

Bi-metal-Temperature switch TSK



Fluidcontrol

High operating temperatures significantly reduce the life of oils in the hydraulics and the lubrication. To prevent exceeding harmful limits, for example due to unforeseeable overloads or reduced cooling capacity, the systems must be shut off in a timely manner. This shut-off is performed using the downstream temperature switches of the Bühler TSK series.

These switches contain a bimetal that bends as the temperature rises. If the temperature exceeds a certain limit, the bimetal interrupts the current flow and thus protects the system from damage. After resolving the cause of the excess temperature, following a cooling phase (hysteresis) the bimetal element automatically returns to operating mode. However, for safety reasons it is advisable to still display the current oil temperature on the oil tank.

G3/4" threaded connection

Up to 2 temperature switching points

Sensor length up to 1 m (3.3 ft)

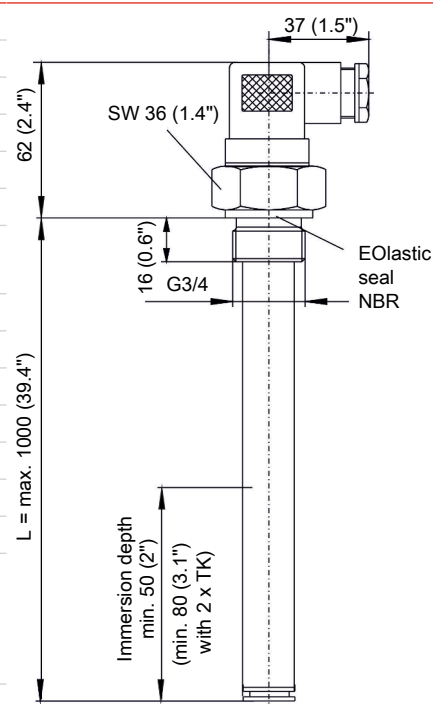
Low hysteresis



Technical Data TSK

Model	TSK	
Version:	MS	VA
Probe material:	Brass	1.4571
Max. operating pressure:	1 bar (14.5 psi)	5 bar (72.5 psi)
Connection:	G3/4	G3/4
Medium temperature:	-40 °C to +100 °C (-40 °F to 212 °F)	
Ambient temperature:	-20 °C to +80 °C (-4 °F to 176 °F)	
Lengths:	280 (11"), 370 (14.6"), 500 (19.7") (standard) variable to max. 1000 mm (39.4")	
Temperature contact	TKxx	
Switch element:	Bimetal	
Number of contacts:	1 or 2	
Max. voltage:	230 V	
Max. switching current:	2 A	
Max. contact load:	100 VA	
Function	NC*	NO*
Switching point °C (°F):	15/20/30/35/40/45/50/55/60/ 65/70/75/80/90/100 (59/68/86/95/104/113/122/131/ 140/149/158/167/176/194/212)	20/30/35/40/45/50/55/60/ 65/70/75/80/90 (68/86/95/104/113/122/131/ 140/149/158/167/176/194)
Switching point tolerance:	± 3 K (± 5.4 Ra)	
Max. hysteresis:	10 K ± 5 K (18 Ra ± 9 Ra)	
Other temperatures available upon request		
* NC = NC contact/NO = NO contact (all data for rising temperature)		

Dimensions



Standard Pin Assignment TSK

Plug connection*:	M3 valve connector	M12 plug A coded
Dimensions:		
Connection schematic:		
Number of pins:	3-pin + PE	4-pin
DIN EN:	175301-803	61076-2-101
Max. voltage:	230 V AC/DC	30 V DC
IP rating:	IP 65	IP 67**
Cable fitting:	PG 11	
Standard pin assignment:		
T1 = lower temperature/T2 upper temperature.		
* other connectors available on request.		
** with IP67 cable box screwed on.		

Model Key for TSK

TSK - XX - XX - G3/4 - XX - XX - T1 - T2			T1/T2*	
Number of temperature contacts 1 or 2			NC contact	NO contact
			TK15NC	- = 15 °C (59 °F)
Version MS Brass VA Stainless steel			TK20NC	TK20NO = 20 °C (68 °F)
			TK30NC	TK30NO = 30 °C (86 °F)
Connector M3 M12			TK35NC	TK35NO = 35 °C (95 °F)
			TK40NC	TK40NO = 40 °C (104 °F)
Length (max. 1000 mm/39.4") 280 (11") 370 (14.6") 500 (19.7") variable (please specify)			TK45NC	TK45NO = 45 °C (113 °F)
			TK50NC	TK50NO = 50 °C (122 °F)
			TK55NC	TK55NO = 55 °C (131 °F)
			TK60NC	TK60NO = 60 °C (140 °F)
			TK65NC	TK65NO = 65 °C (149 °F)
			TK70NC	TK70NO = 70 °C (158 °F)
			TK75NC	TK75NO = 75 °C (167 °F)
			TK80NC	TK80NO = 80 °C (176 °F)
			TK90NC	TK90NO = 90 °C (194 °F)
			TK100NC	- = 100 °C (212 °F)

*Listing can be selected for the first temperature contact T1 and for the second temperature contact T2.

Ordering example

You need: Brass temperature switch, G3/4 connection, length L= 300 mm (11.8"), M3 plug
2 x temperature contact: 1st Contact 50 °C (122 °F) NC, 2nd contact 70 °C (158 °F) NO,

Order: TSK-2-M3/300 -TK50NC-TK70NO