



# PBS

Universal pressure switch

**PRESSURE SENSORS**

**SICK**  
Sensor Intelligence.



### Technical data overview

<b>Device type</b>	Pressure switch						
<b>Measuring ranges</b>	<table border="0"> <tr> <td>Gauge pressure</td> <td>0 bar ... 1 bar up to bar ... 600 bar</td> </tr> <tr> <td>Absolute pressure</td> <td>0 bar ... 1 bar up to 0 bar ... 25 bar</td> </tr> <tr> <td>Compound pressure</td> <td>-1 bar ... 0 bar up to -1 bar ... +24 bar</td> </tr> </table>	Gauge pressure	0 bar ... 1 bar up to bar ... 600 bar	Absolute pressure	0 bar ... 1 bar up to 0 bar ... 25 bar	Compound pressure	-1 bar ... 0 bar up to -1 bar ... +24 bar
Gauge pressure	0 bar ... 1 bar up to bar ... 600 bar						
Absolute pressure	0 bar ... 1 bar up to 0 bar ... 25 bar						
Compound pressure	-1 bar ... 0 bar up to -1 bar ... +24 bar						
<b>Pressure unit</b>	Bar, MPa, psi and kg/cm <sup>2</sup>						
<b>Accuracy</b>	≤ ± 1 % of the span						
<b>Setting accuracy of switching outputs</b>	≤ ± 0.5 % of span						
<b>Output signal</b>	PNP or NPN switching outputs plus optional IO-Link and analog output						
<b>Electrical connection</b>	Round connector M12 x 1						

### Product description

The PBS is an electronic pressure switch, pressure transmitter and display in one. It is available with up to two switching output, analog output and IO-Link in a single device.

Its intuitive configuration via three large pushbuttons and display facilitates operation. The housing can be rotated in two ways. This means that the display and electrical connection can be aligned to match the specific installation situation.

The PBS can be utilized in a wide range of applications due to its gauge pressure measuring ranges between 0 bar - 1 bar and 0 bar - 600 bar. In addition, absolute pressure and compound measuring ranges are available.

The PBS features a fully welded stainless steel membrane, making it suitable for use with a host of corrosive media. Numerous standard process connections make adapters redundant in most cases. In addition, a flush-mounted membrane is available for pressure measurement in heterogeneous liquids.

### At a glance

- Electronic pressure switch with display for monitoring pressure in liquids and gases
- Precise sensor technology with stainless steel membrane
- Integrated process connections manufactured from high-quality stainless steel
- Pressure values indicated on display. Output states are indicated separately via wide-angle LEDs.
- Unit of pressure value in display can be switched
- Min/max memory
- Password protection
- IO-Link

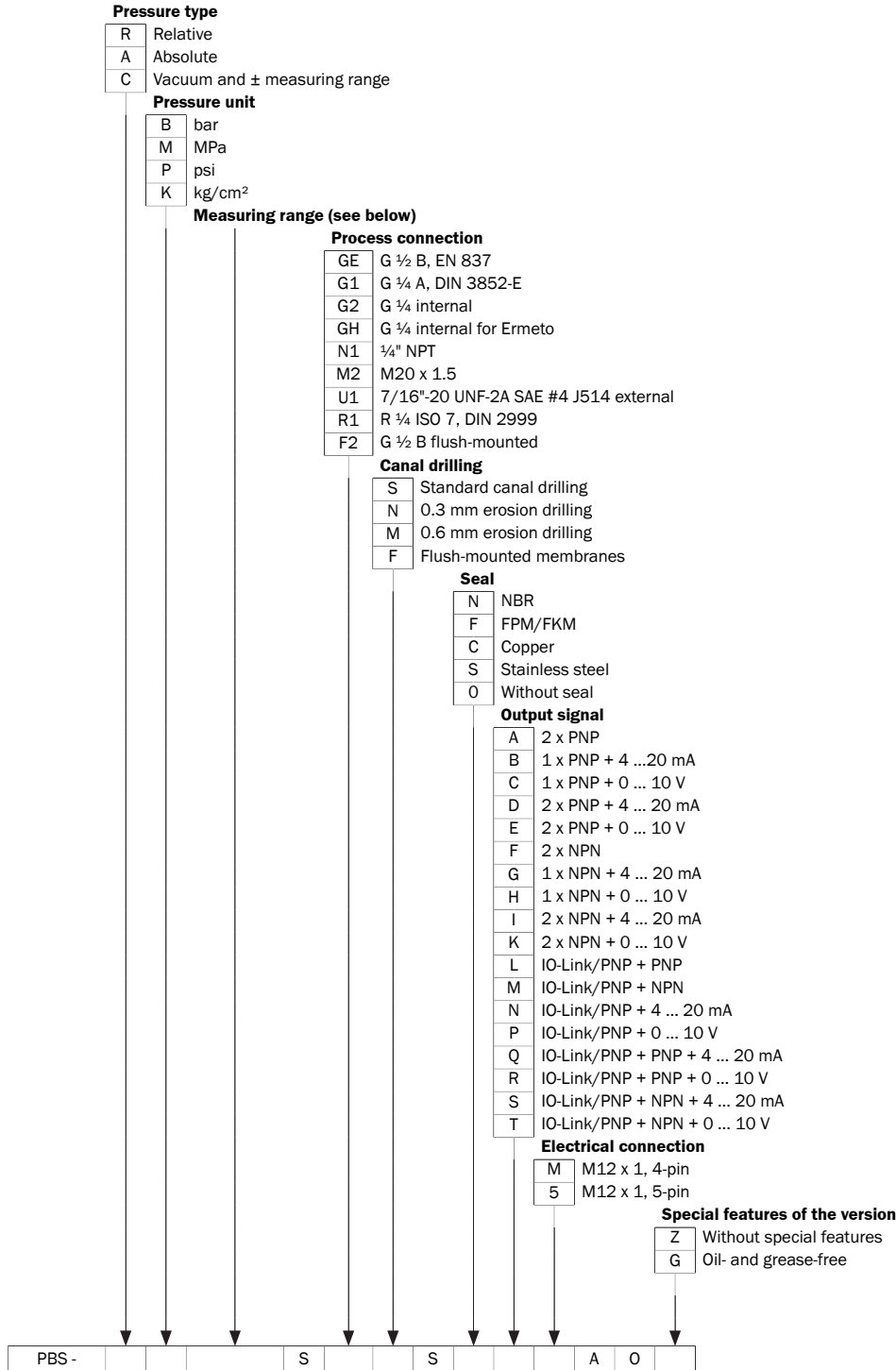
### Your benefits

- Quick and easy setup and operation due to three large pushbuttons and clear display
- Perfect display readability and optimal cable routing due to rotatable housing
- No compromises: Individual solutions through a variety of configurations
- Universal application due to fully welded, highly durable stainless steel membrane
- Saves space and costs: no adapters required due to broad range of standard process connections
- Highly reliable due to application of proven technologies and high-quality materials, water resistance according to IP 65 and IP 67 as well as excellent overpressure safety
- Ultimate system availability: IO-Link enables fast, reliable parameter setting when changing over products
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## Type code

Other models and accessories → [www.sick.com/PBS](http://www.sick.com/PBS)

## Type code



Not all variants of the type code can be combined!

## Measuring range

	Gauge pressure measuring range	Overload limit
1X0	0 ... 1 bar	2 bar
1X6	0 ... 1.6 bar	3.2 bar
2X5	0 ... 2.5 bar	5 bar
4X0	0 ... 4 bar	8 bar
6X0	0 ... 6 bar	12 bar
010	0 ... 10 bar	20 bar
016	0 ... 16 bar	32 bar
025	0 ... 25 bar	50 bar
040	0 ... 40 bar	80 bar
060	0 ... 60 bar	120 bar
100	0 ... 100 bar	200 bar
160	0 ... 160 bar	320 bar
250	0 ... 250 bar	500 bar
400	0 ... 400 bar	800 bar
600	0 ... 600 bar	1,200 bar

	Absolute pressure measuring range	Overload limit
1X0	0 ... 1 bar abs	2 bar abs
1X6	0 ... 1.6 bar abs	3.2 bar abs
2X5	0 ... 2.5 bar abs	5 bar abs
4X0	0 ... 4 bar abs	8 bar abs
6X0	0 ... 6 bar abs	12 bar abs
010	0 ... 10 bar abs	20 bar abs
016	0 ... 16 bar abs	32 bar abs
025	0 ... 25 bar abs	50 bar abs

	± measuring range	Overload limit
1X0	-1 ... 0 bar	2 bar
2X5	-1 ... +1.5 bar	3 bar
4X0	-1 ... +3 bar	6 bar
6X0	-1 ... +5 bar	10 bar
010	-1 ... +9 bar	18 bar
016	-1 ... +15 bar	30 bar
025	-1 ... +24 bar	48 bar

	Gauge pressure measuring range	Overload limit
015	0 ... 15 psi	30 psi
025	0 ... 25 psi	60 psi
030	0 ... 30 psi	60 psi
050	0 ... 50 psi	100 psi
100	0 ... 100 psi	200 psi
160	0 ... 160 psi	320 psi
200	0 ... 200 psi	400 psi
300	0 ... 300 psi	600 psi
500	0 ... 500 psi	1,000 psi
1K0	0 ... 1,000 psi	2,000 psi
1K5	0 ... 1,500 psi	3,000 psi
2K0	0 ... 2,000 psi	4,000 psi
3K0	0 ... 3,000 psi	6,000 psi
5K0	0 ... 5,000 psi	10,000 psi
8K0	0 ... 8,000 psi	16,000 psi

	Absolute pressure measuring range	Overload limit
015	0 ... 15 psi abs	30 psi abs
025	0 ... 25 psi abs	60 psi abs
030	0 ... 30 psi abs	60 psi abs
050	0 ... 50 psi abs	100 psi abs
100	0 ... 100 psi abs	200 psi abs
160	0 ... 160 psi abs	290 psi abs
200	0 ... 200 psi abs	400 psi abs
300	0 ... 300 psi abs	600 psi abs

	± measuring range	Overload limit
015	-14.5 ... +0 psi	30 psi
030	-14.5 ... +15 psi	30 psi
040	-14.5 ... +25 psi	60 psi
045	-14.5 ... +30 psi	60 psi
065	-14.5 ... +50 psi	100 psi
115	-14.5 ... +100 psi	200 psi
175	-14.5 ... +160 psi	320 psi
215	-14.5 ... +200 psi	400 psi
315	-14.5 ... +300 psi	600 psi

	Gauge pressure measuring range	Overload limit
X10	0 ... 0.1 MPa	0.2 MPa
X16	0 ... 0.16 MPa	0.32 MPa
X25	0 ... 0.25 MPa	0.5 MPa
X40	0 ... 0.4 MPa	0.8 MPa
X60	0 ... 0.6 MPa	1.2 MPa
1X0	0 ... 1 MPa	2 MPa
1X6	0 ... 1.6 MPa	3.2 MPa
2X5	0 ... 2.5 MPa	5 MPa
4X0	0 ... 4 MPa	8 MPa
6X0	0 ... 6MPa	12 MPa
010	0 ... 10 MPa	20 MPa
016	0 ... 16 MPa	32 MPa
025	0 ... 25 MPa	50 MPa
040	0 ... 40 MPa	80 MPa
060	0 ... 60 MPa	120 MPa

	Absolute pressure measuring range	Overload limit
X10	0 ... 0.1 MPa abs	0.2 MPa abs
X16	0 ... 0.16 MPa abs	0.32 MPa abs
X25	0 ... 0.25 MPa abs	0.5 MPa abs
X40	0 ... 0.4 MPa abs	0.8 MPa abs
X60	0 ... 0.6 MPa abs	1.2 MPa abs
1X0	0 ... 1 MPa abs	2 MPa abs
1X6	0 ... 1.6 MPa abs	3.2 MPa abs
2X5	0 ... 2.5 MPa abs	5 MPa abs

	± measuring range	Overload limit
X10	-0.1 ... +0 MPa	
X25	-0.1 ... +0.15 MPa	0.3 MPa
X40	-0.1 ... +0.3 MPa	0.6 MPa
X60	-0.1 ... +0.5 MPa	1 MPa
1X0	-0.1 ... +0.9 MPa	1.8 MPa
1X6	-0.1 ... +1.5 MPa	3 MPa
2X5	-0.1 ... +2.4 MPa	4.8 MPa

	Gauge pressure measuring range	Overload limit
1X0	0 ... 1 kg/cm <sup>2</sup>	2 kg/cm <sup>2</sup>
1X6	0 ... 1.6 kg/cm <sup>2</sup>	3.2 kg/cm <sup>2</sup>
2X5	0 ... 2.5 kg/cm <sup>2</sup>	5 kg/cm <sup>2</sup>
4X0	0 ... 4 kg/cm <sup>2</sup>	8 kg/cm <sup>2</sup>
6X0	0 ... 6 kg/cm <sup>2</sup>	12 kg/cm <sup>2</sup>
010	0 ... 10 kg/cm <sup>2</sup>	20 kg/cm <sup>2</sup>
016	0 ... 16 kg/cm <sup>2</sup>	32 kg/cm <sup>2</sup>
025	0 ... 25 kg/cm <sup>2</sup>	50 kg/cm <sup>2</sup>
040	0 ... 40 kg/cm <sup>2</sup>	80 kg/cm <sup>2</sup>
060	0 ... 60 kg/cm <sup>2</sup>	120 kg/cm <sup>2</sup>
100	0 ... 100 kg/cm <sup>2</sup>	200 kg/cm <sup>2</sup>
160	0 ... 160 kg/cm <sup>2</sup>	320 kg/cm <sup>2</sup>
250	0 ... 250 kg/cm <sup>2</sup>	500 kg/cm <sup>2</sup>
400	0 ... 400 kg/cm <sup>2</sup>	800 kg/cm <sup>2</sup>
600	0 ... 600 kg/cm <sup>2</sup>	1,200 kg/cm <sup>2</sup>

	Absolute pressure measuring range	Overload limit
1X0	0 ... 1 kg/cm <sup>2</sup> abs	2 kg/cm <sup>2</sup> abs
1X6	0 ... 1.6 kg/cm <sup>2</sup> abs	3.2 kg/cm <sup>2</sup> abs
2X5	0 ... 2.5 kg/cm <sup>2</sup> abs	5 kg/cm <sup>2</sup> abs
4X0	0 ... 4 kg/cm <sup>2</sup> abs	8 kg/cm <sup>2</sup> abs
6X0	0 ... 6 kg/cm <sup>2</sup> abs	12 kg/cm <sup>2</sup> abs
010	0 ... 10 kg/cm <sup>2</sup> abs	20 kg/cm <sup>2</sup> abs
016	0 ... 16 kg/cm <sup>2</sup> abs	32 kg/cm <sup>2</sup> abs
025	0 ... 25 kg/cm <sup>2</sup> abs	50 kg/cm <sup>2</sup> abs

	± measuring range	Overload limit
1X0	-1 ... 0 kg/cm <sup>2</sup>	2 kg/cm <sup>2</sup>
2X5	-1 ... +1.5 kg/cm <sup>2</sup>	3 kg/cm <sup>2</sup>
4X0	-1 ... +3 kg/cm <sup>2</sup>	6 kg/cm <sup>2</sup>
6X0	-1 ... +5 kg/cm <sup>2</sup>	10 kg/cm <sup>2</sup>
010	-1 ... +9 kg/cm <sup>2</sup>	18 kg/cm <sup>2</sup>
016	-1 ... +15 kg/cm <sup>2</sup>	30 kg/cm <sup>2</sup>
025	-1 ... +24 kg/cm <sup>2</sup>	48 kg/cm <sup>2</sup>

## 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:

Contacts and other locations –[www.sick.com](http://www.sick.com)