

## Programmable Submersible Level Transmitters

### PTM/N/SDI-12



#### CUSTOMER BENEFITS

- SDI-12 interface for use in low power applications
- Adjustment of zero and span setting through SDI-12 commands
- Available as multi-parameter sensor (pressure & temperature)
- Fast customization thanks to configurable product design
- Stainless steel and titanium version for use in acidic or otherwise aggressive media

# Technical Specifications

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## PRESSURE MEASURING RANGE (MH<sub>2</sub>O)

	> 5 ... 20	> 20 ... 250
Overpressure	3 x FS (≥ 3 bar)	3 x FS
Burst pressure (1)	> 200 bar	> 200 bar
Accuracy, (2) (± % FS)	≤ ± 0.1	≤ ± 0.1
Thermal shift, (± % FS/°C)		
Zero point -5...50°C	≤ 0.03	≤ 0.015
Span -5...50°C	≤ 0.015	≤ 0.015
Long term stability, (3)	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

(1) Transducer

(2) Zero based accuracy according to DIN 16086, incl. hysteresis and repeatability at ambient temperature

(3) 1 year (typ. / max.), the long term stability can be improved by ageing (burn-in) the sensor(1)

## TEMPERATURE MEASURING RANGE

Standard	-25...85 °C
Accuracy, (1)	≤ ± 0.3 / ≤ ± 0.5 °C

(1) -5...50 °C, typ. / max.

## TEMPERATURE RANGE

Operating temperature	-5...80 °C (1)
Process temperature	-5...80 °C (1)
Storage temperature	-10...80 °C

(1) For operating temperature > 50°C, PE or FEP cable must be used

## ELECTRICAL SPECIFICATIONS

Output	
Interface	SDI-12
Protocol	SDI-12 V1.3
Resolution	
Pressure	0.01% FS
Temperature	0.05 °C
Measuring units, (1)	
Pressure	mbar, bar, mWC, mH2O, psi, inWC, ftWC, inH2O
Temperature	°C, °F, K
Power supply	8...30 V DC
Supply influence	< 0.1% FS
Current consumption sleep mode	< 0.5 mA
Current consumption active mode	< 6 mA
Cable length, (max.)	250 m (850 ft)

(1) Selectable

## QUALIFICATIONS

	Description	Level	Typical interferences
EN 60068-2-6	Vibration	4 G (4...100 Hz / ± 3.2 mmpp)	
EN 60068-2-27	Shock	100 G (impulse duration 6 ms)	
EN 55022	Emission, class B	< 30 dBµV/m (0.03...1 GHz)	
EN 61000-4-2	Electrostatic discharge	4 kV contact / 8 kV air	
EN 61000-4-3	Irradiated RF	10V/m (0.08...1 GHz)	Radio sets, wireless phones
EN 61000-4-4	Transients (burst)	4 kV	Motors, valves
EN 61000-4-5	Surge	Line-Line: 0.5 kV/2 Ω, Line-Earth: 1 kV/12 Ω	Lightning
EN 61000-4-6	Conducted RF	10 V (0.15...230 MHz, 3 s)	Frequency converters

## PHYSICAL SPECIFICATIONS

Materials	
Transducer	Stainless steel (316L / 1.4435), titanium (Gr. 2), (1)
Housing	Stainless steel (316L / 1.4404), titanium (Gr. 2)
Seals	Viton (Standard), EPDM, Kalrez
Cabel	PUR, FEP, PE
Weight (2)	200 g

(1) Hastelloy (C-276) on request

(2) Specification for a PTM/N/SDI-12, closed, without cable

## Equipment

### OVERVIEW

10.00.0091	Accessories overview

## Additional documents

### MANUAL

Article number	Description
10.00.0292	User Manual

### OPERATING AND SAFETY INSTRUCTIONS

Article number	
10.00.0137	DMM009

# Ordering information

	X.	XXXX.	XXXX.	XX.	XXX
<b>Type</b>					
	PTM/N/SDI-12	49			
<b>Pressure type</b>					
	Gauge	1			
	Absolute (vacuum)	2			
<b>Pressure measuring range</b>					
	5 ... 250 mH2O		XX		
	Offset, special adjustment		99		
<b>Process connection</b>					
	Closed, (Fig. 1)		55		
	Open, (Fig. 2)		56		
	Customized		99		
<b>Electrical connection</b>					
	PE cable, IP 68, black (1), (2)		13		
	PUR cable, IP 68, black (1), (3)		15		
	FEP cable, IP 68, black (1)		21		
	Customized		99		
<b>Output signal</b>					
	SDI-12		69		
<b>Accuracy</b>					
	≤ ± 0.1 % FS			2	
<b>Temperature range</b>					
	-5...50 °C compensated process temperature: -5...50 °C	(allowed)		4	
	-5 ... 80 °C compensated media temperatur -5 ... 80 °C	(allowed)		5	
<b>Option 1</b>					
	Special oil filling: Anderol Food food applications)	(for			G
	Cutting ring connection G 1/2 M				
	Strain relief				
<b>Option 2</b>					
	Electronics packed in gel: Gauge pressure				C
	Electronics packed in gel: Absolute pressure				D
<b>Option 3</b>					
	Ballast weight 1.4435				B
	Version titanium (without ballast weight)				K
	Seals: Viton (standard)				U
	Seals: EPDM				S
	Seals: Kalrez (Level)				T
	Humidity filter element for gauge version (only for PUR and PE cable)				Z

(1) Please specify the required cable length and medium

(2) Suitable for drinking water (food approved)

(3) For operating temperature > 50°C, PE or FEP cable must be used

# Technical drawings

## Dimensions

Fig. 1: Closed version

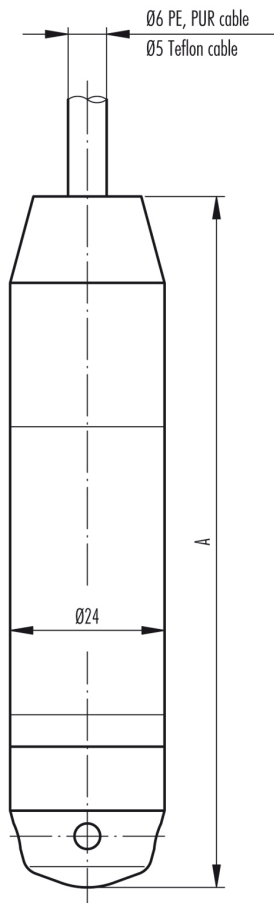
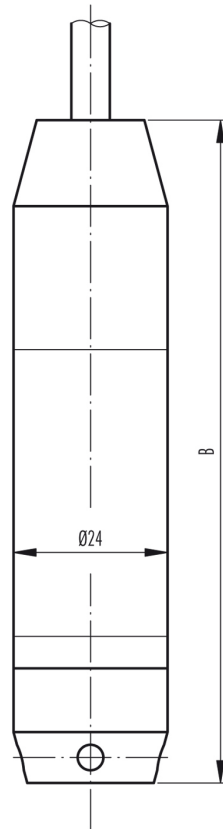


Fig. 2: Open version



Colour	
white	+Vin
yellow	GND
green	SDI-12

### Standard

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

Specifications may change without notice.

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