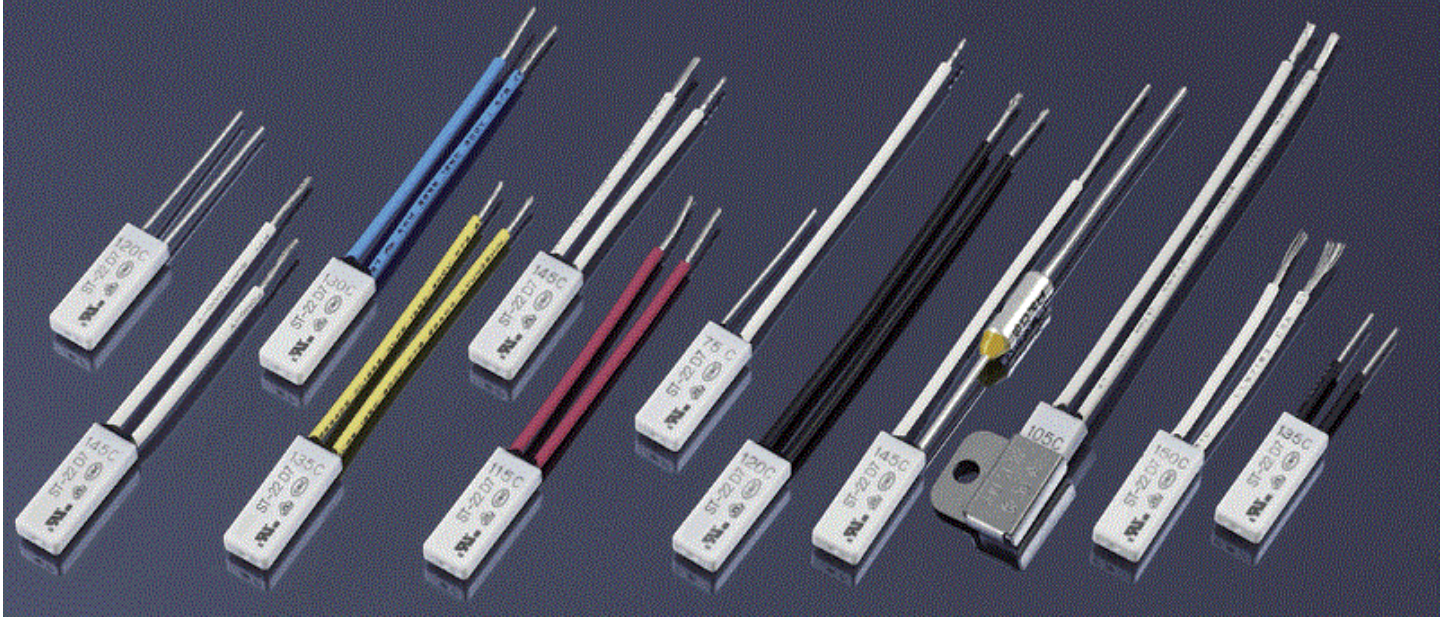
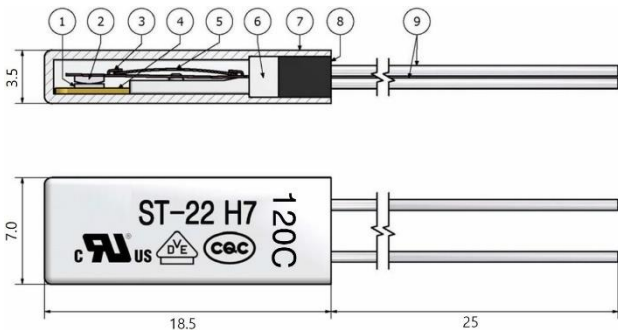


ST-22 Series Thermal Protectors



Main parts

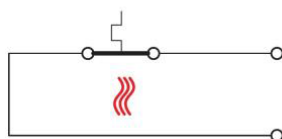
- | | |
|------------------------------|--|
| 1) Fixed Contact (AgNi/Cu) | 6) Base (PBT) |
| 2) Movable Contact (AgNi/Cu) | 7) Case (PBT) |
| 3) Action Plate (BeCu) | 8) Sealed Resin (Epoxy) |
| 4) Fixed Plate (Brass) | 9) Insulated Lead Wire
UL3266 AWG22 White |
| 5) Disc (Bimetal) | |



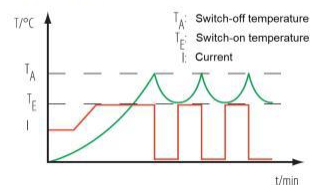
Function

The temperature limiter ST-22 series is independent of current. The temperature measured by means of a continuously operating bimetallic snap-action disk, which is previously been dimensioned according to the desired switch-off temperature. When this fixed switch-off temperature reached, the bimetal disc snaps, opens the contact system of 900 silver and thus interrupts the electrical circuit of the device to protect. After cooling and reaching the switchback temperature of the bimetal disc, the temperature switch automatically switches back to its initial position. (Automatic reset).

Circuit diagram



Functional scheme



ST-22

7A Series

50°C ... 150°C



Function	NC (Normally Closed)	Nominal switching temp. (NST) in 5K steps	50 ... 150°C
Reset	automatic	Tolerance	±5K
Insulation	Plastic housing	Hysteresis	30°C ±15K
Width	7.0mm		AC 250V 7.0A / 10,000
High	3.5mm	Cycle life AC φ = 1.0	AC 125V 10.0A / 10,000 (UL) AC 277V 5.0A / 6,000
Length	18.5mm	Cycle life DC	DC 60V 2.2A / 6,000 DC 48V 3.0A / 6,000
Impregnating resistance	suitable	Contact resistance	< 50mΩ
Pressure resistance of the switch housing	98N	Dielectric strength	AC 1.5 kV / 1 minute
Standard connection	Lead wire 0.33mm ² / AWG 22	Insulation resistance	> 100MΩ
Approval	UL/cUL, VDE, CQC, KC IECEX(Explosion Proof)	Vibration Resistance 20 ... 60 Hz	1mm amplitude
Type of protection	IP45		

Standard connection wires

Isolation material	Max. Temp.	Max. operating voltage	Size	UL-Style
XLPE	125°C	300V	AWG 22	3266

Other wires are available on request.

Available switching & reset temperatures

Switching °C	Reset °C	Switching °C	Reset °C	Switching °C	Reset °C
50°C ± 5 K	20°C ± 15 K	85°C ± 5 K	55°C ± 15 K	120°C ± 5 K	90°C ± 15 K
55°C ± 5 K	25°C ± 15 K	90°C ± 5 K	60°C ± 15 K	125°C ± 5 K	95°C ± 15 K
60°C ± 5 K	30°C ± 15 K	95°C ± 5 K	65°C ± 15 K	130°C ± 5 K	100°C ± 15 K
65°C ± 5 K	35°C ± 15 K	100°C ± 5 K	70°C ± 15 K	135°C ± 5 K	105°C ± 15 K
70°C ± 5 K	40°C ± 15 K	105°C ± 5 K	75°C ± 15 K	140°C ± 5 K	110°C ± 15 K
75°C ± 5 K	45°C ± 15 K	110°C ± 5 K	80°C ± 15 K	145°C ± 5 K	115°C ± 15 K
80°C ± 5 K	50°C ± 15 K	115°C ± 5 K	85°C ± 15 K	150°C ± 5 K	120°C ± 15 K

Withstand Voltage

It shall withstand for one minute under AC1,500V/leakage current 10mA or withstand for one second under AC 1,800V/leakage current 10mA when applied between on-current-part and off-current-part.

Insulation Resistance

Insulation resistance between on-current-part and off-current-part (case & terminal) should be over 100MΩ when measured with DC 500V tester.

Contact resistance

Not greater than 50mΩ between two lead wires using DC6V/1A voltage drop method. (Based on standard lead wire, 70mm long with 7mm stripped).

Pull endure testing of leads with terminal

It should have no damage when applying 3kg-pulling force to one lead wire in axial direction.

High temperature test

Keep the thermal protector in an incubator which temp. is 150°C for 24 hours, and test it two hours later after taking out from the incubator, while the temperature change does not exceed the initial value of ± 5K or ± 5%, returns the maximum value. Tmax is 200°C/1min.

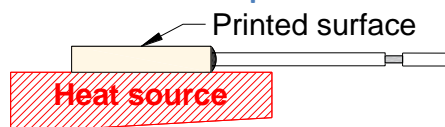
Low temperature resistance test

Keep the thermal protector in a -20°C incubator for 24 hours, and test it two hours later after taking out from the incubator, while the temperature change does not exceed the initial value of ± 5K or ± 5%, returns the maximum value.

Anti-Vibration test

Thermal protector should be able to withstand the amplitude 1mm, frequency 20-60Hz. The vibration direction X, Y, Z and each direction vibrates on a continuous basis for 30 minutes while the temperature change does not exceed the initial value of ±5K or ±5%, returns the maximum value.

Installation of temperature switches



Accessories

Mounting Bracket
CB.00.35.110

[LINK](#)

