Bimetal temperature switch TSK-Atex

Fluidcontrol

Since the viscosity of oil changes based on the temperature, operating temperatures must be monitored. Depending on the requirements, monitoring by means of indicating the minimum temperature to warning points and ending with shut down, will suffice. The warning or shut-off points are implemented using a bimetallic switch and in the process, hysteresis can also be used as a reset point.

The TSK-Atex series consists of simple electrical equipment. In the case of intrinsically safe connections as per EN 60079-14, the TSK-Atex can be used in Zone 1 (group IIC, device category 2G) explosive areas; this also applies to the inner zone of the tank. The temperature switches are classified as temperature class T4.

The temperature switch was designed to allow removing the electrical inner workings without having to remove the switching tube from the tank. This is convenient if the temperature switch is installed laterally inside oil.

ATEX applications: Zone 1 (cat. 2G), simple electrical equipment according to EN 60079-11
Simple, robust design
Electrical inner part, easy to remove
Optionally DIN connector or M12 base connector
Outlet direction adjustable in 90° steps
Elastic sealing ring

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Technical Data TSK-Atex

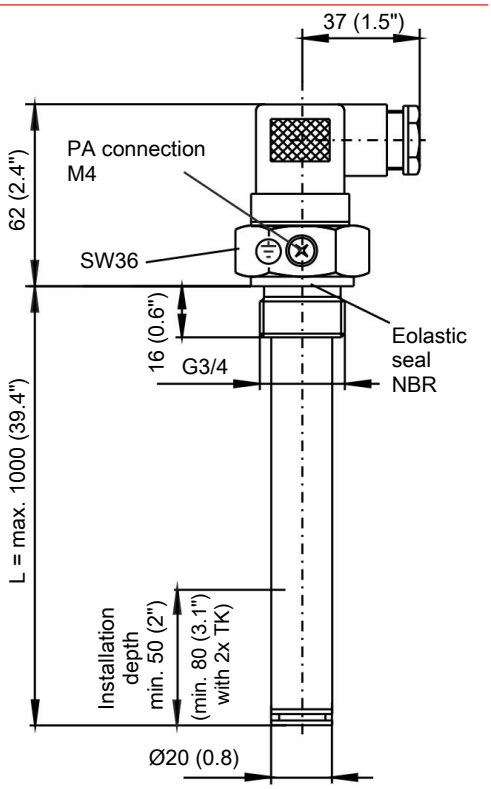
TSK-Atex			
Versions:	TSK-1 = with one temperature contact TSK-2 = with two temperature contacts		
Switch element:	bi-metal		
Switching function:	NC = NC contact/NO = NO contact		
Switching temperature:	45 to 80 °C (113 to 176 °F) (also see chart)		
Probe length L max.:	1000 mm (39.4")		
Probe material:	Brass		
Max. operating pressure:	1 bar (14.5 psi)		
Operating temperature:	max. +80 °C (176 °F)		
Ambient temperature:	-20 to +80 °C (-4 to 176 °F)		
Temperature contacts			
Switch-back difference:	10 K ± 5 K (18 °Ra ± 9 °Ra)		
Switching point:		**NC***	**NO***
	45 °C (113 °F)	TKÖ-45	TKS-45
	55 °C (131 °F)	TKÖ-55	TKS-55
	65 °C (149 °F)	TKÖ-65	TKS-65
	75 °C (167 °F)	TKÖ-75	TKS-75

Other temperatures available upon request
*NC = NC contact/NO = NO contact All data for rising temperature

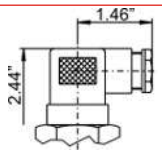
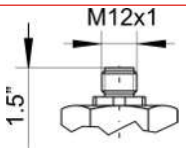
Accessories
Connection cable M12x1 (5-pin) 3.0 m (9.8 ft) long, item no.: 9144050018
Switch amplifier for temperature switches see data sheet no. 18 0003

The device is suitable for use in ATEX category II 2 G Ex ib IIC T4.
The temperature switch may only be operated on intrinsically-safe circuits!

Dimensions



Temperature contacts	
P_i	100 mW
U_i	30 V
I_i	50 mA
L_i; C_i	Negligible

Connector	M3	M12 (base)
Dimensions:		
Number of pins:	3-pin + PE	4-pin+PE
DIN EN:	175301-803	
IP rating:	IP65	IP 67**
Cable fitting:	PG 11	PG 7**

**with IP67 cable box screwed on
Other connectors available on request

Model key for TSK temperature switch

TSK - XX - XX - G3/4 - XX / XX - XX - XX - ATEX

Number of temperature contacts
1 or 2

Version
MS Brass

Plug connection
M3
M12

Length (max. 1000 mm/39.4")
280 (11")
370 (14.6")
500 (19.7")
variable (please specify)

T2 (2nd temperature contact)

NC contact	NO contact	
TK40NC	TK40NO	= 40 °C (104 °F)
TK50NC	TK50NO	= 50 °C (122 °F)
TK60NC	TK60NO	= 60 °C (140 °F)
TK70NC	TK70NO	= 70 °C (158 °F)
TK80NC	TK80NO	= 80 °C (176 °F)

T1 (1st temperature contact)

NC contact	NO contact	
TK40NC	TK40NO	= 40 °C (104 °F)
TK50NC	TK50NO	= 50 °C (122 °F)
TK60NC	TK60NO	= 60 °C (140 °F)
TK70NC	TK70NO	= 70 °C (158 °F)
TK80NC	TK80NO	= 80 °C (176 °F)

Ordering example

You require:	Length L= 300 mm (11.8 in), 2 temperature contacts, 1st contact NC at 50 °C (122 °F), 2nd contact NO at 70 °C (158 °F), M3 plug
Order:	TSK-MS-G3/4-M3/300-TK50NC-TK70NO-ATEX