

PBSN

Industrial pressure transmitter for standard applications

Main features

- Robust stainless housing
- External programming of zero point and span with FlexProgrammer 9701
- High level of modularity
- Ceramic sensing element
- Abrasive and chemical resistant
- Excellent price/performance ratio



Applications

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ Process technic <input type="checkbox"/> Hydraulic ■ Pneumatic <input type="checkbox"/> Refrigeration <input type="checkbox"/> Water treatment ■ Car industry <input type="checkbox"/> Test benches <input type="checkbox"/> Safety <input type="checkbox"/> Aerospace <input type="checkbox"/> Railways <input type="checkbox"/> Shipbuilding <input type="checkbox"/> Heavy vehicle | <ul style="list-style-type: none"> ■ Health care ■ Biotechnology <input type="checkbox"/> Food <input type="checkbox"/> Beverage <input type="checkbox"/> Pharmaceutical <input type="checkbox"/> Petro-chemical <input type="checkbox"/> Chemical ■ HVAC ■ Energy ■ Medical gas ■ Agriculture vehicles <input type="checkbox"/> Pumps and compressors |
|---|--|

Main characteristics (20 °C)

Pressure range	-1...0 bar up to 0...400 bar
Accuracy (linearity, hysteresis and repeatability)	0.7% FS

Ordering details - PBSN

	PBSN	1	2	B22	R	A1	14	02	2	1
Housing material										
Stainless steel			1.4301 AISI 304							1
Accuracy										
0.70% FS										2
Pressure range and unit in bar										
-1 ... 0										B59
-1 ... 0.6										B72
-1 ... 1.5										B74
-1 ... 3										B76
-1 ... 5										B77
-1 ... 9										B79
-1 ... 15										B81
-1 ... 24										B82
-1 ... 39										B1L
0 ... 1										B15
0 ... 1.6										B16
0 ... 2.5										B18
0 ... 4										B19
0 ... 6										B20
0 ... 10										B22
0 ... 16										B24
0 ... 25										B26
0 ... 40										B27
0 ... 60										B29
0 ... 100										B31
0 ... 160										B33
0 ... 250										B35
0 ... 400										B38
Kind of pressure										
Relative										R
Output signal										
4 ... 20 mA										A1
0 ... 10 V										A2
Output connection										
M12, 4 pins										14
DIN 43650, 4 pins										44
Shielded cable (1.5 m)										53
Process connection										
G1/4 EN 837										02
G1/2 EN 837										03
1/4 NPT										04
1/2 NPT										05
G1/4 DIN 3852										06
Process connection material										
Stainless steel			1.4404 AISI 316L							2
Sealing										
NBR										1
EPDM										2
FKM (Viton®)										3

Model - PBSN

Technical specification

Measuring principle	Thick film on ceramic
Measuring ranges	0 ... 1 to 0 ... 400 bar
Type of pressure	Relative
Accuracy (20 °C) <small>(linearity, hysteresis, repeatability)</small>	0.7% FS
Annual stability	≤ 0.2%/year
Response time	≤ 5 ms typical (10 ... 90%)
Process connections	See page 4

Environment

Temperature	
Compensated range	-20 ... +60 °C
Storage	-40 ... +100 °C
Media	-25 ... +100 °C
Ambient	-20 ... +85 °C
Thermal drift	See table below
Protection rating	IP65 (EN 60529) up to IP67 depending on connection
Vibration IEC60068-2-6	1.5 mm (10 – 55Hz), 20 g (55 Hz – 2 KHz) 10 cycles for 2.5 h per axe
Shock IEC60068-2-27	50 g/11 ms 100 g/6 ms 3 x Imp. /Axis and direction
Bump IEC60068-2-29	100 g/2 ms 4000 x Imp./Axis and direction
Random IEC60068-2-64	0.1 g ² /Hz (10 g RHS)

Electrical specification

Output signal / Power Supply	4 ... 20 mA / 8 ... 32 VDC 0 ... 10 V / 13 ... 32 VDC
Load impedance	
Current output	$R_{\Omega} = (U_{s_supply} - 11V) / 20 \text{ mA}$
Voltage output	> 5 kΩ
Insulation resistance	> 100MΩ at 500 VDC
Electrical connections	See page 4

Material

Process Connection	Stainless steel AISI 316L (1.4404)
Sensor	Ceramic
Sealing	NBR, EPDM, FKM(viton®)
Housing	Stainless steel AISI 304 (1.4301)

Approvals

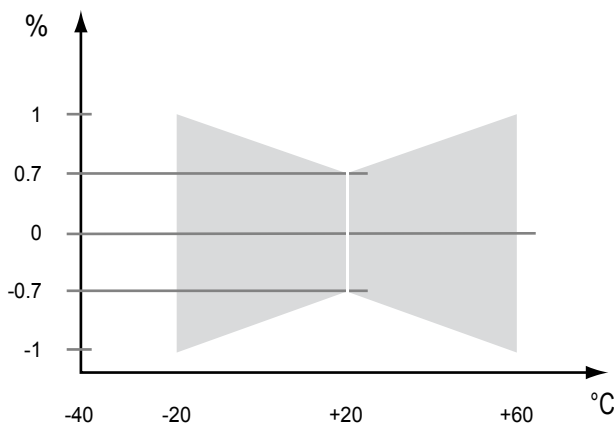
CE conformity	Directive 2004/108/CE in accordance with EN 61000-6-2, EN 61000-6-3, EN 61326-1 (Tab.2) Pressure directive 97/23/CE
----------------------	---

Measuring Ranges

Pressure range	Pressure in bar													
	-1...0	-1...0.6	-1...1.5	-1...3	-1...5	-1...9	-1...15	-1...24	-1...39	0...60	0...100	0...160	0...250	0...400
Overpressure	0...1	0...1.6	0...2.5	0...4	0...6	0...10	0...16	0...25	0...40	120	200	320	360	600
Burst pressure	3	3	7	12	18	30	48	75	120	180	300	480	480	800

Total error band

Accuracy 0.7 % FS at 20 °C



Model - PBSN

Electrical connections



M12, 4 pins

Connection

4 ... 20 mA 0 ... 10V

1 : + Supply	1 : + Supply
2 : N. C.	2 : + Measurement
3 : - Supply	3 : - Supply/ - Measurement
4 : N. C.	4 : N. C.
body : \perp	body : \perp

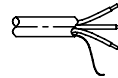


Standard version DIN 43650 connector

Connection EN 176301-803A

4 ... 20 mA 0 ... 10V

1 : + Supply	1 : + Supply
2 : - Supply	2 : - Supply/ - Measurement
3 : N. C.	3 : + Measurement
\perp : Shield	\perp : Shield



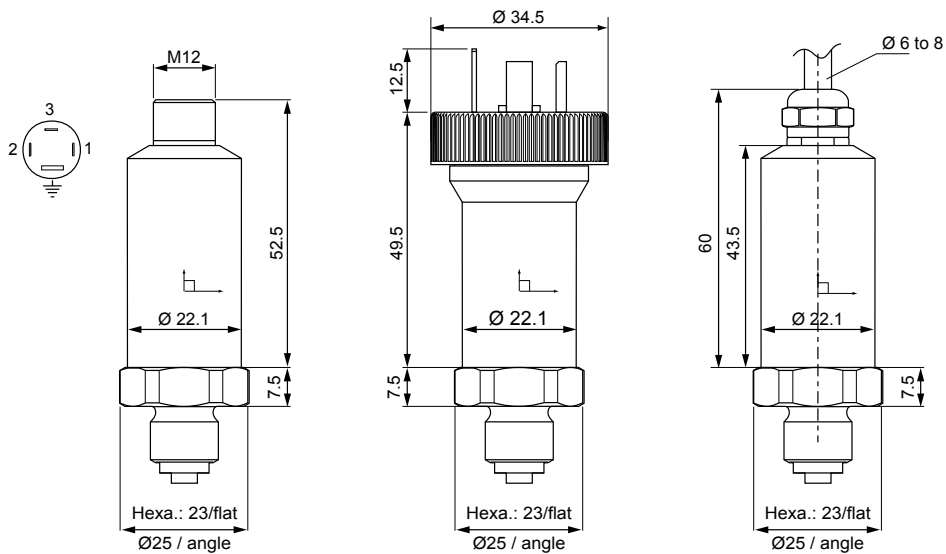
Cable output (1.5m long) + PG7 cable gland

Connection

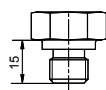
4 ... 20 mA 0 ... 10V

+ Supply : white	+ Supply : red
- Supply : blue	- Supply/Meas. : blue
\perp : Shield	+ Measurement : white
	\perp : Shield

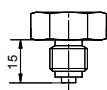
Dimensions (mm), Connections



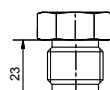
Hydraulic connections



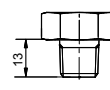
G 1/4 DIN 3852-E



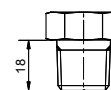
G 1/4 EN837



G 1/2 EN837



1/4 NPT



1/2 NPT