

Thermostat KO/KS/KB

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



Applications

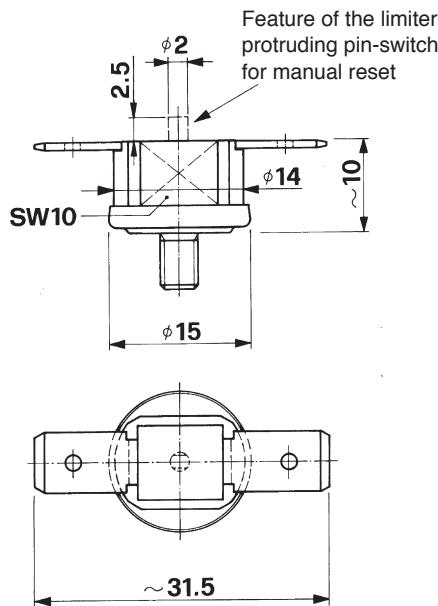
The very compact snap-action disk thermostats are designed for current loads of up to 16A and have a wide range of applications. These thermostats can be used in regulator applications to maintain a constant temperature (normally closed or normally open); they can be used as thermal switches in monitoring 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	190°C
KB	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

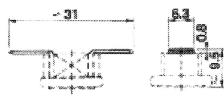


Fig. 4 Flat plugs
6.3 x 0.8
bent sideways

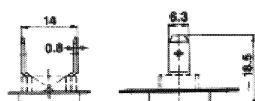


Fig. 6 Flat plugs
6.3 x 0.8 turned up
vertically

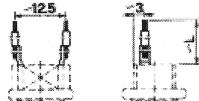


Fig. 8 Insulated strand
0.5 mm², Lengths
L=150, 300, 600 mm



Fig. 9 Connections
sideways
without cable



Fig. 10 «Crimp-lugs»
outside 0.5 mm

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

Mounting variants

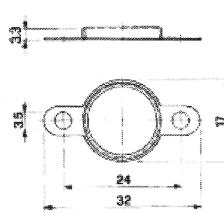


Fig. 11 Flange with
bilateral mounting,
cranked

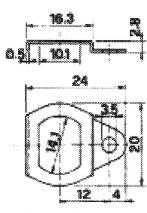


Fig. 12 Flange with
unilateral mounting,
cranked

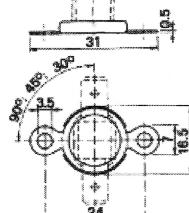


Fig. 13 Cover with
arresting flange

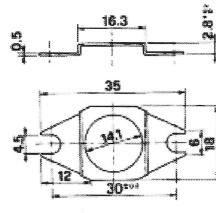


Fig. 14 Special
longitudinal flange
for M-4 screws

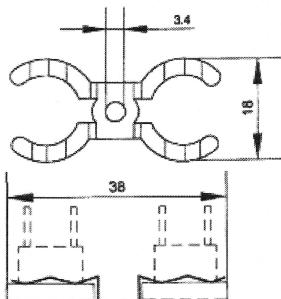


Fig. 15 Special
longitudinal flange
for 2 thermostats

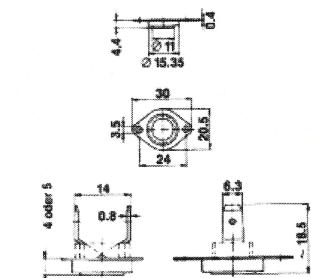


Fig. 16 Flange with
bilateral mounting,
recessed

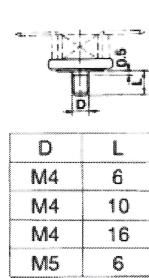


Fig. 17 Screw mounting

D	L
M4	6
M4	10
M4	16
M5	6

Fig. 18 Encapsulated
bimetallic disk

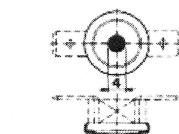


Fig. 19 Uncovered
bimetallic disk

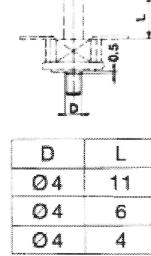


Fig. 20 Lengthening
reset cap for limiter



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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

Fig. 4	Flat plugs	6.3 x 0.8 bent sideways	1	x x x	x x x ± x x			
Fig. 6	Flat plugs	6.3 x 0.8 turned up vertically	3					
Fig. 8	Insulated strand 0.5 mm ²	L=150 mm	6					
Fig. 8	Insulated strand 0.5 mm ²	L=300 mm	7					
Fig. 8	Insulated strand 0.5 mm ²	L=600 mm	8					
Fig. 9	Connections sideways without cable		A					
Fig. 10	«Crimp-lugs»		C					
	Flat cover without flange		0					
Fig. 11	Flange with bilateral mounting	cranked	1					
Fig. 12	Flange with unilateral mounting	cranked	2					
Fig. 13	Cover with arresting flange	90°	3					
Fig. 13	Cover with arresting flange	45°	8					
Fig. 13	Cover with arresting flange	30°	9					
Fig. 13	Cover with arresting flange	parallel	D					
Fig. 14	Special longitudinal flange for M-4 screws		A					
Fig. 15	Special longitudinal flange for 2 thermostats		B					
Fig. 16	Flange with bilateral mounting, recessed	5 mm	C					
Fig. 17	Screw mounting	M4 x 6 mm	4					
Fig. 17	Screw mounting	M4 x 10 mm	6					
Fig. 17	Screw mounting	M4 x 16 mm	7					
Fig. 17	Screw mounting	M5 x 6 mm	5					
Fig. 18	Encapsulated bimetallic disk		0					
Fig. 19	Uncovered bimetallic disk		1					
Fig. 20	Lengthening reset cap for limiter	L = 11 mm	2					
Fig. 20	Lengthening reset cap for limiter	L = 6 mm	3					
Fig. 20	Lengthening reset cap for limiter	L = 4 mm	4					

				Tolerance ± 10 °K	Tolerance ± 5 °K	Tolerance ± 3 °K
				°C	°C	°C
005				-	-	-
015				15°	-	-
020				20°	20°	-
030				30°	30°	30°
035				-	35°	35°
040				40°	40°	40°
042				-	-	42.5°
045				-	45°	45°
047				-	-	47.5°
050				50°	50°	50°
053				-	-	53°
056				-	56°	56°
060				-	-	60°
063				63°	63°	63°
067				-	-	67°
071				-	71°	71°
075				-	-	75°
080				80°	80°	80°
085				-	-	85°
090				-	90°	90°
095				-	-	95°
100				100°	100°	100°
106				-	-	106°
112				-	112°	112°
118				-	-	118°
125				125°	125°	125°
132				-	-	132°
140				-	140°	140°
150				-	150°	-
160				160°	-	-
170				-	-	-
180				180°	-	-
190				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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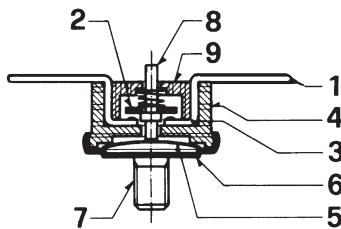
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Mode of action

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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