

Thermostat KO/KS/KB

Thermostat with snap-action disk: regulator, automatic controller, limiter



Applications

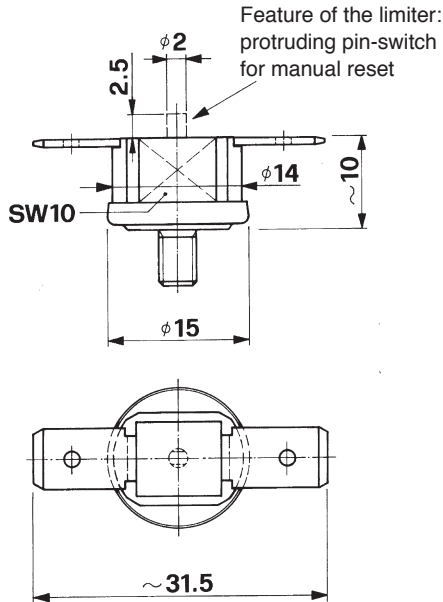
The very compact snap-action disk thermostats are designed for current loads of up to 16A and have a wide range of applications. These thermostats can be used in regulator applications to maintain a constant temperature (normally closed or normally open); they can be used as thermal switches in monitoring applications (normally closed or normally open); or they can be used as limiters (normally closed) with mechanical resetting.

The thermostats are used everywhere where overheating protection is required in a minimum of space.

- Domestic appliances
- Coffee machines
- Electrical equipment
- Motors
- Heaters



General dimensions*



Technical specifications

Switching performance

KS	{	16 (4) A 250 V ac
KO		6'000 switching cycles
KB	{	16 (4) A 250 V ac
		2'500 switching cycles

Maximum speed of Temperature change

10° K/Min

Differential gap

10° – 20°C
(smaller values on request)

Maximum switching temp. KO/KS
KB

190°C
180°C

Electrical insulation

> 2800 V

Design

As per EN 60730
• micro-contact-breaker
• type 1C

Contact material

Silver alloy
(KO/KS in gold
on request)

Approval

VDE, UL etc.

* Detailed dimensions and a key to the order numbers are given on the following pages



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Connection variants

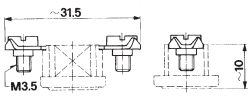


Fig. 1 Screw lugs for conductors up to 2.5 mm²

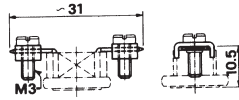


Fig. 2 Clamping straps for conductors up to 2.5 mm²

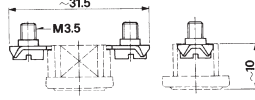


Fig. 3 Screw lugs upwards for conductors up to 1.5 mm²

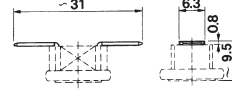


Fig. 4 Flat plugs 6.3 x 0.8 bent sideways

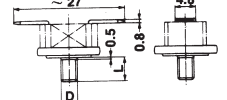


Fig. 5 Flat plugs 4.8 x 0.8 bent sideways

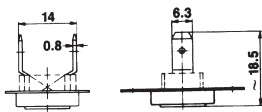


Fig. 6 Flat plugs 6.3 x 0.8 turned up vertically

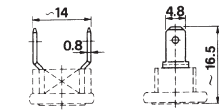


Fig. 7 Flat plugs 4.8 x 0.8 turned up vertically

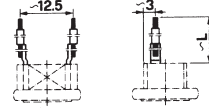


Fig. 8 Insulated strand 0.5 mm², Lengths L=150, 300, 600 mm

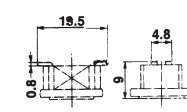


Fig. 9 Connections sideways without cable

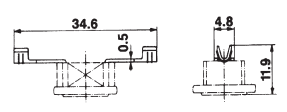


Fig. 10 «Crimp-lugs» inside 0.5 mm

*) Size of the manual reset: cf. general dimensions on previous page

Mounting variants

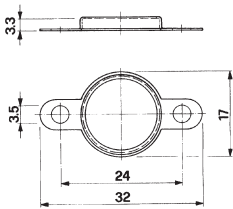


Fig. 11 Flange with bilateral mounting, cranked

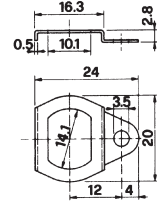


Fig. 12 Flange with unilateral mounting, cranked

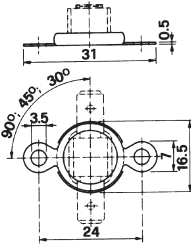


Fig. 13 Cover with arresting flange

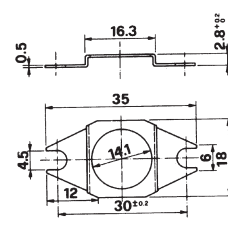


Fig. 14 Special longitudinal flange for M-4 screws

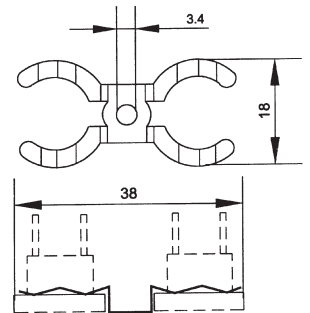


Fig. 15 Special longitudinal flange for 2 thermostats

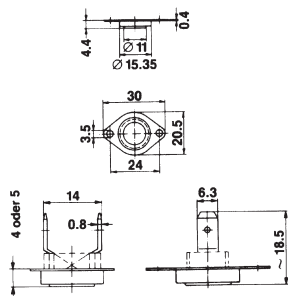


Fig. 16 Flange with bilateral mounting, recessed

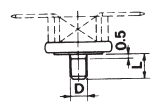


Fig. 17 Screw mounting

D	L
M4	6
M4	10
M4	16
M5	6

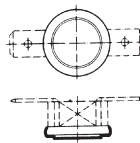


Fig. 18 Encapsulated bimetallic disk

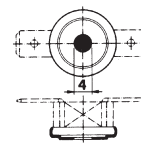


Fig. 19 Uncovered bimetallic disk

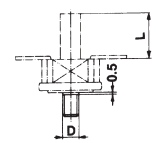


Fig. 20 Lengthening reset cap for limiter



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KO: Contact opens on temperature rise
 KS: Contact closes on temperature rise
 KB: Contact opens on temperature rise,
 manual reset

KO = circuit breaker, KS = circuit closer, KB = circuit limiter

		x	x	x	x	x	x	x	x	±	x	x			
		x	x	x	x	x	x	x	x	±	x	x	Tolerance ± 10 °K	Tolerance ± 5 °K	Tolerance ± 3 °K
													°C	°C	°C
Fig. 1	Screw lugs for conductors up to 2.5 mm ²	0											—	—	—
Fig. 2	Clamping straps for conductors up to 2.5 mm ²	5											15°	—	—
Fig. 3	Screw lugs upwards for conductors up to 2.5 mm ²	9											20°	20°	—
Fig. 4	Flat plugs 6.3 x 0.8 bent sideways	1											30°	30°	30°
Fig. 5	Flat plugs 4.8 x 0.8 bent sideways	2											—	35°	35°
Fig. 6	Flat plugs 6.3 x 0.8 turned up vertically	3											40°	40°	40°
Fig. 7	Flat plugs 4.8 x 0.8 turned up vertically	4											—	—	42.5°
Fig. 8	Insulated strand 0.5 mm ² L=150 mm	6											—	45°	45°
Fig. 8	Insulated strand 0.5 mm ² L=300 mm	7											—	—	47.5°
Fig. 8	Insulated strand 0.5 mm ² L=600 mm	8											50°	50°	50°
Fig. 9	Connections sideways without cable	A											—	—	53°
Fig. 10	«Crimp-lugs»	C											—	56°	56°
	Flat cover without flange	0											—	—	60°
Fig. 11	Flange with bilateral mounting cranked	1											63°	63°	63°
Fig. 12	Flange with unilateral mounting cranked	2											—	—	67°
Fig. 13	Cover with arresting flange 90°	3											—	71°	71°
Fig. 13	Cover with arresting flange 45°	8											—	—	75°
Fig. 13	Cover with arresting flange 30°	9											80°	80°	80°
Fig. 13	Cover with arresting flange parallel	D											—	—	85°
Fig. 14	Special longitudinal flange for M-4 screws	A											—	90°	90°
Fig. 15	Special longitudinal flange for 2 thermostats	B											—	—	95°
Fig. 16	Flange with bilateral mounting, recessed 5 mm	C											100°	100°	100°
Fig. 17	Screw mounting M4 x 6 mm	4											—	—	106°
Fig. 17	Screw mounting M4 x 10 mm	6											—	112°	112°
Fig. 17	Screw mounting M4 x 16 mm	7											—	—	118°
Fig. 17	Screw mounting M5 x 6 mm	5											125°	125°	125°
													—	—	132°
													—	140°	140°
Fig. 18	Encapsulated bimetallic disk	0											—	150°	—
Fig. 19	Uncovered bimetallic disk	1											160°	—	—
Fig. 20	Lengthening reset cap for limiter L = 11 mm	2											—	—	—
Fig. 20	Lengthening reset cap for limiter L = 6 mm	3											180°	—	—
Fig. 20	Lengthening reset cap for limiter L = 4 mm	4											190°	—	—

Specimen order: KS 660 071 ± 05 = Regulator/Controller; insulated strand connection 0,5 mm², length = 150 mm;
 screw mounting M4 x 10; encapsulated bimetallic disk; circuit closing contact;
 trigger temperature 71 °C ± 5 °K



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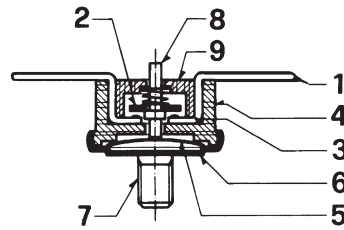
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Mode of action

The thermostats respond to a fixed temperature that is determined by a snap-action bimetallic disk. The action of the bimetallic disk is mechanically transmitted to a bridge contact via a transfer pin, so that the electrical circuit is either open or closed, depending on the state of the bimetallic disk.



Key

- 1 = Connection
- 2 = Contact plate
- 3 = Double contact-breaker
- 4 = Housing
- 5 = Bimetallic disk
- 6 = Heat-conducting plate
- 7 = Fixing screw (various)
- 8 = Pin-switch (various)
- 9 = Cover

Note

It is the responsibility of the customer to verify the suitability of the intended use. We can provide no guarantees in this regard. However, we will be happy to advise you.

ISO 9001
BUREAU VERITAS
Certification



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