL10362, Y2 = AWG24 Yellow UL3135, Y3 AWG 22 White UL3398								
Lead length 1 (L5)*								
Lead length 2 (L6)								
Insulation of case (see page 3 for drawings & pictures)								
U1 = Shrink cap insulation								U5 = Transparent shrink cap
U2 = Without insulation								U6 = PBT insulating case
U3 = Without epoxy cover or lead wire								U7 = With M4 thread
U4 = Epoxy potted								U8 = PBT insulating case with pin connection, grid dimension 5.08mm, potted, without lead wire

Example above:

Model ST01, 150°C switching temperature, ± 5K tolerance, Y3 AWG 22 White UL3398 lead wire, lead length 100/100mm, U1 Shrink cap insulation.

\*For a 1 sensor 2 lead device. A 3 sensor device with interconnecting leads is also available. The outer leads (L1 & L4) and interconnecting leads (L2 & L3) should be specified. See drawing below.

**STRUCTURE**



- Contact:**  
Silver/Nickel alloy  
Long life over current capability
- Spring:**  
Beryllium copper with good elasticity
- Case:**  
Brass construction 0.02mm thickness  
Better thermal conductivity  
3µm silver plated surface

**TECHNICAL DATA**

	Normally Closed	Normally Open
Nominal switching temperature in 5K steps	60 - 180°C	60 - 180°C
Standard tolerance (Others on request)	± 5K	± 5K
Reset temperature range	-30K ± 15K	-30K ± 15K
Maximum operating voltage	500V AC, 60V DC	500V AC, 60V DC
Working current @ 250V AC 50/60Hz	5 amps	5 amps
Cycles @ 250V AC/3.0A cos φ 1.0	10,000	
Cycles @ 250V AC/6.3A cos φ 1.0	3,000	
Cycles @ 250V AC/4.0A cos φ 0.45	1,000	
Cycles @ 250V AC/1.0A cos φ 0.45	10,000	
Isolation voltage	2.5kV	2.5kV
Y1 Lead wire (PTFE)	AWG22 Yellow, UL10362, 600V, 250°C	AWG22 Yellow, UL10362, 600V, 250°C
Y2 Lead wire (Silicone rubber)	AWG24 Yellow, UL3135, 600V, 200°C	AWG24 Yellow, UL3135, 600V, 200°C
Y3 Lead wire (Cross linked polymer)	AWG22 White, UL3398, 300V, 150°C	AWG22 White, UL3398, 300V, 150°C

**ST01 SERIES THERMAL CUT-OUT/THERMAL PROTECTOR**



**DIMENSIONS & INSULATION TYPES**

Series	ST01	ST01	ST01
Code	U1	U2	U3
Description	Shrink cap insulation	Without insulation	Without epoxy cover & lead wire
Dimensions mm			

Series	ST01	ST01	ST01
Code	U4	U5	U6
Description	Epoxy potted cover	Transparent shrink cap	PBT insulating case
Dimensions mm			

**ST01 SERIES THERMAL CUT-OUT/THERMAL PROTECTOR**



Series	ST01	ST01	ST01-S
Code	U7	U8	U2
Description	M4 threaded case	PBT insulating case, pin connection Grid dimension 5.08mm, potted	Super thin - 2.5mm thickness Without insulation
Dimensions mm			

Series	ST01-H
Code	U1
Description	With PTC self-hold Shrink cap insulation
Dimensions mm	