# Bimetal temperature switch TSK-Atex

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



Fluidcontrol







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DE110011 08/2018 page 1 / 3 Bühler Technologies GmbH, Harkortstr. 29, D-40880 Ratingen Tel. +49 (0) 21 02 / 49 89-0, Fax: +49 (0) 21 02 / 49 89-20 E-Mail: fluidcontrol@buehler-technologies.com Internet: www.buehler-technologies.com



## Technical Data TSK-Atex

#### TSK-Atex

Versions:	TSK-1 = with TSK-2 = with	n one temperatuı h two temperatu	re contact re contacts	
Switch element:	bi-metal			
Switching function:	NC = NC contact/NO = NO contact			
Switching temperature:	45 to 80 °C (also see chart)			
Probe length L max.:	1000 mm			e J
Probe material:	Brass			
Max. operating pressure:	1 bar			
Operating temperature:	max. +80 °0	2		
Ambient temperature:	-20 to +80 °	°C		
Temperature contacts				
Switch-back difference:	10 K ± 5 K			
Switching point:		NC*	NO*	1001
	45 °C	TKÖ-45	TKS-45	į
	55 °C	TKÖ-55	TKS-55	
	65 °C	TKÖ-65	TKS-65	-
	75 °C	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 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!

#### **Temperature contacts**

•		
$\overline{P_i}$	100 mW	
$\overline{U_i}$	30 V	
$l_i$	50 mA	
$L_i; C_i$	Negligible	
Plug connection	М3	M12 (base)
Dimensions:		M12x1 ®
Number of pins:	3-pin + PE	4-pin+PE
DIN EN:	175301-803	
Protection class:	IP65	IP 67**
Cable fitting:	PG 11	PG 7**
**with respective plug	top	

Other plug connections available upon request



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TSK-Atex					
Model key for TSK temperature s	witch				
TSK-	xx-x	x-G3	/4- <u>XX</u>	,/ <u>xx</u> -,>	<u>xx</u> - <u>xx</u> -A1
Number of temperature contacts					
1 or 2					
Version					
MS Brass					
Plug connection					
M3					
M12					
Length (max, 1000 mm)					
280					
370					
500					
variable (please specify)					

T2 (2nd tem	perature c	ontact)
NC contact	NO conta	ct
TK40NC	TK40NO	= 40 °C
TK50NC	TK50NO	= 50 °C
TK60NC	TK60NO	= 60 °C
TK70NC	TK70NO	= 70 °C
TK80NC	TK80NO	= 80 °C
T1 (1st temp	perature co	ntact)
<b>T1 (1st temp</b> NC contact	<b>berature co</b> NO conta	o <b>ntact)</b> ct
<b>T1 (1st temp</b> NC contact TK40NC	<b>Derature co</b> NO conta TK40NO	o <b>ntact)</b> ct = 40 °C
<b>T1 (1st temp</b> NC contact TK40NC TK50NC	Derature co NO conta TK40NO TK50NO	ontact) ct = 40 °C = 50 °C
T1 (1st temp NC contact TK40NC TK50NC TK60NC	NO conta TK40NO TK50NO TK60NO	entact) ct = 40 °C = 50 °C = 60 °C
T1 (1st temp NC contact TK40NC TK50NC TK60NC TK70NC	NO conta TK40NO TK50NO TK60NO TK70NO	ntact) ct = 40 °C = 50 °C = 60 °C = 70 °C

### Ordering example

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

