

Bi-metal-Temperature switch TSA, TÖA

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 following temperature switches TSA and TÖA.

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.

G1/2" threaded connection

1 x temperature switching point

Fixed length of 29 mm (1.1") for line installation e.g.

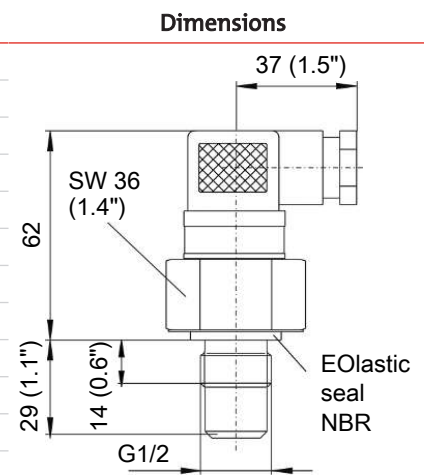


Technical data TSA/TÖA

Model	TÖA	TSA
Probe length:	29 mm (1.1")	
Probe material:	Anodised aluminium	
Max. operating pressure:	15 bar (217.5 psi)	
Medium temperature:	-40 °C to +100 °C (-40 °F to 212 °F)	
Ambient temperature:	-20 °C to +80 °C (-4 °F to 176 °F)	
Temperature contacts		
Switch element:	Bimetal	
Max. voltage:	230 V	
Max. switching current:	2 A	
Max. contact load:	100 VA	
Switching point tolerance:	± 5 K (± 9 Ra)	
Max. hysteresis:	15 K ± 3 K (27 Ra ± 5.4 Ra)	
Function	NC*	NO*
Switching point °C (°F):	25/30/40/45/50/55/60/65/ 70/80/95 (77/86/104/113/122/131/140/ 149/158/176/203)	25/30/35/40/45/50/60/65/ 70/80/90/95 (77/86/95/104/113/122/140/ 149/158/176/194/203)

Other temperatures available upon request

* NC = NC contact/NO = NO contact (all data for rising temperature)



Standard pin assignment TSA/TÖA

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:		

* other connectors available on request.

** with IP67 cable box screwed on.

Ordering instructions TSA/TÖA

Switching function	NO (normally open contact)		NO (normally open contact)	
Temperature	Model	Item no.	Model	Item no.
25 °C	TSA-25-M3	1139699	TSA-25-M12	1141199
30 °C	TSA-30-M3	1141799	TSA-30-M12	1145099
35 °C	TSA-35-M3	1143599	TSA-35-M12	1144899
40 °C	TSA-40-M3	1139599	TSA-40-M12	1141299
45 °C	TSA-45-M3	1144799	TSA-45-M12	1145199
50 °C	TSA-50-M3	1138599	TSA-50-M12	1141399
60 °C	TSA-60-M3	1138699	TSA-60-M12	1141499
65 °C	TSA-65-M3	1143499	TSA-65-M12	1145299
70 °C	TSA-70-M3	1138799	TSA-70-M12	1141599
80 °C	TSA-80-M3	1139299	TSA-80-M12	1141699
90 °C	TSA-90-M3	149009024	TSA-90-M12	1145399
95 °C	TSA-95-M3	1141899	TSA-95-M12	1145499

Switching function	NC (normally closed contact)		NC (normally closed contact)	
Temperature	Model	Item no.	Model	Item no.
25 °C	TÖA-25-M3	1142899	TÖA-25-M12	1144199
30 °C	TÖA-30-M3	1142799	TÖA-30-M12	1144999
40 °C	TÖA-40-M3	1143299	TÖA-40-M12	1144299
45 °C	TÖA-45-M3	1143799	TÖA-45-M12	1145599
50 °C	TÖA-50-M3	1142199	TÖA-50-M12	1144399
55 °C	TÖA-55-M3	149009066	TÖA-55-M12	1145699
60 °C	TÖA-60-M3	1143399	TÖA-60-M12	1144499
65 °C	TÖA-65-M3	1145799	TÖA-65-M12	149009094
70 °C	TÖA-70-M3	1140299	TÖA-70-M12	1144599
80 °C	TÖA-80-M3	1140899	TÖA-80-M12	1144699
95 °C	TÖA-95-M3	1142599	TÖA-95-M12	149009101

Ordering example

You need: Temperature contact at 50 °C (122 °F) NO, type M3 plug

Order: Item no. 1138599 Temperature switch TSA-50-M3