

DS 217

Pressure Switch with welded Stainless Steel Sensor

Characteristics:

- ▶ accuracy according to IEC 60770:
0.5 % FSO
- ▶ 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 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		$\leq \pm 1.5$ % FSO											
Repeatability		$\leq \pm 0.5$ % FSO											
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		$\leq \pm 0.5$ % FSO											
Permissible load		$R_{max} = 500 \Omega$											
Influence effects		supply: 0.05 % FSO / 10 V							load: 0.05 % FSO / k Ω				
Measuring rate		10 Hz											
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)													
Thermal effects (offset and span)													
Thermal error		$\leq \pm 0.5$ % FSO / 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											

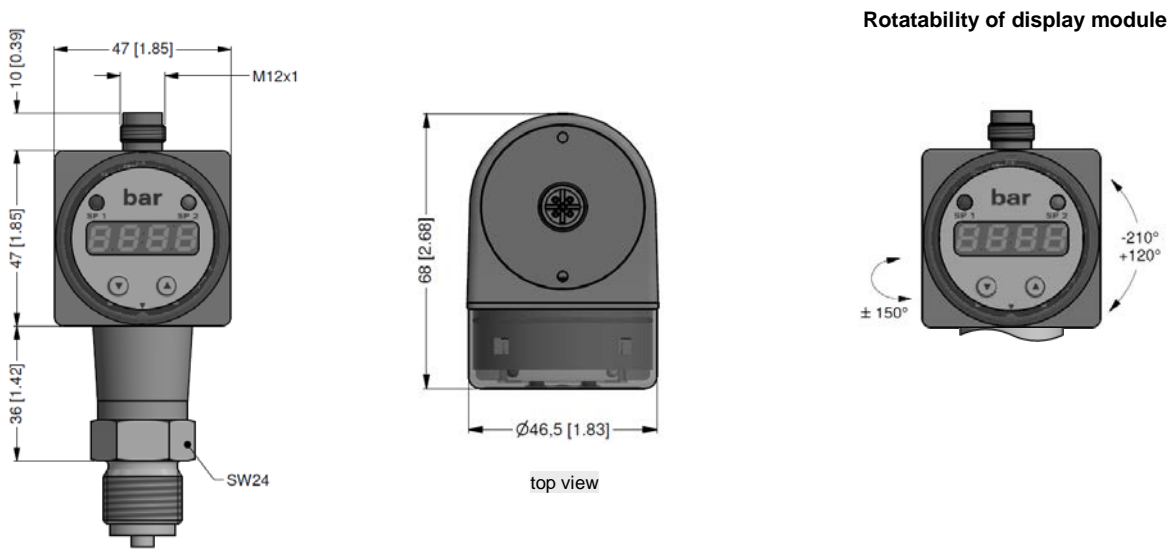
Mechanical stability		
Vibration	10 g (25 ... 2000 Hz)	according to DIN EN 60068-2-6
Shock	500 g / 1 msec	according to DIN EN 60068-2-27
Materials		
Pressure port / housing	stainless steel 1.4571 (316 Ti) / stainless steel 1.4301 (304)	
Display housing	PA 6.6, polycarbonate	
Seal sensor	none (welded)	
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 % FSO / 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.

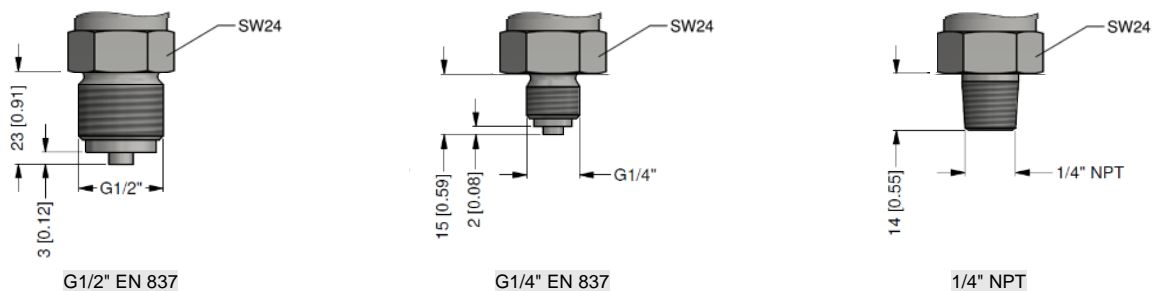
Wiring diagram / pin configuration

<p>3-wire-system (current)</p>	Electrical connections	M12x1, plastic (5-pin)	
	Supply + Supply - Signal + (only 3-wire) Contact 1 Contact 2 Shield	1 3 2 4 5 via pressure port	

Dimensions (mm / in)



Mechanical connection (dimensions mm / in)



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Ordering code DS 217

DS 217

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Pressure																				
	gauge	7	8	P																
Input																				
	[bar]																			
	6				6	0	0	1												
	10				1	0	0	2												
	16				1	6	0	2												
	25				2	5	0	2												
	40				4	0	0	2												
	60				6	0	0	2												
	100				1	0	0	3												
	160				1	6	0	3												
	250				2	5	0	3												
	400				4	0	0	3												
	600				6	0	0	3												
	customer				9	9	9	9												consult
Analogue output																				
	without analogue output							0												
	4 ... 20 mA / 3-wire							7												
	customer							9												consult
Contact																				
	1 contact								1											
	2 contacts								2											
Accuracy																				
	0.5 % FSO								5											
	customer								9											consult
Electrical connection																				
	male plug M12x1 (5-pin) / plastic version									N	0	1								
	customer									9	9	9								consult
Mechanical connection																				
	G 1/2" EN837									2	0	0	2							
	G1/4" EN 837									4	0	0	2							
	1/4" NPT									N	4	0	2							
	customer									9	9	9	9							consult
Special version																				
	standard																			0 0 0
	oxygen application																			0 0 7
	customer																			9 9 9

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