

DS 217

Pressure Switch with welded Stainless Steel Sensor

Characteristics:

- ▶ accuracy according to EN IEC 62828-2: 0.5 % span
- ▶ nominal pressure ranges from 0 ... 6 bar up to 0 ... 600 bar
- ▶ 1 analogue output and up to 2 contacts
- ▶ display and housing rotatable
- ▶ suitable for oxygen applications



Technical Data



Input pressure range												
Nominal pressure gauge [bar]	6	10	16	25	40	60	100	160	250	400	600	
Overpressure (static) [bar]	12	20	32	50	80	120	200	320	500	800	1 200	
Burst pressure \geq [bar]	30	50	80	125	200	300	500	800	1 400	2 000	3 000	
Vacuum resistance	unlimited											
Contact												
Number / type	standard: 1 PNP contact, 1 analogue output optionally: max. 2 independent PNP contact; 1 analogue output											
Switching current	standard: contact rating max. 125 mA, short-circuit resistant											
Accuracy of switching points ¹	$\leq \pm 1.5$ % span											
Repeatability	$\leq \pm 0.5$ % span											
Switching frequency	max. 10 Hz											
Switching cycles	$> 100 \times 10^6$											
Delay time	0 ... 100 sec											
Analogue output (optionally) / Supply												
3-wire current signal	4 ... 20 mA / $V_S = 24 V_{DC} \pm 10$ %											
Accuracy ¹	$\leq \pm 0.5$ % span											
Permissible load	3-wire: $R_{max} = 500 \Omega$											
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / k Ω											
Measuring rate	10 Hz											
¹ accuracy according to EN IEC 62828-2 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (Offset and Span) / Permissible temperatures												
Thermal error	$\leq \pm 0.5$ % span / 10 K in compensated range -25 ... 85 °C											
Permissible temperatures	medium: -25 ... 125 °C electronics / environment: -25 ... 85 °C storage: -40 ... 85 °C											
Electrical protection												
Short-circuit protection	permanent											
Reverse polarity protection	no damage, but also no function											
Electromagnetic compatibility	emission and immunity according to EN 61326											

Mechanical stability		
Vibration	10 g (25 ... 2000 Hz) according to DIN EN 60068-2-6	
Shock	500 g / 1 msec according to DIN EN 60068-2-27	
Materials		
Pressure port / housing	stainless steel 1.4571 (316 Ti) / stainless steel 1.4301 (304)	
Display housing	PA 6.6, polycarbonate	
Seal sensor	none (welded)	
Diaphragm	stainless steel 1.4542 (17-4PH)	
Media wetted parts	pressure port, seal pressure port, diaphragm	
Miscellaneous		
Weight	approx. 160 g	
Display	4-digit, red LED display, digit height 7 mm, digit width 4.85 mm (angle 10°); range of indication -1999 ... +9999; accuracy 0.1% ± 1 digit; digital damping 0.3 ... 30 sec (programmable); measured value update 0.0 ... 10 sec (programmable)	
Long term stability	≤ ± 0.3 % span / year at reference conditions	
Operational life	100 million load cycles	
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ²	
² This directive is only valid for devices with maximum permissible overpressure > 200 bar.		
Wiring diagrams		
3-wire-system (current)		
Pin configuration		
Electrical connections	M12x1 (5-pin) plastic	
supply +	1	
supply -	3	
signal + (only for 3-wire)	2	
contact 1	4	
contact 2	5	
shield	via pressure port	
Connections (dimensions in mm)		
	Mechanical connections - optional 	Rotatability of display module
<p>G1/2" EN 837</p>	<p>1/4" NPT</p>	<p>top view</p>

The manufacturer provides the EU declaration of conformity.

Calibration - All production undergoes output control, which is performed by comparison with standards. The traceability of standards and working gauges is ensured in accordance with Act No. 505/1990, as amended, on metrology.

The manufacturer offers the possibility to supply sensors calibrated in the calibration laboratory of BD SENSORS, accredited according to ČSN EN ISO / IEC 17025: 2018.

Ordering code DS 217

15.01.2024

DS 217

Measured pressure	
Gauge	7 8 P
Input [bar]	
0 ... 6	6 0 0 1
0 ... 10	1 0 0 2
0 ... 16	1 6 0 2
0 ... 25	2 5 0 2
0 ... 40	4 0 0 2
0 ... 60	6 0 0 2
0 ... 100	1 0 0 3
0 ... 160	1 6 0 3
0 ... 250	2 5 0 3
0 ... 400	4 0 0 3
0 ... 600	6 0 0 3
Customer	9 9 9 9
Customer - underpressure	X X X X
Analogue output	
4 ... 20 mA / 2-wire	1
Customer	9
Switching output	
1 switching contact	1
2 switching contacts	2
Accuracy	
0,5%	5
Customer	9
Electrical connection	
Connector M 12 x 1 (5-pin)	N 0 1
Customer	9 9 9
Mechanical connection	
G 1/2" EN 837	2 0 0
G 1/4" DIN 3852	3 0 0
G 1/4" EN 837	4 0 0
1/4" NPT	N 4 0
7/16 - 20 UNF	U 0 0
Customer	9 9 9
Seals	
Without - welded	2
Customer	9
Special version	
Standard	0 0 0
Oxygen application	0 0 7
Customer	9 9 9

0,-...without additional charge On request...in accordance with the producer

Surcharges for calibration are not subject to any discounts. Subject to change.

This document contains the specification for ordering the product;

detailed technical parameters of the product and its possible variants are given in the data sheet.

BD SENSORS reserves the right to change sensor specifications without further notice.



BD SENSORS s.r.o.
Hradišťská 817
CZ – 687 08 Buchlovice

Tel.: +420 572 411 011
Fax: +420 572 411 497

www.bdsensors.cz
info@bdsensors.cz

Společnost BD SENSORS s.r.o. je certifikována společností TÜV SÜD Czech dle normy ISO 9001.

