

PRESSURE TRANSMITTER FOR LEVEL MEASUREMENT ATM/N



24



Features

- Compact and robust stainless steel assembly 1.4435 (316L) or titanium (option)
- Piezoresistive measuring element
- Any pressure ranges between 0...100 mbar and 0...25 bar
- Calibration available for all common pressure units mH₂O, mWG, mWC ect.
- Available with PE, PUR or Teflon cable, also connectable
- Reverse polarity and short circuit protected
- Surge (lightning) protection according to EN 61000-4-5 (option)

Typical applications

- Depth and level measurement in
- Wells
 - Bore holes
 - Waste water
 - Reservoirs
 - Lakes, rivers
 - Sewage treatment plant

Technical specifications

Pressure range	[bar]	0.1 ... 0.5	> 0.5 ... 2	> 2 ... 25
Overpressure		3 bar	3 x FS (min. 3 bar)	3 x FS
Burst pressure	[bar]	> 200	> 200	> 200
Accuracy ¹⁾	[± % FS]	≤ 0.5 (optional ≤ 0.25)	≤ 0.5 (optional ≤ 0.25, ≤ 0.1)	≤ 0.5 (optional ≤ 0.25, ≤ 0.1)
Thermal shift	[± % FS/°C]			
Zero	-5...50°C	≤ 0.06	≤ 0.03	≤ 0.015
Span	-5...50°C	≤ 0.015	≤ 0.015	≤ 0.015
Long term stability (1 Jahr) - (typ./max.)		0.5% FS/< 4 mbar	0.2% FS/< 4 mbar	0.1% FS/< 0.2% FS
Output signal		4 ... 20 mA	0 ... 20 mA	0 ... 5 V / 0 ... 10 V
Type		Two wire current transmitter	Three wire current transmitter	Three wire voltage transmitter
Supply voltage		9...33 V DC	9...33 V DC	15...30 V DC
Supply voltage influence		< 0.1% FS	< 0.1% FS	< 0.1% FS
Circuit diagram				
Load resistance	[Ohm]	$R_L < \frac{U_B [V] - 9V}{0.02A}$	$R_L < \frac{U_B [V] - 6V}{0.02A}$, 1kOhm max	$R_L > 10kOhm$
Load resistance influence		< 0.1% FS	< 0.1% FS	< 0.1% FS

Materials

Process connection, diaphragm, housing
Seals (standard)

Stainless steel 1.4435 (316L) other materials (e.g. titanium) on request
 Viton (other materials see ordering information)

Electromagnetic compatibility

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

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

²⁾ Only with optional surge (lightnin) protection

Ordering Information

		24	X	XXXX	XXXX	XX	XXX
Type	ATM/N	24					
Pressure type	Gauge	1					
	Absolute	2					
Pressure range ⁵⁾	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				
Version	Closed version (Fig. 1)					55	
	Open version (Fig. 2)					56	
	G 1/4 M (Fig. 3)					11	
	G 1/2 M (Fig. 3)					13	
	Special version ²⁾ (Fig. 3)					99	
Electrical connection	Connectable version ³⁾ (Fig. 4)	IP68				07	
	PE cable ^{1) 4)}	IP68				13	
	PUR cable ¹⁾	IP68				15	
	Teflon cable ¹⁾	IP68				21	
Output signal	0... 5 V DC					46	
	0...10 V DC					47	
	0...20 mA					00	
	4...20 mA					05	
	4...20 mA surge (lightning) protection					08	
	0...10 V DC surge (lightning) protection					49	
	Special output signal					99	
Accuracy	≤ ± 0.5% FS					0	
	≤ ± 0.25% FS					1	
	≤ ± 0.1% FS (on request)					2	
Temperaturbereich	-5...50°C compensated (medium temperature -5... 50°C)					4	
Options	Version titanium						K
	Ballast weight						B
	Electronics packed in gel: Gauge pressure						C
	Absolute pressure						D
	Special oil filling in the TD: ASEOL Food						G
	Halocarbon						H
	Seals: Viton (standard)						U
	EPDM						S
	Kalrez						T
Humidity filter element						Z	

¹⁾ Please specify the required cable length and medium

²⁾ Other versions or process connections on request

³⁾ Connector with required cable has to be ordered separately (KART100)

⁴⁾ Suitable for drinking water (food approved)

⁵⁾ mH₂O, mWS, mWC etc. available

Dimensions

Fig. 1: Closed version

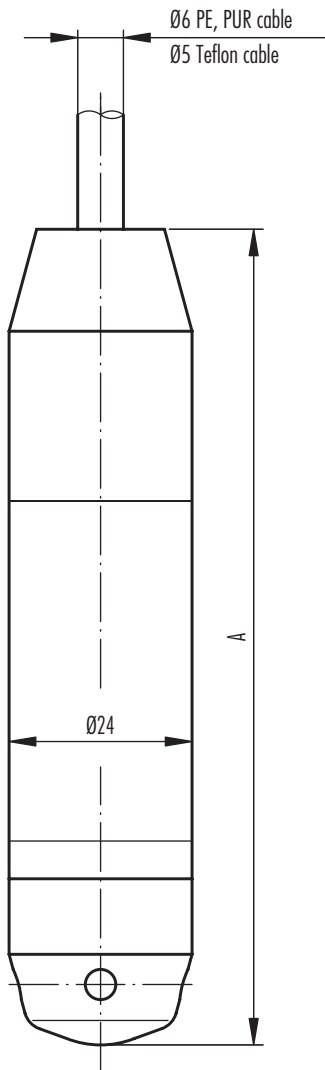


Fig. 2: Open version

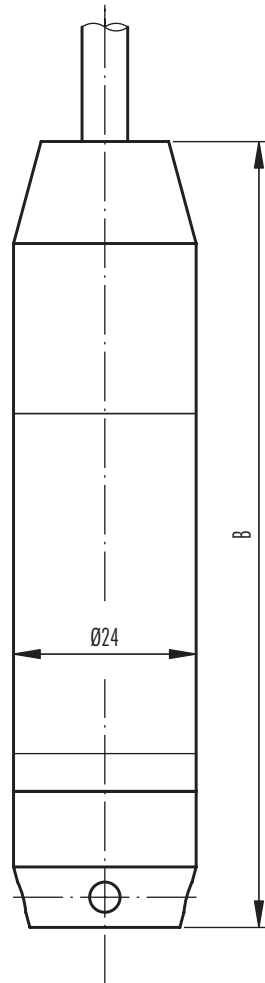


Fig. 3: with process connection

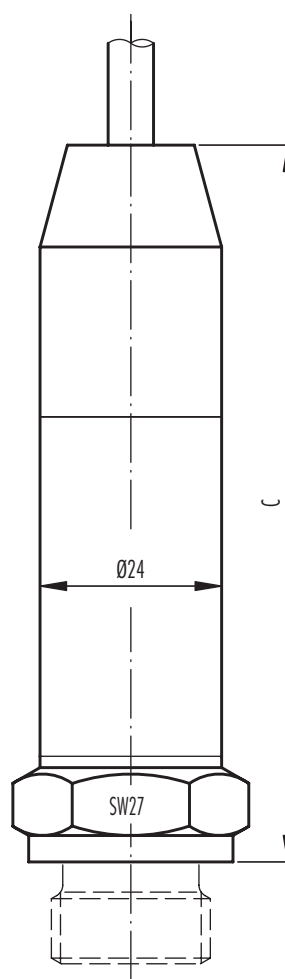
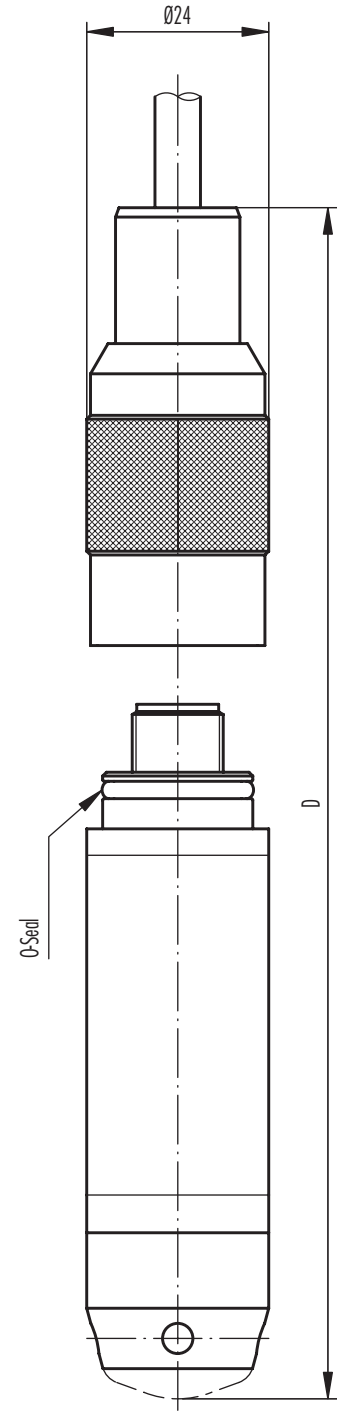


Fig. 4: Electrical connection, connectable



Standard	A [mm]	B [mm]	C [mm]	D [mm]	Weight [g]
without ballast weight	108	104	on request*	on request*	approx. 160
with ballast weight	195	191	on request*	on request*	approx. 420

*C: Depending on process connection

*D: Depending on process connection or version

Version with surge (lightning) protection	A [mm]	B [mm]	C [mm]	D [mm]	Weight [g]
without ballast weight	157	153	on request	on request	approx. 200
with ballast weight	244	240	on request	on request	approx. 460

Colour 2-Wire 3-Wire

with yellow	+Vin	+Vin
brown	Pout	GND
		Pout