PTS8052

SPECIAL PRESSURE TRANSMITTER

Pressure Transmitter with Flush Diaphragm

for gauge pressure and absolute pressure

Accuracy 0.25% and 0.5%

Standard output: **4 . . . 20 mA; 2-wire**
or 0 . . . 5 VDC; 3-wire
or 0 . . . 10 VDC; 3-wire

Description

Pressure sensors for general application are top of the range pressure transducers.

Their accuracy, reliability, resistance to corrosion and mechanical load make them suitable for all pressure measuring tasks - in production, development or in the laboratory.
The front flush pressure diaphragm avoids zones, in which medium could crystallize or residues could form, thus ensuring trouble-free pressure measurement and hygienic cleaning of the pressure sensors.

The measuring ranges, graded in accordance with EN, range from 0,1 bar to 600 bar. The case and wetted parts comprise stainless steel and are thus resistant to chemically aggressive media. With the aid of an integrated cooling element, the sensors can be supplied with medium temperatures of up to 150 °C.

For more difficult measuring tasks (e.g. hydrostatic column), two potentiometers enable the zero point andmeasuring range to be set.

The pressure sensors for general application meet the electronic magnetic compatibility (EMC) requirements to EN 61 326.

Features

- o For pasty or crystallizing media
- o Finely graded selection of nominal ranges according to EN
- o Corrosion resistant, stainless steel design
- o High overload protection
- o Highly resistant to shock and vibration
- o For dynamic or static measurements
- o Good reproducibility
- o Integrated cooling element for medium temperatures of up to 150° C

Measuring Ranges

Gauge pressure

Negative	-1 . . . 0 bar	to	-0,1. . . 0 bar
Positive	0 . . . 0.01 bar	to	0 . . . 600 bar
Absolute pressure	0 . . . 0.25 bar	to	0 . . . 16 bar

Applications

Process engineering,

Plant and apparatus construction,

Development and laboratory applications

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Technical data

Type	PTS8052						**Option**
Pressure type	negative or positive gauge pressure				absolute pressure		negative or positive gauge pressure
Output signal	4 . . . 20 mA - 2-wire system 0 . . . 5 VDC - 3-wire system 0 . . . 10 VDC - 3-wire system						other signals on request
Accuracy % of F. S. 1)	0,5	0,25	0,5	0,25	0,5	0,25	
Ranges accord. to EN	0 . . . 0.1 bar 2) to 0 . . . 16 bar		0 . . . 25 bar to 0 . . . 600 bar		0 . . . 0,25 bar to 0 . . . 16 bar		
Sensor element	piezoresistive		thin film		piezoresistive		
Repeatability	≤ ± 0.05% of F. S.						
Stability (annual)	≤ ± 0.2% of F. S. in rated conditions						
Case	Stainless steel						
Pressure connection	≤ 0…1,6 bar G 1 B; ≥ 0...2,5 bar G 1/2 B						
Wetted parts	Stainless steel						
Overload limit	≤ 16 bar 3,5 x; ≤ 600 bar 2 x;						
Electrical connection	plug according to DIN EN 175301-803 form A with junction box round connector M12x1; 4-pin						cable outlet with 1 m cable
Power supply	10 . . . 30 VDC (14 . . . 30 VDC for output 0 . . . 10 V)						
Power consumption	output 4 . . . 20 mA: signal currency voltage output: 8 mA						
Load	≤ $\frac{\text{UB - 12 V}}{0.020\ \text{A}}$ for output (0) 4 . . . 20 mA > 5 kOhm for output 0 . . . 5 V > 10 kOhm for output 0 . . . 10 V						
Temp. compens. range	0 . . . 80 °C						
Temperature influence - Zero point - Measuring range	 ± 0.2% / 10 K 3) ± 0.2% / 10 K						
Adjustability	zero point and full scale up to ± 10%						
Response time	≤ 1 ms (within 10% to 90% of F. S.)						
Protection type	IP 65 to EN 60 529 / IEC 529						IP 67 for cable outlet
Emission 4)	according to EN 61 326						
Interference 4)	according to EN 61 326						
Electrical protection types	polarity, overload and short-circuit protection						
Temperature ranges - Storage - Medium - Ambient	 -40 . . .100 °C -30 . . .100 °C -20 . . . 80 °C						medium temperature -40 . . . 125 °C integrated cooling element for temperatures up to 150° C
Weight	approx. 0.2 kg						

of F. S. = of full scale value

1) 0.25% accuracy for ranges ≥ 0.25 bar

2) ≥ 0 . . . 2500 bar; M 16 x 1.5 female
≤ ″ ± 0,4%/10 K for measuring ranges 0 . . . 0.1 and 0 . . . 0.16 bar

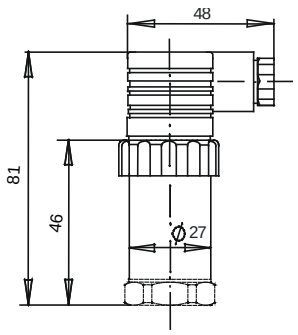
3) Declaration of conformity on request

Dimensions

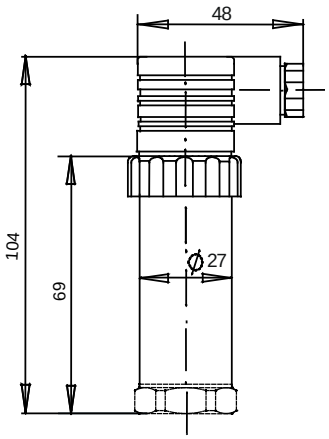
Case

Plug according to DIN EN 175301-803 form A

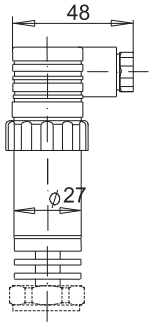
Accuracy 0.5%



Accuracy 0.25%

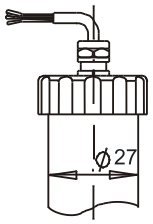


with integrated cooling element



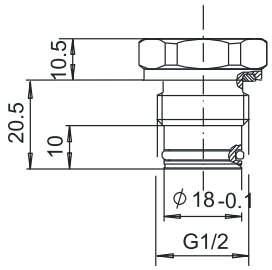
for long version + 22 mm

cable outlet

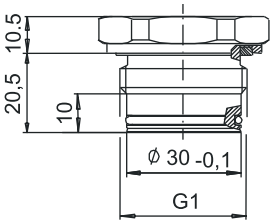


Pressure connections

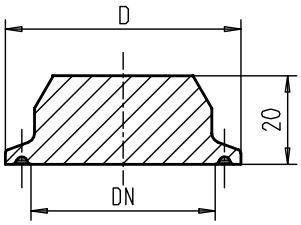
G ½ B



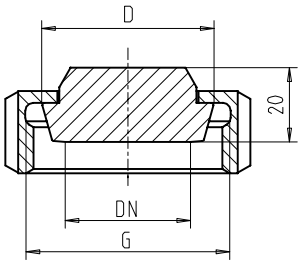
G 1 B



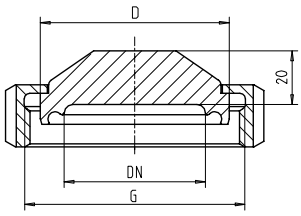
clamp



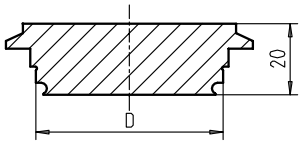
DIN 11851



DIN 11864-1



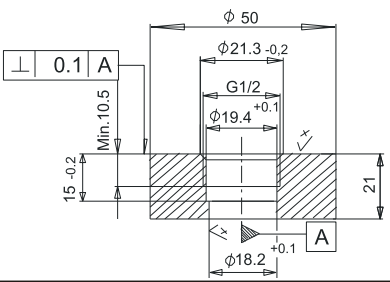
varivent



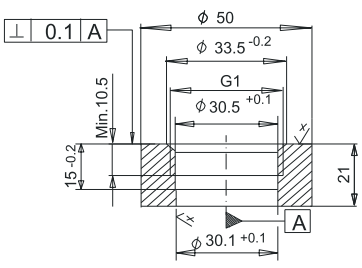
Pressure connection		Nominal diameter DN	Dimensions (mm)	
			D	G
Clamp	Tri-Clamp	1 1/2"	50	
		2 "	64	
	DIN 32676	DN 32	50	
		DN 40	50	
		DN 50	64	
	ISO 2852	DN 33,7	50	
		DN 38	50	
		DN 40	64	
		DN 51	64	
Union nut DIN 11851 with conical coupling, for tubes to DIN 11850		DN 25	44	Rd 52 x 1/6
		DN 40	56	Rd 65 x 1/6
		DN 50	68.5	Rd 78 x 1/6
Union nut DIN 11864-1 with liner form A, for tubes to DIN 11850		DN 40	54.9	Rd 65 x 1/6
		DN 50	66.9	Rd 78 x 1/6
Varivent	form F	DN 25/32	50	
	form N	DN 40/50	68	

weld-on socket or screw-in aperture

G 1/2



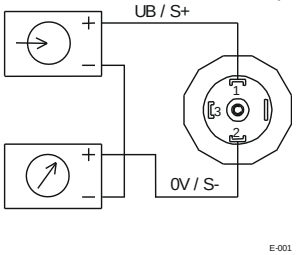
G 1



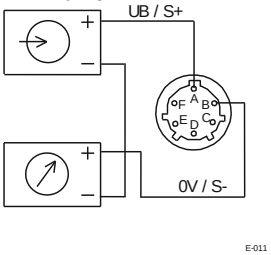
Electrical connection

Two-wire system

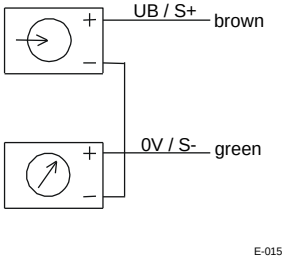
DIN EN 175301-803 form A plug



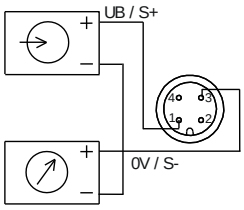
MIL-plug PT 02 E-10 6P



cable outlet

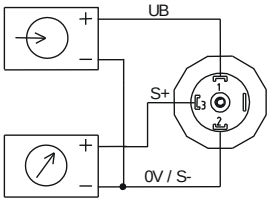


M12x1

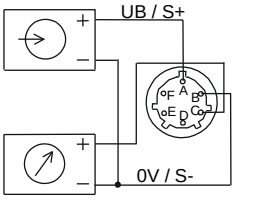


Three-wire system

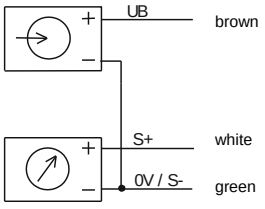
DIN EN 175301-803 form A plug



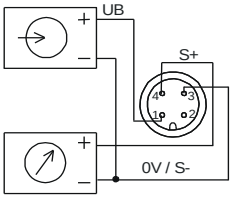
MIL-plug PT 02 E-10 6P



cable outlet



M12x1



Process connection	Available measuring ranges
G ½ B flush [1)]	0 ... 2.5 to 0 ... 600 bar
G 1 B flush [1)]	0 ... 0.1 to 0 ... 1.6 bar
Hygienic G 1 B flush	0 ... 0.1 to 0 ... 25 bar

1) Process connection also available with cooling element

Designation	Order No.
Welding socket for G ½ B flush	PTS80522299
Welding socket for G 1 B flush	PTS80522264
Welding socket for G 1 B hygienic flush	PTS80526011

Connection table for DIN plug or cable outlet

	4 . . . 20 mA (2-wire)		0 . . . 10 VDC (3-wire)	
Supply: UB+	1	brown	1	brown
Supply: 0V	2	green	2	green
Signal: S+	---	--------	3	white
Signal:	---	--------	2	green

Order details

1. Type
2. Measuring range
3. Output signal
4. Options

Modifications reserved