

# PROGRAMMABLE PRESSURE TRANSMITTER FOR LEVEL MEASUREMENT PTM/N (2-wire)



32



## Features

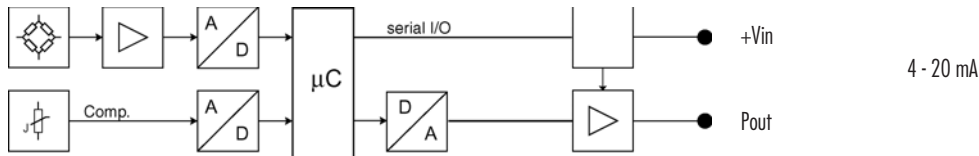
- Piezoresistive measuring element
- Adjustable 1:4 of the nominal range within -5% to +105%
- All pressure ranges from 0...100 mbar to 0...25 bar
- Calibration available for all common pressure units mH<sub>2</sub>O, mWG, mWC etc.
- Adjustable delay
- Available with PE-, PUR- or Teflon cable
- Reverse polarity and short circuit protected
- Active compensated (option)

## Typical applications

Depth and level measurement in

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

## Specifications



Pressure range [bar]	0.1 ... 0.5	> 0.5 ... 2	> 2 ... 25
<b>Overpressure</b>	3 bar	3 x FS (min. 3 bar)	3 x FS
<b>Burst pressure</b>	> 200 bar	> 200 bar	> 200 bar
<b>Thermal shift</b> [± % FS/°C]			
Zero	-5...50°C	≤ 0.06 <sup>2)</sup>	≤ 0.015
Span	-5...50°C	≤ 0.015	≤ 0.015
Active compensated (Z+S)	-10...50°C (typ./max.)	0.01/0.015	0.01/0.015
	-25...85°C (typ./max.)	0.015/0.02	0.015/0.02
<b>Accuracy<sup>1)</sup></b>	≤ ± 0.25 % FS ≤ ± 0.1 % FS, ≥ 500 mbar ≤ ± 0.1 % FS, activ compensated (option)		
<b>Long term stability</b> (1 year) - (typ./max)	≤ 0.5% FS/< 4mbar	≤ 0.2% FS/< 4mbar	≤ 0.1% FS/< 0.2% FS

### Electrical specifications

<b>Supply voltage</b>	Range:	9...33 V DC
	Supply voltage influence:	< 0.1 % FS
<b>Analog Output</b>	Resolution:	≤ ± 0.025 %
	Output 4 mA:	adjustable between -5% FS...105% FS
	Output 20 mA:	adjustable between -5% FS...105% FS
	Span:	adjustable between 25% FS...110% FS, min. 50 mbar
	Adjustable delay:	100 ms, 1 s, 10 s, (standard ca. 30 ms)
<b>Load resistance</b>		$R_L = U_B [V] - 6.6 V / 0.02 A$
<b>Load resistance influence</b>		< 0.1 % FS
<b>Interface</b>	VART199 incl. PC-Program (VART244) <sup>4)</sup>	

### Materials

**Process connection, Diaphragm, Housing** Stainless steel 1.4435 (316L), other materials (e.g. titanium) on request  
**Seals** (standard) Viton (other materials see ordering code)

## Electromagnetic compatibility

Standard	Level	Typical interferences	
<b>Emission:</b>			
EN 61000-6-3	Generic emission standard		
EN 55022	Emission, class B		
<b>Immunity:</b>			
EN 61000-6-2	Generic immunity		
EN 61000-4-2	Electrostatic discharge	4kV contact, 8kV air	
EN 61000-4-3	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz	Cellular phones, radio sets
EN 61000-4-3	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off	Digital portable phones
EN 61000-4-4	Fast transients (burst)	2 kV	Motors, valves
EN 61000-4-6	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz	Cellular phones, radio sets
EN 61000-4-5	Surge	10 kA (8/20 ms) <sup>3)</sup>	Lightning strikes

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

<sup>2)</sup> 0.5 - 0.99 mHz20: ≤ 0.12

<sup>3)</sup> Only with optional surge (lightning) protection

<sup>4)</sup> Interface not included

## Ordering information

		32	X	. XXXX	. XXXX	. XX	. XXX	
<b>Type</b>	PTM/N	32						
<b>Pressure type</b>	Gauge	1						
	Absolute	2						
<b>Pressure range<sup>5)</sup></b>	All pressure ranges from 0...100 mbar to 0...25 bar available		XX					
<b>Version</b>	Closed version (Fig. 1)			55				
	Open version (Fig. 2)			56				
	G 1/4 M (Fig. 3)			11				
	G 1/2 M (Fig. 3)			13				
	Other version available <sup>2)</sup> (Fig. 3)			XX				
<b>Electrical connection</b>	Connectable version <sup>3)</sup> (Fig. 4)	IP68			07			
	PE cable <sup>1) 3)</sup>	IP68			13			
	PUR cable <sup>1)</sup>	IP68			15			
	Teflon cable <sup>1)</sup>	IP68			21			
<b>Output signal</b>	4...20 mA					05		
	4...20 mA with surge protection (lightning)					08		
<b>Accuracy</b>	≤ ± 0.25 % FS						1	
	≤ ± 0.1 % FS, ≥ 500 mbar						2	
<b>Temperature range</b>	-5...50°C compensated (max. medium temperature -5...50°C)						4	
	Customized temperature range						9	
<b>Options</b>	Version titanium						K	
	Ballast weight						B	
	Electronic packed in gel:	Gauge						C
		Absolute						D
	Special oil filling:	ASEOL Food						G
		Halocarbon						H
	Seals:	Viton (Standard)						U
		EPDM						S
		Kalrez						T
	Temperature calibration active, -10...50°C compensated						E	
Special options						Z		

<sup>1)</sup> Please specify the medium and required cable length

<sup>2)</sup> Other versions or process connections on request

<sup>3)</sup> Connector with required cable has to be ordered separately (KART100)

<sup>4)</sup> Suitable for drinking water (food approved)

<sup>5)</sup> mH<sub>2</sub>O, mWG, mWC etc. available

## Dimensions

Fig. 1: Closed version

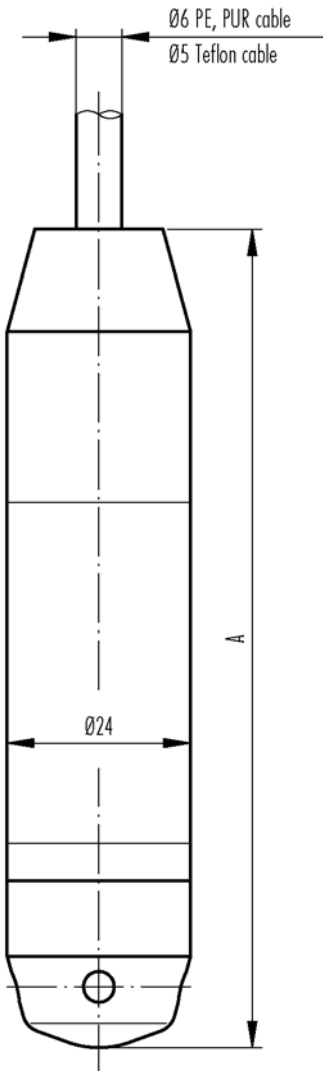


Fig. 2: Open version

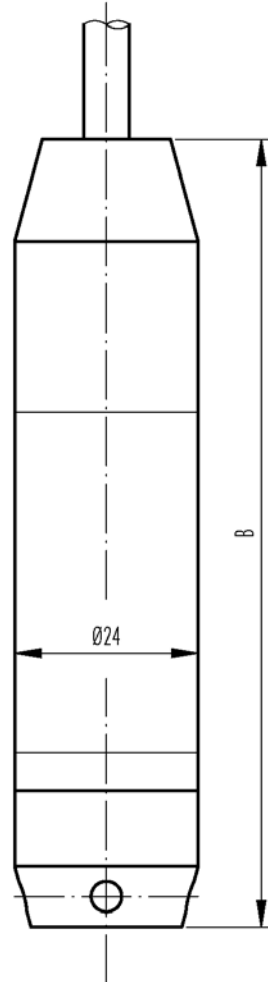


Fig. 3: with process

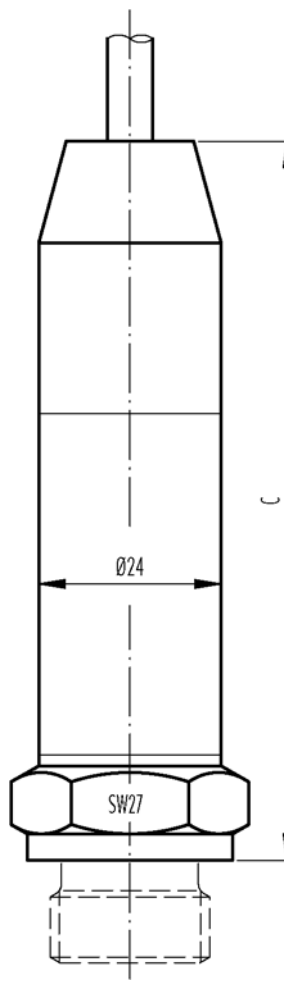
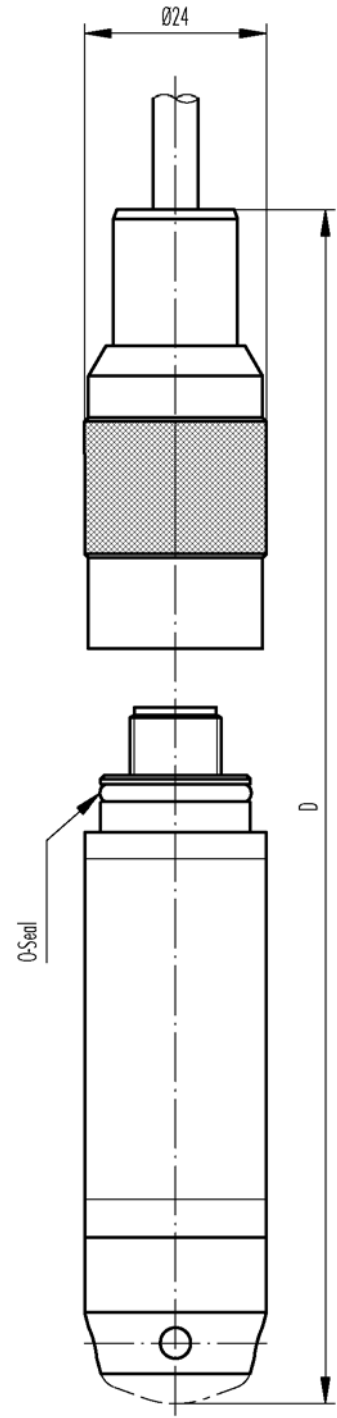


Fig. 4: Electrical connection, connectable



Standard (the same lengths also with overvoltage protection)

	A [mm]	B [mm]	C [mm]	D [mm]	Weight [g]
without ballast weight	118	114	on request*	on request*	ca.
with ballast weight	205	201	on request*	on request*	ca.

Colour 2-wire  
 white +Vin  
 yellow Pout

Specifications may change without notice.

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