

Electronic Pressure Switch

BPS1000

Features

- Developed in accordance with railway standard EN50155
- Designed for increased electromagnetic compatibility
- For pressure control applications with increased ambient load
- With internal membrane
- Switch point accuracy $\pm 0.5\%$

Measuring ranges

- 0...10 bar to 0... 400 bar gauge

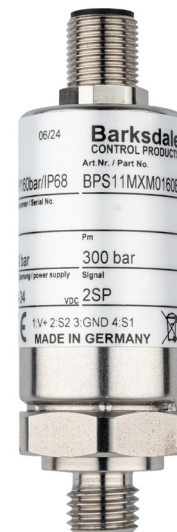
Applications

- OEM applications
- Hydraulic and Pneumatics
- Railway applications

General Specifications

Sensor element	Ceramic sensor
Materials: Wetted parts Electronics housing Plug	Stainless steel, mat. no. 1.4301, FKM, Ceramic Stainless steel, mat. no. 1.4301 Brass nickel coated, polyamid 6.6
System of protection	IP68 with mating connector
Protection class	III
Process connection	M12 x 1.5 male, G1/4 B male (Manometer)
Dimensions	Ø 31 (SW27) x 70 (in screwed-in condition)
Weight	approx. 125 g
Overpressure [bar]	1.5 x FSO
Burst pressure	3 x FSO
Electrical connection	M12, 4-pin
Switch point resolution	0.1 bar
Operating cycles / life time	8 mio cycles / 10 years
Switch point accuracy*	$\pm 0.5\%$ FSO
Long term stability	$\pm 0.1\%$ FSO (per year / typical)
Compensated temperature range	-10 °C ... +70 °C
Temperature range: Medium Electronics Storage	-40 °C ... 85 °C -40 °C ... 80 °C -40 °C ... 85 °C

*includes temperature error, repeatability, hysteresis



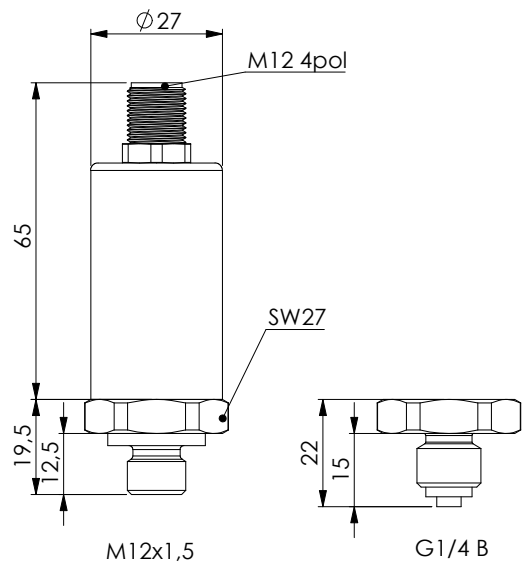
Transistor switching outputs	
Switching function	Normally open/normally closed, standard / window mode and diagnosis function adjustable
Adjustment range for switching point and hysteresis	0% ... 125% f. s.
Switching frequency	max. 100 Hz
Load	max. 500 mA/output, short-circuit proof
Delay	0.0 s ... 50 s adjustable
Power supply	8 - 33,6 V DC, reversed porarity protected (SELV, PELV)
Insulation test	750 V DC 1 min
Insulation resistance test	500 V DC 2 s, max 3 mA, R ≥ 500 MΩ
Power consumption	max. 40 mA
Response time	≤ 2 ms
Shock / Vibration	30g / 4g - successfully tested according to EN50155
EMV / ESD**	Basic norm EMC EN 50121-3-2:2016+A1:2019
	EN 61000-4-2 ESD 12 kV CD / 15 kV AD
	EN 61000-4-3 HF radiated 30 V/m
	EN 61000-4-4 Burst 4 kV
	EN 61000-4-5 Surge 2 kV
	EN 61000-4-6 HF conducted 20 V

**only valid when the housing is grounded

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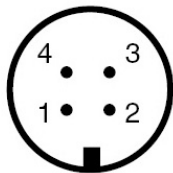
BPS1000

Sizes and dimensions



Plug

4-pin



Process connections

G1/4 B according to DIN EN 837-1
M12 x 1.5

Connection table

Pin	Output
1	+ UB
2	SP2
3	0V
4	SP1

Order code

Base model				
BPS1				
Output	2 Switch points			
	Process connection			
	8	G1/4" form B male, Manometer connection		
	M	M12 x 1.5		
	Seal			
	X	without seal		
	Electrical connection			
	M	M12, 4-pin		
	Pressure Ranges			
		0010B	0 ... 10 bar	
	0050B	0 ... 50 bar		
	0100B	0 ... 100 bar		
	0160B	0 ... 160 bar		
	0200B	0 ... 200 bar		
	0400B	0 ... 400 bar		
	XXXXB	other pressure ranges on request		
Example				
BPS1	1	8	X	M
				0200B