

TKC: Thermostat with remote sensor, for industrial use

How energy efficiency is improved

Controlling and monitoring as required, without auxiliary energy.

Areas of application

For controlling and monitoring the temperature of liquids and gases in baths, tanks, pipelines, air ducting and heating chambers. Especially suitable for equipment that is subject to vibrations.

Features

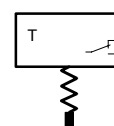
- Temperature range 0 to 295 °C
- -40 to +320 °C permissible sensor temperature
- Contact rating: 1 mA, 6 V to 10 A, 400 V
- Gold-plated silver contacts
- Upper and lower switching points can be set independently
- Sealable
- 20 sec. time constant in water at 0.25 m/s

Technical description

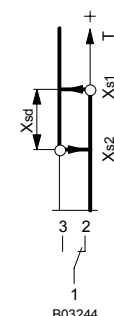
- Light-alloy housing with transparent cover
- Splash-proof
- Ambient temperature: -40 to +70 °C
- IP 67 with accessories
- 1.5, 3 or 6 m capillary tube length



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Type	Setting range °C	min. switching difference ¹⁾ K	Permissible sensor temp. °C	Sensor cartridge mm	Weight kg
TKC 7B17 F001	0...45	1,8...2,5	-40...65	180	0,8
TKC 7B20 F001	40...110	1,6...5,0	-40...135	125	0,8
TKC 7B23 F001	60...140	2,0...4,5	-40...165	125	0,8
TKC 7B26 F001	100...180	1,8...5,0	-40...205	125	0,8
TKC 7B32 F001	160...250	2,5...6,5	-40...275	125	0,8
TKC 7B35 F001	210...295	2,5...5,0	-40...320	125	0,8

Contact rating	Time constant in air 0.5 m/s	120 s
as silver contacts ²⁾ for higher loading		
max. 10(2) A, 400 V~	Permissible ambient temp.	-40...70 °C
25 W, 250 V=	Degree of protection	IP 44 (EN 60529)
min. 100 mA, 24 V	Protection class	I (IEC 60730)
as gold contacts ³⁾ for lower loading		
max. 200 mA, 50 V	Wiring diagram	A01497
min. 1 mA, 6 V	Dimension drawing	M259247
Time constant in water 0,25 m/s	Fitting instructions	MV 23155
without sheath 20 s		
with sheath 30 s		

Variants (otherwise as F001)

TKC 7B20 F003	Capillary tube 3 m long
TKC 7B26 F003	Capillary tube 3 m long
TKC 7B17 F005	Capillary tube 6 m long
TKC 7B20 F005	Capillary tube 6 m long
TKC 7B23 F005	Capillary tube 6 m long
TKC 7B26 F005	Capillary tube 6 m long
TKC 7B32 F005	Capillary tube, 6 m long
TKC 7B17 F501	Aluminium cover with inspection glass; IP 67; cable screw fitting Pg 13,5; 1,5 m
TKC 7B20 F501	Aluminium cover with inspection glass; IP 67; cable screw fitting Pg 13,5; 1,5 m
TKC 7B20 F111	Limiter; locks when temperature rises; capillary tube 1,5 m
TKC 7B26 F111	Limiter; locks when temperature rises; capillary tube 1,5 m

¹⁾ The small values apply to the high setting points, the large values to the low ones.

²⁾ If under inductive load, take RC circuit into account.

³⁾ If the contacts are ever loaded higher than 200 mA, 50 V, the gold plating will be damaged.
The contacts are then classed only as silver contacts, since they lose the properties of gold contacts.

Accessories

- 0044529 000 Plug spanner for the setting screws
- 0036787 000* Brass R½ screw fitting with stuffing box; 12 bar, 180 °C
- 0144313 000* Stainless steel R½ screw fitting with stuffing box; 12 bar, 180 °C
- 0233310 000 Aluminium cover with window (with accessory 0259299 000 = IP 54)
- 0259189 000* Bracket for off-wall mounting
- 0259299 000 Cable screw fitting Pg 13,5
- 0259409 000* Bracket (for 3-point fixing when used with 0259189)
- 0303212 000* Rubber grommet as an inlet for the capillary tube in air ducts; T < 50 °C
- 0364140 000* Bushing for tension relief, for thermostats with capillary tube
- 0364244 ... LW 15 pockets, R½, of brass; see chapter 29
- 0364258 ... LW 15 pockets, G½ A; of stainless steel; see chapter 29
- 0364346 ... LW 15 pockets, G½ A; of brass; see chapter 29

*) Dimension drawing or wiring diagram are available under the same number

Operation

Whenever the temperature exceeds the upper switching point (which can be set on the right-hand scale), the contacts switch over from 1-2 to 1-3.

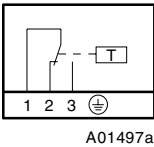
When the temperature falls below the lower switching point (which can be set on the left-hand scale), the contacts switch over from 1-3 to 1-2.

The vibration-proof snap-action switch has a pre-loaded spring which prevents the change-over mechanism from operating until the switching point has been attained. This ensures that the contacts remain fully closed right up to the switching point, even if operation is very slow.

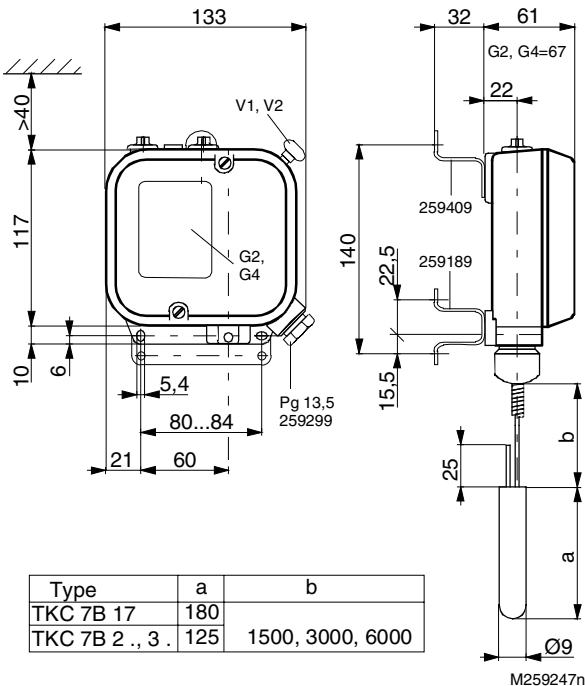
Additional technical data

Complies with:-	
Directive 2006/95/EC	EN 60730-1/ EN 60730-2-9
EMC directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-2
	EN 61000-6-3/ EN 61000-6-4

Wiring diagram



Dimension drawing



Type	a	b
TKC 7B 17	180	
TKC 7B 2 .., 3 ..	125	1500, 3000, 6000

Accessories

