PRESSURE TRANSMITTER FOR LEVEL MEASUREMENT ATM/N

Features

- Compact and robust stainless steel assembly 1.4435 (316L) or titanium (optional)
- Piezoresistive measuring element
- Gauge or absolute
- Standard DIN pressure ranges from 0…100 mbar to 0…25 bar
- Calibration available for all common pressure units mH2O, mWS, mWC etc.
- Complies with the EMC directive 89/336/EEC
- High reliability
- Short delivery time
- Customized versions due to modular assembly
- Available with PE, PUR or Teflon cable
- Reverse polarity and short circuit protected
- Surge (lightning) protection according to EN 61000-4-5 as an option
- Temperature measuring with Pt 100 element (optional, series 31, ATM/N/T)

Typical applications

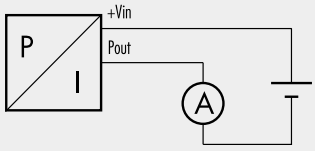
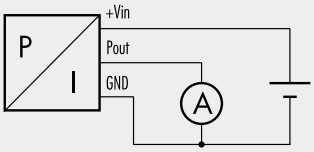
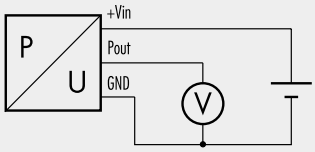
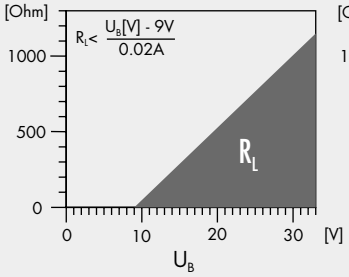
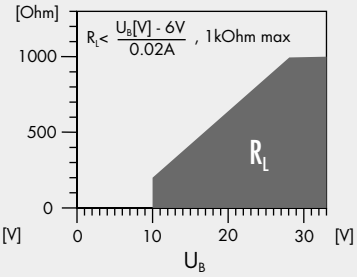
Depth and level measurement in

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

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	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
Long term stability (1 year)		< 4 mbar	< 4 mbar	< 0.2% FS

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

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			R_L > 10kOhm
Load resistance influence	< 0.1% FS	< 0.1% FS	< 0.1% FS

Materials		
Process connection, diaphragm, housing	Stainless steel 1.4435 (316L) or titanium (optional)	
Seals (standard)	Viton	(other materials see ordering information)

Electromagnetic compability

	Standard	Level	Typical interferences
Emission:			
EN 50081-1:1992	Generic emission standard		
EN 55022:1994	Emission, class B		
Immunity:			
EN 50082-2:1995	Generic immunity		
EN 61000-4-2:1995	Electrostatic discharge	4kV contact, 8kV air	
ENV 50140:1993	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz	Cellular phones, radio sets
ENV 50204:1995	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off	Digital portable phones
EN 61000-4-4:1995	Fast transients (burst)	2 kV	Motors, valves
ENV 50141:1993	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz	Cellular phones, radio sets
EN 61000-4-5:1995 [2]	Surge	10 kA (8/20 µs)	Lightning strikes

[2] Only with optional surge (lightning) protection

CE The pressure transmitter ATM fulfill the emission and immunity requirements described in the EMC directive 89/336/EEC.
The conformity was tested by KEMA Nederland BV. The certificate and the test report (KEMA 54285-KRQ/ECM 96-4184) are available on request.

Ordering Information

			24	X	XXXX	XXXX	XX	XXX
Type	ATM/N		24					
Pressure type	Gauge			1				
	Absolute			2				
Pressure range [6]	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 [3]					99		
Electrical connection	Connector for option level transmitter, connectable [4]	(Fig. 4)					99	
	PE cable [1] [2] [5]						13	
	PUR cable [1] [2]						15	
	Teflon cable [1]						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	
Temperature range	Compensated 0…70°C (media temperature 0… 80°C) [2]							0
	Compensated -25…85°C (media temperature -25… 85°C) [2]							1
	Special temperature range							9
Options	Execution titanium							K
	Ballast weight							B
	Electronics packed in gel: Gauge pressure							C
	Absolute and sealed gauge pressure							D
	Special oil filling: ASEOL Food							G
	Halocarbon							H
	Seals: EPDM							S
	Kalrez							T
	Special options							Z

[1] Please specify the required cable length and media
[2] For media temperature > 50°C a teflon cable must be used
[3] Other executions or process connections on request
[4] Connector with required cable has to be ordered separately
[5] Suitable for drinking water (food approved)
[6] mH2O, mWS, mWC ets. available

Dimensions

Fig. 1: Closed version

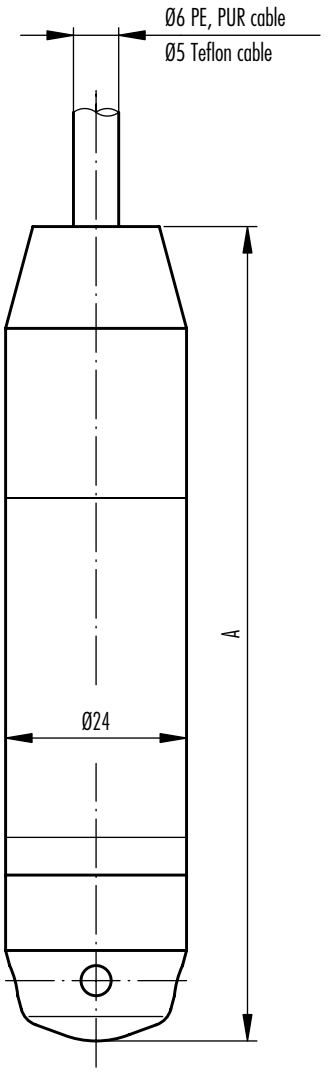


Fig. 2: Open version

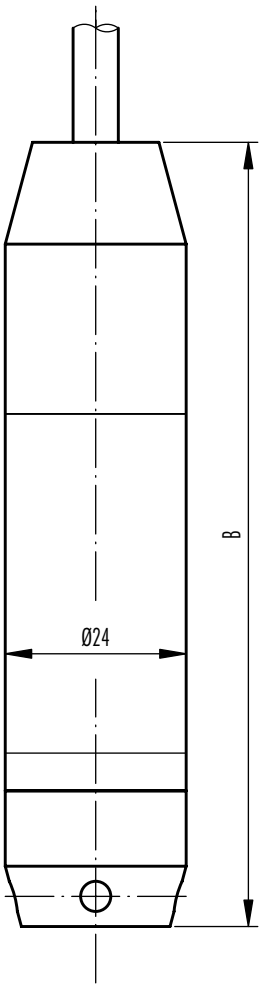


Fig. 3: with process connection

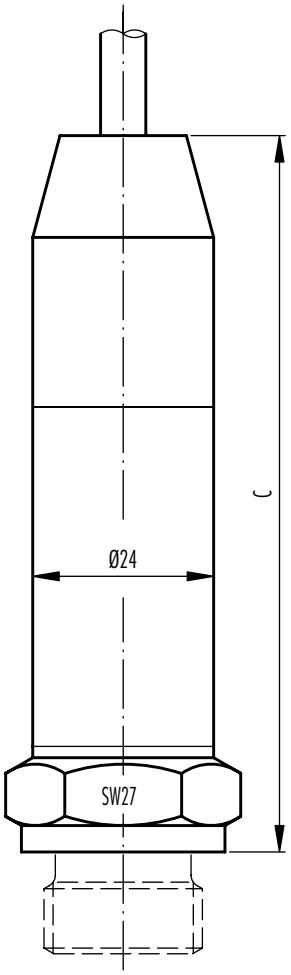
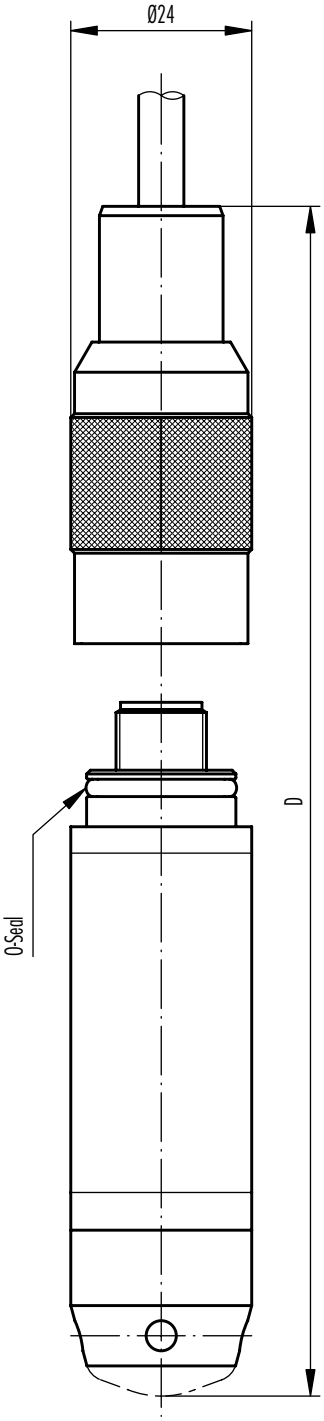


Fig. 4: Electrical connection, connectable



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

Version with surge (lightning) protection

	A [mm]	B [mm]	C [mm]	D [mm]	Weight [g]
without ballast weight with ballast weight	157	153	on request	on request	approx. 200
244	240	on request	on request	approx. 460	

Colour	2-Wire	3-Wire
white	+Vin	+Vin
yellow	Pout	GND
brown		Pout

Specifications may change without notice. Release 06/01

Switzerland

STS Sensor Technik Sirnach AG
Rütihofstrasse 8
CH - 8370 Sirnach
Tel.: (071) 969 49 29
Fax: (071) 969 49 20
e-mail: sales@sts-ag.ch
Internet: www.sts-ag.ch

Germany

STS Sensoren Transmitter Systeme GmbH
Mercedesstrasse 1
D - 71063 Sindelfingen
Tel.: (07031) 811 920
Fax: (07031) 811 958
e-mail: sts.gmbh@t-online.de
Internet: www.sts-ag.ch

Italy

STS Italia s.r.l.
Via Gesù 5
I - 20090 Opera (MI)
Tel.: 02-57607073/074
Fax: 02-57607110
e-mail: stsopera@tin.it
Internet: www.sts-ag.ch

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