

TSM-Atex TSE-Atex Bimetal temperature switches



All fluid containing systems used as hydraulic power packs or for lubrication need to limit the minimum and maximum temperature of the fluid.

This unit is a simple apparatus without own voltage source. In an intrinsically safe installation acc. to EN 60079-14 the temperature switch can be used in hazardous locations zone 1 (group IIC, cat. 2G). That applies also to the zone inside of the reservoir. For standard application the temperature class is T5 at ambient temperatures -20 °C to +80 °C.

The TSM/TSE series of switches have bi metal contacts with a range of different settings and contact functions. Either one or two contacts are inserted into a housing made of brass (TSM) or stainless steel (TSE).

Please note that for applications with temperature settings close to ambient temperatures the hysteresis of the TSM/TSE might not allow the contact to reset.

The TSM/TSE can be fitted with DIN or M12 connector terminals.

- **Atex - range of use:
zone 1 (cat. 2G), intrinsically safe
acc. to EN 50020**
- **Rugged design**
- **Electrical insert easy to remove**
- **DIN or optional M12 connector**
- **Elastomer seal fitted as standard**
- **DIN connector allows adjustment
of cable orientation in 90 ° steps**

technical data

types TSM-1 / TSE-1 = with one temperature contact
TSM-2 / TSE-2 = with two temperature contacts

switch bimetal trip
switching function NC or NO*
switch over temperature 50 to 80 °C
length of probe L max. = 1000 mm

	TSM	TSE
probe material	brass	1.4571
max. operating pressure	5 bar	10 bar
max. operating temperature	80 °C	
ambient temperature	-20 to +80 °C	

temperature contacts

hysteresis 18 K ± 5 K (TMÖ-50 to TMÖ-80)
35 K ± 5 K (TMS-60)
40 K ± 5 K (TMS-70)

switch point	50°C	60°C	70°C	80°C	NC*	part-no	NO*	part-no
					TMÖ-50	1846299	-	-
					TMÖ-60	1846099	TMS-60	1848099
					TMÖ-70	1847099	TMS-70	1849099
					TMÖ-80	1847299	-	-

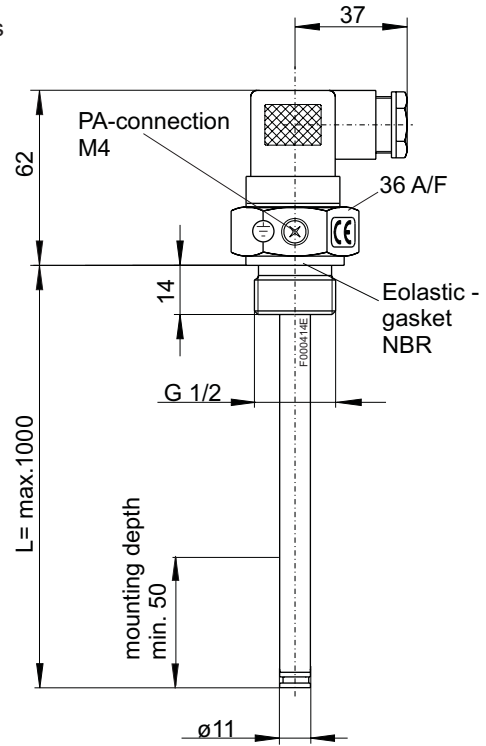
other settings upon request

* NC=normally closed / NO=normally open, all figures at **rising temperature**

supplies

connection plug M12x1 (5 pol.) 3,0m
part-no : 9144050018

controllers for temperature switch - Atex
see data sheet DE 18 0004



Ex-qualification: **Ex II 2 G EEx ib IIC T5**
L_n, C_i : negligible ; I_{ma x} : 90mA ; U_{ma x} : 30V (DC)



The level switches to be allowed only for intrinsically safe electric circuit !

connector

M3
3 pol. + PE
DIN 43650

M12 (socket)
4 pol. + PE

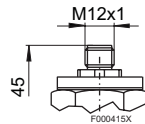
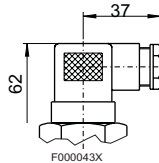
protection class
cable gland

IP 65
PG 11

IP 67**
PG 7**

other connectors
upon request

**with plug fixed



order information

part-no. of the basic version, L=variable (for the part-no of temperature contacts see above)

with connector	M3	M12 (socket)	length
TSM-1-Atex G1/2	1138199A	1140499A	L=...mm
TSM-2-Atex G1/2	1138299A	1140599A	L=...mm
TSE-1-Atex G1/2	1141099A	1143099A	L=...mm
TSE-2-Atex G1/2	1142099A	1144099A	L=...mm

order example:

you need: length L= 300 mm, two temperature contacts, first contact NC at 50 °C, second contact NO at 70 °C, connector type M3

you order: part-no. 1138299A temperature switch TSM-2-Atex G1/2-M3, L=300mm, TMÖ-50 (1846299) and TMS-70 (1849099)