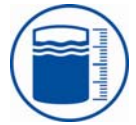


Piezo-resistive depth-measuring sensor - Type TPS-T -



- FOR HYDROSTATIC FILLING LEVEL AND DEPTH MEASUREMENTS IN WELLS, DRILL-HOLES, CONTAINERS, WASTE-WATER SYSTEMS, ETC.
- PRESSURE RANGES FROM 0 ... 0.25 BAR TO 0 ... 25 BAR
- OUTPUT SIGNAL 4...20 mA
- COMPACT AND ROBUST CONSTRUCTION
- OPTIONALLY WITH TEMPERATURE OUTPUT

DESCRIPTION

Typical applications of the piezo-resistive depth-measuring sensor of the type TPS-T are the continuous measuring of filling levels in wells, drill-holes, waste-water systems, standing water bodies and containers that cannot be fitted with a measuring transducer that is flush with the wall of the container.

The 4-20mA output signal is proportional to the filling level or pressure and is also available with a 4-wire temperature output.

TECHNICAL DATA

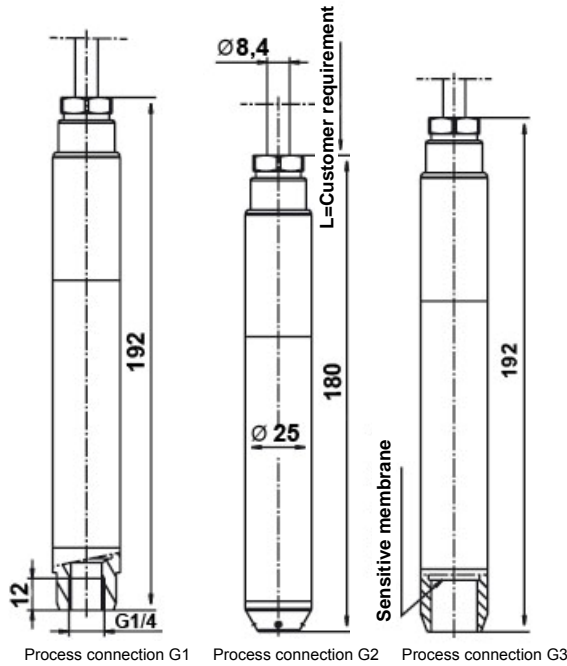
General information	
Device type / measuring principle	depth-measuring sensor of the type TPS-T / piezo-resistive
Applications	hydrostatic filling and level measurements in liquids
Input	
Measuring ranges	see order information
Overload limit	3 times the maximum measuring value; max. 40 bar overload safety
Bursting pressure	≥ 4 times the maximum measuring value; max. 50 bar
Output	
Output signal	4...20 mA, 2-wire
Working resistance	≤ (U _B -10V)/0.02A (Ω)
Influence of working resistance	< 0.1% of filling level
Measuring accuracy	
Linearity	< 0.5% of filling level
Setting time	< 10ms
Thermal hysteresis	Zero point and measuring range of 0...50°C
Auxiliary energy	
Power supply	10...30V DC ripple: the voltage peaks may not exceed or fall short of the values given for the power supply
Influence of power supply	< 0.01%/V of maximum value (nominal power supply 24V DC)
Conditions for use	
Permissible operating temperature	0...50°C
Environmental temperature influence at 0...50°C	zero point: < 0.02%/1K typically < 0.04%/1K max. measuring range: < 0.02%/1K typically, < 0.04%/1K max. zero point: < 0.04%/1K typically, < 0.06%/1K max. for measuring range 250/400 mbar measuring range: < 0.03%/1K typically, < 0.05%/1K max. for a measuring range of 250/400 mbar
Design configuration	
Electrical connection	6-wire sheathed polyethylene cable with internal air equalisation hose, length as required, minimum bending radius 120 mm (fixed installation), for use up to 100m without an additional cable grip
Parts in contact with the medium	stainless steel material No.: 1.4435 (316L) FPM, polyolefin, polyethylene
Protection type EN 60529	IP68 (up to 40 bar)
Accessories	
	pressure equalisation casing with ventilation filter *
	cable reel *

* Dimensional drawings on request

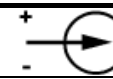

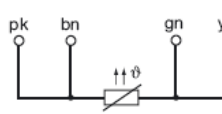


N-TPS-T-D-e-08-1/1

Piezo-resistive depth-measuring sensor - Type TPS-T -

DIMENSIONAL DRAWINGS



ELECTRICAL CONNECTION

Connection		Terminal assignment / cable
Power supply DC 10...30V		+ white - grey
Output 4...20mA 2-wire		+ white - grey memorised power supply
Temperature sensor (for electrical version T)		for electrical version with PT100 temperature sensor pink (pk), brown (bn) green (gn), yellow (ye)
Screening		black
 Device must be grounded!		

ORDERING INFORMATION (Type TPS-T)

Electronics	
S	4-20 mA
T	4-20 mA, with integrated temperature sensor PT100

Process connection	
G1	G 1/4 internal
G2	Connection open at bottom
G3	Connection closed at bottom

Measuring range	
0.25	0... 0.25 bar
0.4	0... 0.4 bar
0.6	0... 0.6 bar
1.0	0... 1.0 bar
1.6	0... 1.6 bar
2.5	0... 2.5 bar
4	0... 4 bar
6	0... 6 bar
10	0... 10 bar
16	0... 16 bar
25	0... 25 bar
CC	Special measuring range on request

Cable length	
L XXX	Length given in 5 m steps, max. length 100m
LS XXX	Special length on request

Electrical connection	
K	PUR cable
M	PE-LD cable (standard)

TPS-T					
-------	--	--	--	--	--

Accessories / installation parts for Type TPS-T	(Order reference)
Pressure equalisation casing with ventilation filter	ZDA
Cable reel	ZKH

Our products are constantly in further development, therefore subjects to modifications.

N-TPS-T-D-e-08-1/2