

Temperature sensor TF with IO-Link

The temperature-based change in the viscosity of hydraulic and lubricating oils requires closely monitoring and stabilising the operating temperature.

Furthermore, close temperature monitoring impacts the life of the oils. The oil tank is typically accepted as the control point for the oil temperature, which generally provides an informative mean value. It may further be helpful to also monitor segments or individual devices in a system.

The IO-Link compatible TF series sensors are suitable to ensure cost-effective and efficient temperature monitoring in hydraulic and lubrication oil tanks IO-Link.

The digital, bidirectional communication of these sensors meets all requirements of modern plant automation, reduces acquisition and installation costs, and improves system availability. Their robust design makes them suitable for virtually any liquid properties, allowing a wide range of applications.

TF-M-G1/2-xx-M12-TD-1D1S

IO-Link and 1 x programmable switching output

Continuous temperature measurement

Brass or stainless steel housing

Sensor length up to 1 m (3.3 ft)

Connecting flange G1/2



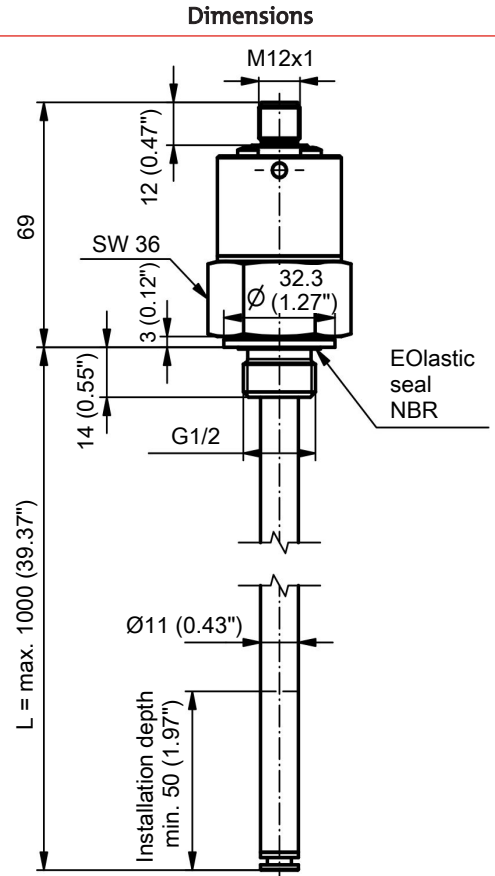
Technical Data

TF-M-G1/2-xx-M12-TD-1D1S

	TF-M-G1/2	TF-E-G1/2
Version:	MS	VA
Probe material:	Brass	1.4571
Max. operating pressure:	5 bar (72.5 psi)	10 bar (145 psi)
Connection:	G1/2	G1/2
Medium temperature:	-20 °C to +80 °C	
Ambient temperature:	-20 °C to +70 °C (-4 °F to +158 °F)	
Lengths:	280 (11.02), 370 (14.57), 500 (19.69) (standard) variable to max. 1000 mm (39.37 inch)	

Input value

Sensor element:	Pt100 Class B DIN EN 60751
Tolerance Pt100:	±0.8 °C (1.4 °F)
Operating voltage (U _B):	18 - 30 VDC
Measuring range:	-20 °C to +120 °C (-4 °F to 248 °F)
Output:	IO-Link
IO-Link	Revision 1.1
Baudrate:	COM3 (230.4 k)
SIO Mode:	Yes
Min. Time Period	10 ms



Standard pin assignment

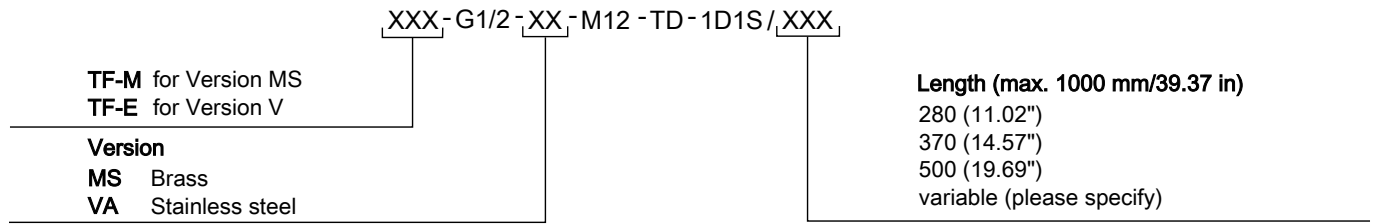
Connector

	M12
Dimensions	
Number of pins	4-pin
DIN EN	61076-2-101
IP rating	IP67*

*with IP67 cable box attached

Version	1D1S
Plug	M12 4-pin
Connection schematic	
Pin	
1	+24 V DC
2	S2 (PNP max. 200 mA)
3	GND
4	C/Q (IO-Link)

Model key



Ordering example

You require: Brass temperature sensor with M12 plug, IO-Link output, length L= 520 mm (20.47 in), operating pressure 5 bar (72.5 psi)

Order: TF-M-G1/2-MS-M12-TD-1D1S/520