

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



32

## Features

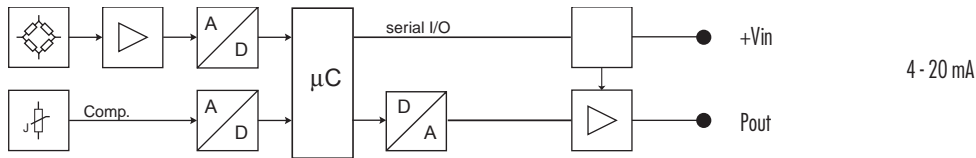
- Piezoresistive measuring element
- Adjustable 1:4 of the nominal range within -5% to +105%
- Standard DIN pressure ranges from 0...100 mbar to 0...25 bar
- Calibration available for all common pressure units mH<sub>2</sub>O, mWG, mWC etc.
- Adjustable delay
- Complies with the EMC directive EN 61000
- Available with PE-, PUR- or Teflon cable
- Reverse polarity and short circuit protected

## 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	0...70°C	0.06	0.03	0.015
	-25...85°C	0.08	0.04	0.02
Span	0...70°C	0.015	0.015	0.015
	-25...85°C	0.02	0.02	0.02
<b>Accuracy<sup>1)</sup></b>	≤ ± 0.25 % FS ≤ ± 0.1 % FS, ≥ 500 mbar			

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

### Electrical specifications

<b>Supply voltage</b>	Range: Supply voltage influence:	9...33 V DC < 0.1 % FS
<b>Analog Output</b>	Resolution: Output 4 mA: Output 20 mA: Span: Adjustable delay:	12 bit adjustable between -5% FS... 105% FS adjustable between -5% FS... 105% FS adjustable between 25% FS... 110% FS, min. 50 mbar 100 ms, 1 s, 10 s, (standard ca. 30 ms)
<b>Interface</b>	VART199 incl. PC-Program (VART244) <sup>3)</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 EN 55022	Generic emission standard 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>2)</sup>	Lightning strikes

<sup>2)</sup> Only with optional surge (lightning) protection

<sup>3)</sup> Interface not included



The pressure transmitter PTM fulfils the emission and immunity requirements described in the EMC directive IEC 61000.

## Ordering information

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<b>Type</b>	PTM/N	32					
<b>Pressure type</b>	Gauge	1					
	Absolute	2					
<b>Pressure range<sup>6)</sup></b>	0...100 mbar	00					
	0...160 mbar	01					
	0...250 mbar	02					
	0...400 mbar	03					
	0...600 mbar	04					
	0...1.0 bar	05					
	0...1.6 bar	06					
	0...2.5 bar	07					
	0...4.0 bar	08					
	0...6.0 bar	09					
	0...10 bar	10					
	0...16 bar	11					
	0...25 bar	12					
Special calibration	99						
<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					
	Customized version <sup>3)</sup> (Fig. 3)	99					
<b>Electrical connection</b>	Connectable version <sup>4)</sup> (Fig. 4)	IP68	07				
	PE cable <sup>1) 2) 5)</sup>	IP68	13				
	PUR cable <sup>1) 2)</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>	0...70°C compensated (max. medium temperature 0...80°C) <sup>2)</sup>					0	
	-25...85°C compensated (max. medium temperature -25...85°C) <sup>2)</sup>					1	
	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 compensation active						E
Special options						Z	

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

<sup>2)</sup> For medium temperature >50°C a teflon cable must be used

<sup>3)</sup> Other versions or process connections on request

<sup>4)</sup> Connector with required cable has to be ordered separately (KART100)

<sup>5)</sup> Suitable for drinking water (food approved)

<sup>6)</sup> mH2O, mWG, mWC etc. available

## Dimensions

Fig. 1: Closed version

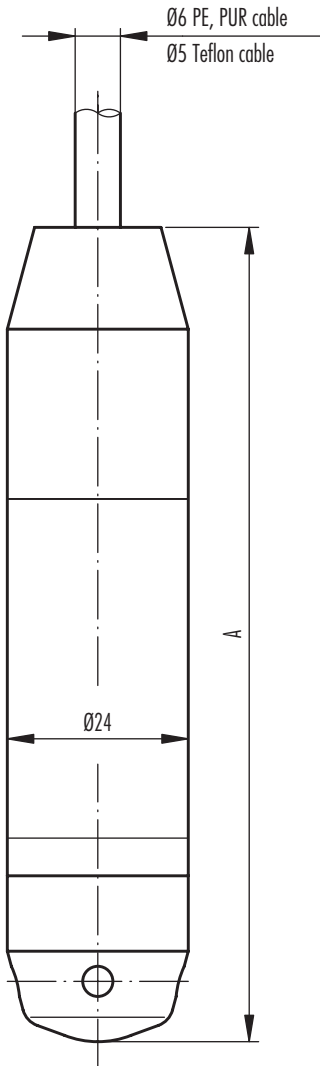


Fig. 2: Open version

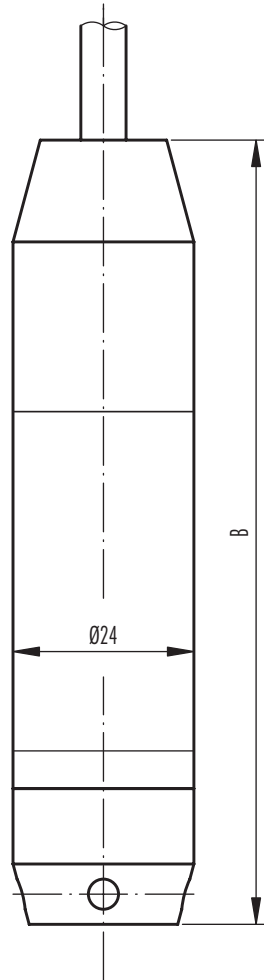


Fig. 3: with process connection

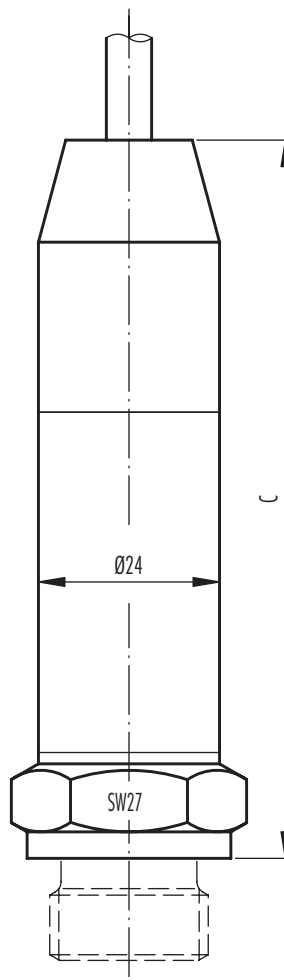
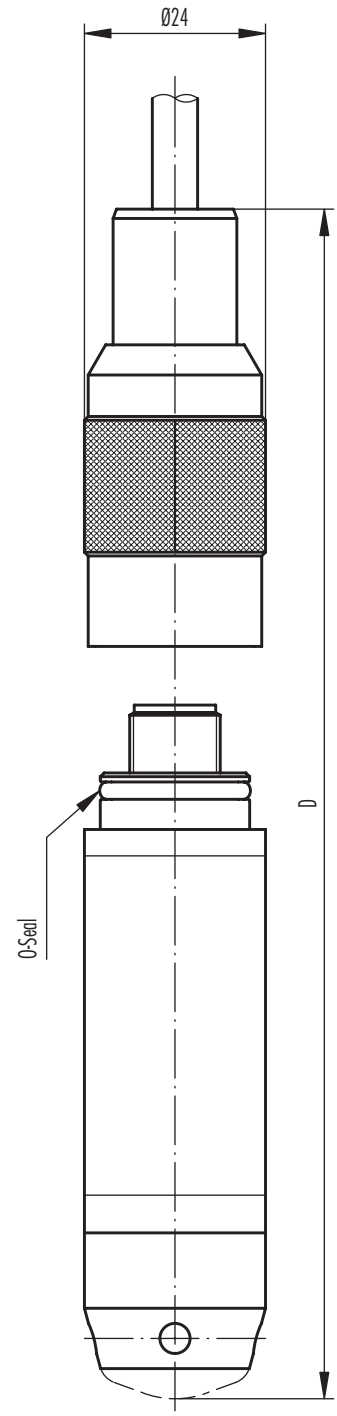


Fig. 4: Electrical connection, connectable



Standard

	A [mm]	B [mm]	C [mm]	D [mm]	Weight [g]
without ballast weight	118	114	on request*	on request*	ca. 200
with ballast weight	205	201	on request*	on request*	ca. 460

\*C: Depending on process connection

\*D: Depending on process connection or version

Colour 2-wire

white +Vin

yellow Pout

Specifications may change without notice.

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