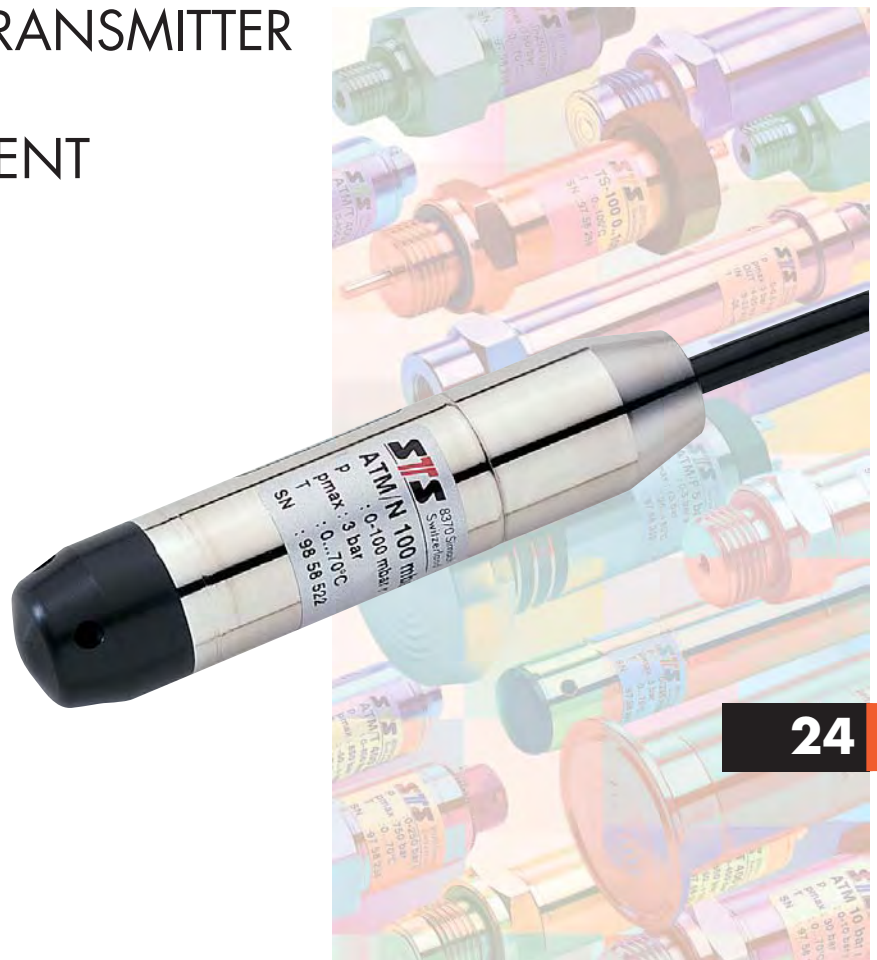


PRESSURE TRANSMITTER FOR LEVEL MEASUREMENT ATM/N



24

Features

- Compact and robust stainless steel assembly 1.4435 (316L) or titanium (option)
- 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, mWG, mWC etc.
- Complies with the EMC directive EN 61000
- High reliability
- 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

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STS - feel the Difference

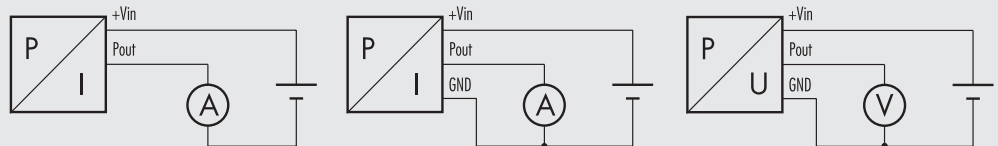
Specifications

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) - (typ./max.)		0.5% FS/< 4 mbar	0.2% FS/< 4 mbar	0.1% FS/< 0.2% FS

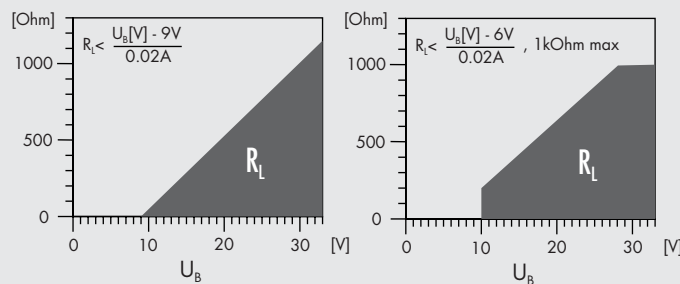
¹⁾ Zero based non-conformity according to DIN 16086, including hysteresis and repeatability

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



$R_L > 10k\Omega$

Load resistance influence

< 0.1% FS

< 0.1% FS

< 0.1% FS

Materials

Process connection, diaphragm, housing Stainless steel 1.4435 (316L) other materials (e.g. titanium) on request
Seals (standard) 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	4kV contact, 8kV air
EN 61000-4-3	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz
EN 61000-4-3	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off
EN 61000-4-4	Fast transients (burst)	2 kV
EN 61000-4-6	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz
EN 61000-4-5	Surge	10 kA (8/20 ms) ²⁾
		Cellular phones, radio sets Digital portable phones Motors, valves Cellular phones, radio sets Lightning strikes

²⁾ Only with optional surge (lightning) protection



The pressure transmitter ATM fulfils the emission and immunity requirements described in the EMC directive EN 61000.

Ordering Information

		24	X	.XXXX	.XXXX	.XX	.XXX	
Type	ATM/N	24						
Pressure type	Gauge	1						
	Absolute	2						
Pressure range⁶⁾	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	Connectable version ⁴⁾ (Fig. 4)	IP68		07				
	PE cable ^{1) 2) 5)}	IP68		13				
	PUR cable ^{1) 2)}	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	
Temperature range	Compensated 0...70°C (medium temperature 0...80°C) ²⁾						0	
	Compensated -25...85°C (medium temperature -25...85°C) ²⁾						1	
	Special temperature range						9	
Options	Version titanium						K	
	Ballast weight						B	
	Electronics packed in gel:	Gauge pressure						C
		Absolute and sealed gauge 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⁾ For medium temperature > 50°C a teflon cable must be used

³⁾ Other versions or process connections on request

⁴⁾ Connector with required cable has to be ordered separately (KART100)

⁵⁾ Suitable for drinking water (food approved)

⁶⁾ mH2O, mWG, mWC ets. available

Dimensions

Fig. 1: Closed version

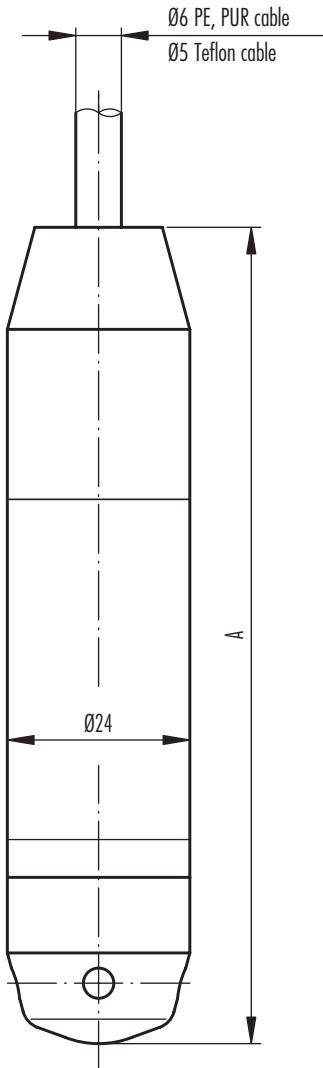


Fig. 2: Open version

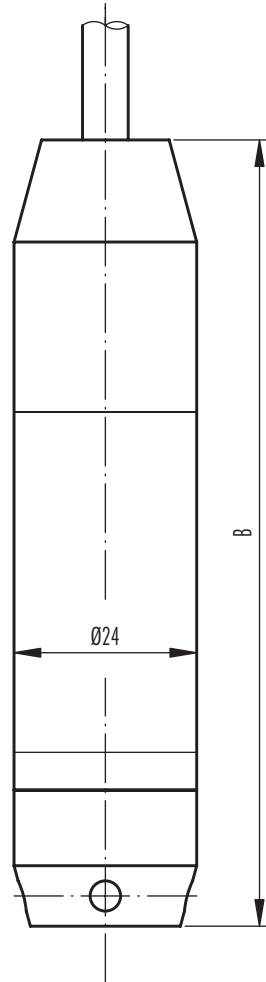


Fig. 3: with process connection

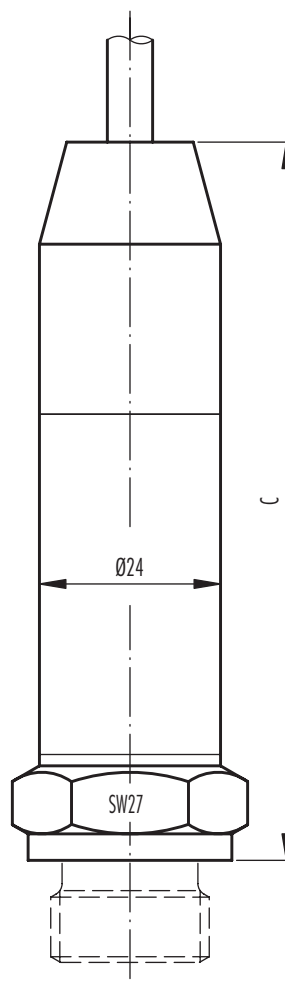
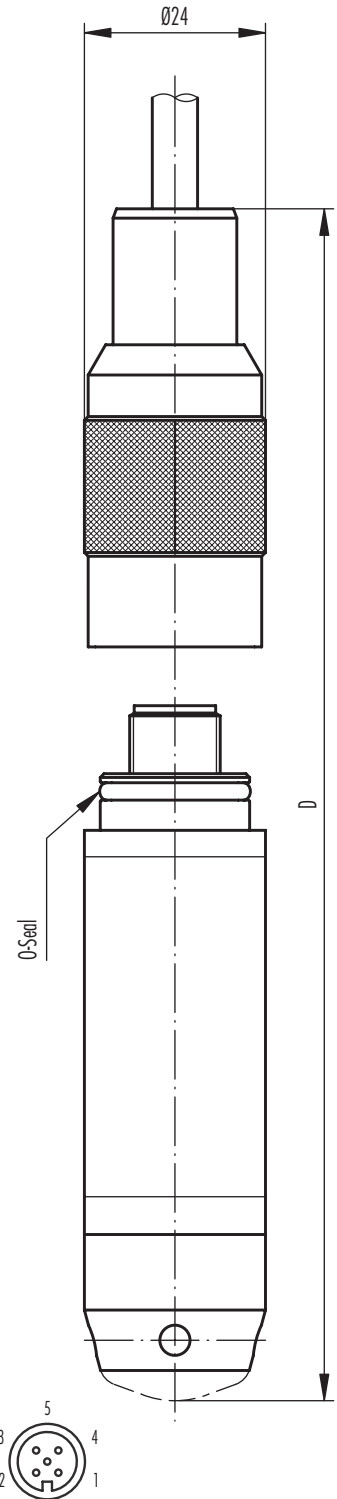


Fig. 4: Electrical connection, connectable



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

*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
white	+Vin	+Vin
yellow	Pout	GND
brown		Pout

Specifications may change without notice.

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