Product family overview

PBS plus

Multifunctional IO-Link sensor for pressure measurement, control and monitoring

PRESSURE SENSORS

SICK
Sensor Intelligence.

Technical data overview

Device type	Pressure switch
Measuring ranges	
Gauge pressure	0 bar ... 0.4 bar (0 psi ... 6 psi) to 0 bar ... 1,000 bar (0 psi ...14,504 psi)
Absolute pressure	0 bar ... 0.4 bar (0 psi ... 6 psi) to 0 bar ... 25 bar (0 psi ... 363 psi)
Compound pressure	-1 bar ... 0 bar (-14.5 psi ... 0 psi) to –1 bar ... +24 bar (-14.5 psi ... +348 psi)
Pressure unit	Bar (can be switched to psi, MPa, kPa, kg/cm^2)
Accuracy	≤ ± 0.5 % of the span
Setting accuracy of switching outputs	≤ ± 0.5 % of span
Output signal	Output 1: PNP/IO-Link, Output 2 (optional): PNP/NPN switchable, Analog output (optional): 4...20 mA / 0...10 V switchable
Electrical connection	Round connector M12 x 1

Product description

The PBS plus is an electronic pressure switch, pressure transmitter and display in one and is available with up to two switching outputs, analog output and IO-Link. It is set using three large pushbuttons and the display or via IO-Link. The housing can be twisted in two places - the display and the electrical connection can be optimally aligned in any mounting situation. With measuring ranges of 0.4 bar to 1,000 bar (gauge pressure), the PBS plus can be used in many different applications. It also has absolute pressure and vacuum measuring ranges. The PBS plus is highly resistant to corrosion due to the fully-welded stainless steel membrane. Process data is transmitted to the control via IO-Link as measured values in bar. The diagnostic options make it possible for temperature values to be read out in °C and minimum and maximum values for temperature and pressure to be monitored.

At a glance

- Switchable switching outputs (PNP/NPN) and analog output (current/voltage)
- Scalable analog output (5:1 turn down)
- High measurement accuracy: ± 0.5%
- IO-Link for transmitting process data to the control as measured values in bar
- Housing can be twisted in two places (process connection/display) and display can be rotated by 180°
- Common process connections, also with flush-mounted membrane

Your benefits

- Low storage costs, short delivery times, low number of variants
- Reduced installation time since housing and display can be rotated at two points
- Rugged design: stainless steel measuring cell
- No special conversion of IO-Link process data is required - it is shown automatically as measured values in bar
- Extensive diagnosis options via IO-Link (e.g. pressure peaks, ambient temperature) deliver data for predictive maintenance
- Economic solution for hydrostatic level measurement (thanks to high accuracy and small measuring ranges)

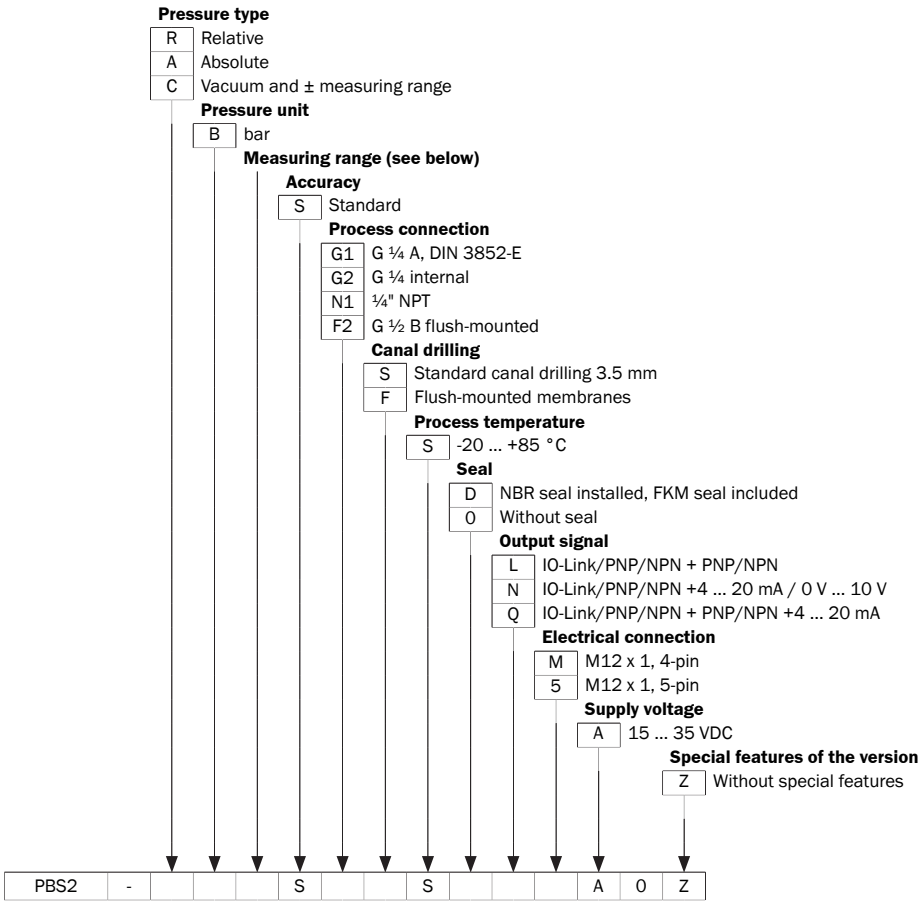
Fields of application

- Measurement of system pressure in hydraulic systems
- Control of the clamping pressure in CNC machines
- Monitoring of the cylinder pressure in hydraulic presses
- Control of the pressure in cooling and lubricant systems
- Hydrostatic level measurement
- Measurement of system pressure in PET bottle production

Type code

Other models and accessories ➜ www.sick.com/PBS_plus

Type code



Not all variants of the type code can be combined!

Measuring range

	Gauge pressure measuring range	Overload limit
X40	0 ... 0.4 bar (0 ... 6 psi)	0.8 bar
X60	0 ... 0.6 bar (0 ... 9 psi)	1.2 bar
1X0	0 ... 1 bar (0 ... 15 psi)	2 bar
1X6	0 ... 1.6 bar (0 ... 23 psi)	3.2 bar
2X5	0 ... 2.5 bar (0 ... 36 psi)	5 bar
4X0	0 ... 4 bar (0 ... 58 psi)	8 bar
6X0	0 ... 6 bar (0 ... 87 psi)	12 bar
010	0 ... 10 bar (0 ... 145 psi)	20 bar
016	0 ... 16 bar (0 ... 232 psi)	32 bar
025	0 ... 25 bar (0 ... 363 psi)	50 bar
040	0 ... 40 bar (0 ... 580 psi)	80 bar
060	0 ... 60 bar (0 ... 870 psi)	120 bar
100	0 ... 100 bar (0 ... 1,450 psi)	200 bar
160	0 ... 160 bar (0 ... 2,321 psi)	320 bar
250	0 ... 250 bar (0 ... 3,626 psi)	500 bar
400	0 ... 400 bar (0 ... 5,802 psi)	800 bar
600	0 ... 600 bar (0 ... 8,702 psi)	1,200 bar
1K0	0 ... 1,000 bar (0 ... 14,504 psi)	1,500 bar

	Absolute pressure measuring range	Overload limit
X40	0 ... 0.4 bar (0 ... 6 psi) abs	0.8 bar
X60	0 ... 0.6 bar (0 ... 9 psi) abs	1.2 bar
1X0	0 ... 1 bar (0 ... 15 psi) abs	2 bar abs
1X6	0 ... 1.6 bar (0 ... 23 psi) abs	3.2 bar abs
2X5	0 ... 2.5 bar (0 ... 36 psi) abs	5 bar abs
4X0	0 ... 4 bar (0 ... 58 psi) abs	8 bar abs
6X0	0 ... 6 bar (0 ... 87 psi) abs	12 bar abs
010	0 ... 10 bar (0 ... 145 psi) abs	20 bar abs
016	0 ... 16 bar (0 ... 232) abs	32 bar abs
025	0 ... 25 bar (0 ... 363 psi) abs	50 bar abs

	± measuring range	Overload limit
1X0	–1 ... 0 bar (–14.5 ... 0 psi)	2 bar
1X6	–1 ... 0.6 bar (–14.5 ... +9 psi)	1.2 bar
2X5	–1 ... +1.5 bar (–14.5 ... +22 psi)	3 bar
4X0	–1 ... +3 bar (–14.5 ... 44 psi)	6 bar
6X0	–1 ... +5 bar (–14.5 ... +73 psi)	10 bar
010	–1 ... +9 bar (–14.5 ... +131 psi)	18 bar
016	–1 ... +15 bar (–14.5 ... +218 psi)	30 bar
025	–1 ... +24 bar (–14.5 ... +348 psi)	48 bar

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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