Level Sensor

PS1/17

Main features

- Measuring ranges from 1 mWC to 250 mWC
- Standard signals 4...20 mA, 0...10 V, and others
- Media temperature range -40°C to 85°C
- Max. tensile force 4 N (cable)
- Highly reliable
- Degree of protection IP68, PS17 Option: 0.25%
- Precision Class 0.5 %

Applications

- Filling level measurement in tanks, vessels, water systems
- Point level measurement in rivers, rivulets, lakes or weirs

Description

The PS1 filling-level and gage probe has excellent properties for measuring filling levels in tanks and hydro facilities, as well as water-gage measuring in rivers, creeks, lakes and at weirs thanks to its stainless-steel membrane and semi-conductor thin-film technology. The probe is fit for depths down to 250 meters. Its stainless-steel housing makes it hermetically tight and very robust. The reasonable probe is durable, and it is simple to handle. As the PS17 model, the probe is now available even slimmer, making it more versatile to use.

Regarding equipment, there are several options concerning cap configuration, for example, where there is a choice between steel or plastics as a weight.

DZ NAGANO Sensortechnik

PS1/17 Level Sensor

Specification

PRESSURE RANGE							
Measuring range* silicon technology	p [bar]**	**0,1**	**0,25**	**0,5**			
Overload pressure	p [bar]**	0,3	0,5	1,0			
Burst pressure	p [bar]**	0,6	1,0	1,5			
Measuring range* stainless steel diaphragm	p [bar]**	**1,0**	**1,6**	**2,0**	**2,5**	**4,0**	**6,0**
Overload pressure	p [bar]**	6	6	6	6	10	20
Burst pressure	p [bar]**	9	9	9	9	15	30
Measuring range* stainless steel diaphragm	p [bar]**	**10**	**16**	**20**	**25**		
Overload pressure	p [bar]**	20	40	40	100		
Burst pressure	p [bar]**	30	60	60	150		

** 1 bar is equivalent to ~ 10 mWC

ELECTRICAL PARAMETER				
		2-wire	3-wire (only PS1)	
Output signal*		4...20 mA	0...10 mA	
Supply voltage	U_S [V_{DC}]	10...32 ***	12...32	
Load resistor	R_A [Ω]	R_A=(Us-10V)/0,02A	≥ 4.7kΩ	
Maximum supply current	I [mA]	23	10	*** > AppNote (see www.adz.de)

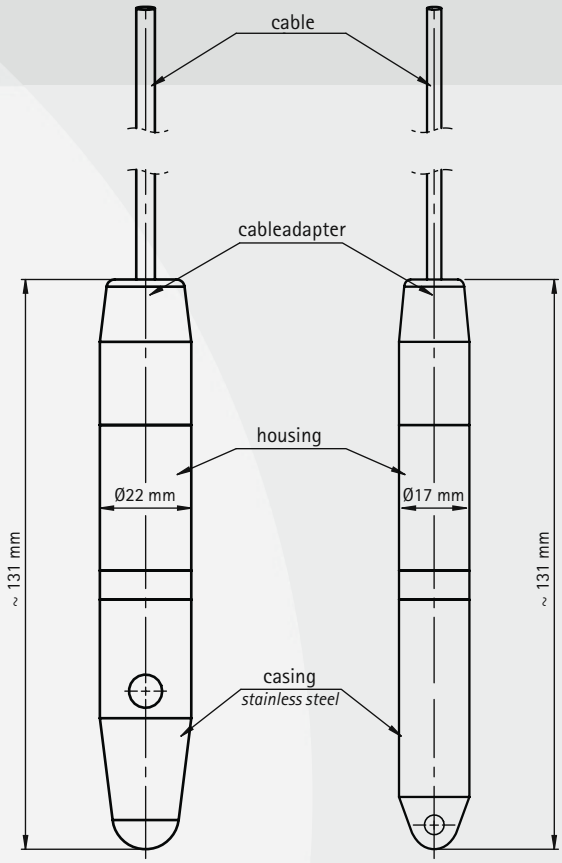
ACCURACY	pressure range 1 bar to 25 bar			0,1 bar to 0,5 bar		optional PS17, 300 mbar to 20 bar
Accuracy @ RT	% of the range	≤ 0,50	option ≤ 0,25	≤ 1,00	option ≤ 0,5	≤ 0,25
	BFSL	≤ 0,125		≤ 0,25		≤ 0,125
Non-linearity		≤ 0,15		≤ 0,15		≤ 0,15
Stability/year	% of the range	≤ 0,10		≤ 0,10		≤ 0,10

ACCEPTABLE TEMPERATURE RANGES			
Measuring medium	T [°C]	-40...85	
Ambience	T [°C]	-40...85	
Storage	T [°C]	-40...85	
Compensated range****	T [°C]	-20...85	
Mean TC offset	% of the range	≤ 0,15 / 10 K	
Mean TC range	% of the range	≤ 0,15 / 10 K	
Total error	% of the range	-40°C 2,00%	**** The mean TC are relevant for the compensated range only,
	% of the range	85°C 2,00%	outside the compensated range the total error statements apply.

MECHANICAL PARAMETER				
Wetted components	stainless steel *			pressure range 1 to 25 bar
Wetted components	silicon, NBR O-ring, aluminium, plastic PA66			pressure range 0,1 to 0,5 bar
Housing	stainless steel *			
Cable*	PUR-cable (max. tensile strenght 40 N)			
Shock resistance	g	1000	acc. to DIN EN 60068-2-32 – free fall	
Vibration resistance	g	20	acc. to DIN EN 60068-2-6 – vibration (sinusoidal)	
Weight Level Sensor PS1	m [g]	~200g plus cable		
Weight Level Sensor PS17	m [g]	~150g plus cable		
Weight cable	m [g]	40 pro m		

Approval	CE Declaration of conformity 2014/30/EU

Configurations -examples PS1 PS17



*** customer specific configurations available**

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Electrical Configuration*

Cable port
2-wire red: UB+ black: out white: nc
3-wire red: UB+ black: UB- white: out

nc =
not connected

The electrical connection must be made in accordance with the respective connection diagram unless otherwise agreed upon.

*** custom-made adjustments are possible**

Product line

DS5	Electronic Pressure Switch	SME	Pressure Transmitter in Miniature Design
DPSX9I	Intrinsically Safe Electronic Pressure Switch for Current	SMF	Pressure Transmitter with Flush Diaphragm
DPSX9U	Intrinsically Safe Electronic Pressure Switch for Voltage	SMH	High Pressure Transmitter
PS1/17	Level Sensor	SML	Pressure Transmitter for Industrial Application
PSX2	Intrinsically Safe Level Sensor	SMO	Pressure Transmitter in Mobile Hydraulics
SHP	High Precision Pressure Transmitter	SMS	OEM Pressure Transmitter for Hydraulics and Pneumatics
SIS	Low Pressure Transmitter in Short and Compact Design	SMX	Intrinsically Safe Pressure Transmitter for Industrial Application
SIL	Low Pressure Transmitter for Industrial Application	SMX2	Intrinsically Safe Pressure Transmitter for Industrial Application
SKE	High Temperature Pressure Transmitter with Detached Electronics	TPSE	Multi-Function Transmitter for Pressure and Temperature – external sensor
SKL	High Temperature Pressure Transmitter with Cooling Fins	TPSI	Multi-Function Transmitter for Pressure and Temperature – internal sensor
SMC	Pressure Transmitter with CANopen Interface and J1939		

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Subject to change
due to technical progress.
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