

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

PRESSURE MEASURING RANGE (MH₂O)

	> 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
Process temperature	-5...80 °C
Storage temperature	-10...80 °C

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, 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
Type					
	PTM/N/SDI-12	49			
Pressure type					
	Gauge	1			
	Absolute (vacuum)	2			
Pressure measuring range					
	5 ... 250 mH2O		XX		
	Offset, special adjustment		99		
Process connection					
	Closed, (Fig. 1)		55		
	Open, (Fig. 2)		56		
	Customized		99		
Electrical connection					
	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		
Output signal					
	SDI-12		69		
Accuracy					
	≤ ± 0.1 % FS			2	
Temperature range					
	-5...50 °C compensated process temperature: -5...50 °C	(allowed)		4	
	-5 ... 80 °C compensated media temperatur -5 ... 80 °C	(allowed)		5	
Option 1					
	Special oil filling: Anderol Food food applications)	(for			G
	Cutting ring connection G 1/2 M				
	Strain relief				
Option 2					
	Electronics packed in gel: Gauge pressure				C
	Electronics packed in gel: Absolute pressure				D
Option 3					
	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

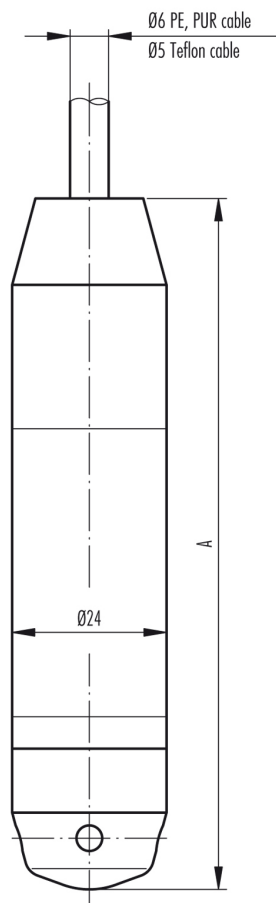
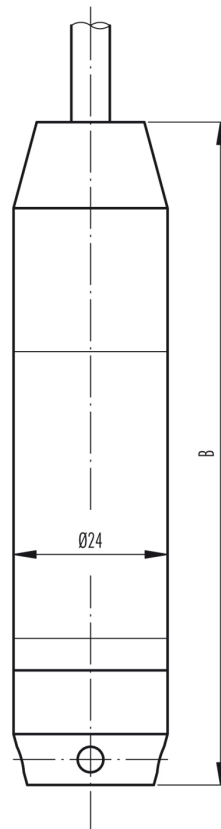


Fig. 2: Open version



Colour	
white	+Vin
yellow	GND
green	SDI-12

Standard

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



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