

PROGRAMMABLE
PRESSURE TRANSMITTER
FOR LEVEL- AND
TEMPERATURE
MEASUREMENT
PTM/N/SDI-12



49



Features

- Piezoresistive measuring element
- Any pressure ranges from 0...1 mWC to 0...250 mWC available
- SDI-12 Interface
- Output: pressure and temperature
- Reverse polarity and short circuit protection
- Compact and robust design, housing made of stainless steel (1.4435/316L)
- Available with PUR, PE or FEP (Teflon) cable

Typical applications

Depth and level measurement in

- Wells
- Bore holes
- Waste water
- Lakes, rivers
- Sewage treatment plant
- Water supply

Specifications

Pressure Sensor			
Sensor type	piezoresistive measuring element		
Pressure type	absolute, gauge		
Resolution	0.01 % FS		
Measurement units	mbar, bar, mWC, mH2O, psi, inWC, ftWC, inH2O		
Pressure Range	[bar]	0.1 ... 0.5	> 0.5 ... 2
Overpressure		3bar	3 x FS (min. 3bar)
Burst pressure		≥ 200bar	≥ 200bar
Terminal shift	[± % FS/°C]		
Zero	-5...50°C	≤ 0.06	≤ 0.03
Span	-5...50°C	≤ 0.015	≤ 0.015
Accuracy ¹⁾		≤ ± 0.25 % FS	≤ ± 0.1 % FS
Temperature Sensor			
Sensor type	PT1000		
Measurement range	-5...50°C		
Accuracy	≤ ± 0.3°C		
Resolution	0.05°C		
Measurement units	°C, °F, K		
Interface			
Interface type	SDI-12		
Cable length	max. 250m (820 feet)		
Functionality			
SDI-12	Functionality according to SDI-12 standard Re-setting units, recalibration of zero and span, additional circuit user information		
Power			
Supply voltage	8...30 VDC		
Current consumption			
Sleep mode	< 0.5 mA		
Active mode	< 6 mA		
Protection	Reverse polarity protection and short protected		
Materials			
Process connection, diaphragm, housing	Stainless steel 1.4435 (316L), other materials (e.g. titanium) on request		
Seals	Viton, EPDM, Kalrez		
Cable	PE, PUR, FEP (Teflon)		

Electromagnetic compatibility

	Standard	Level	Typical sources of interference
Emission:			
EN 61000-6-3	Generic emission standard		
EN 55022	Emission, class B		
Immunity:			
EN 61000-6-2	Generic immunity standard		
EN 61000-4-2	Electrostatic discharge	4kV contact, 8kV air	
EN 61000-4-3	Radiated electromagnetic field	10V/m, 80-1000MHz, 80% AM 1kHz	Radio sets, wireless phones
EN 61000-4-4	Fast transients (burst)	4 kV (level 4)	Motors, valves
EN 61000-4-6	Line-conducted electromagnetic interference	10V, 0.15-230MHz	Radio sets, wireless phones
EN 61000-4-5	Surge	500/1000V (2/12 Ohm) 2kV (42 Ohm)	Lightning

¹⁾ Zero based non-conformity according to DIN 16086, including hysteresis and repeatability

Ordering information

		49	X	. XXXX	. XXXX	. XX	. XXX
Type	PTM/N/SDI-12	49					
Pressure type	Gauge	1					
	Absolute (vacuum)	2					
Pressure range	Any pressure ranges from 0...1 mWC to 0...250 mWC available	99					
Pressure connection ⁵⁾	closed			55			
	open			56			
Electrical connection ¹⁾	PUR cable	IP68		15			
	PE cable	IP68		13			
	FEP cable	IP68		21			
Output signal	SDI-12				69		
Accuracy	≤ ± 0.25 % FS ²⁾					1	
	≤ ± 0.1 % FS ³⁾					2	
Comp. Temperature range	-5...50°C					4	
Options	Seals ⁴⁾	Viton					U
		EPDM					S
		Kalrez					T

¹⁾ Please specify required cable length and medium

²⁾ Pressure range ≤ 500 mbar

³⁾ Pressure range > 500 mbar

⁴⁾ Unless otherwise specified seals are made of Viton

⁵⁾ Special pressure connections available

Dimensions

Fig. 1: Closed version

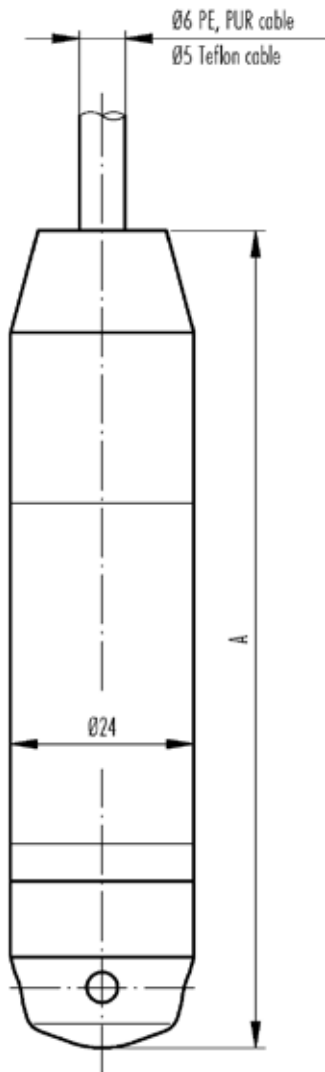


Fig. 2: Open version



Colour	
white	+Vin
yellow	GND
green	SDI-12

Standard

A [mm]	B [mm]	Weight [g]
157	153	ca. 200

Specifications may change without notice.

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