



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



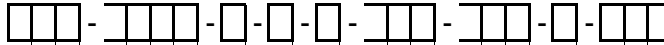
Input pressure range														
Nominal pressure gauge	[bar]	6	10	16	25	40	60	100	160	250	400	600		
Overpressure (static)	[bar]	14	35	35	70	140	140	350	350	700	1 200	1 200		
Burst pressure \geq	[bar]	28	70	70	140	280	280	700	700	1 400	1 500	1 500		
Vacuum resistance		unlimited												
Output signal / Supply														
Analogue output														
Standard		without analogue output												
Option		3-wire: 4 ... 20 mA / $V_S = 24 V_{DC} \pm 10\%$												
Accuracy ¹		$\leq \pm 0.5\%$ FSO												
Permissible load		3-wire: $R_{max} = 500 \Omega$												
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)														
Contact (standard)														
Number / type		standard: 1 PNP contact option: max. 2 independent PNP contact; 1 analogue output												
Switching current		standard: contact rating max. 500 mA, short-circuit resistant												
Accuracy of switching points		$\leq \pm 1.5\%$ FSO												
Repeatability		$\leq \pm 0.5\%$ FSO												
Switching frequency		max. 10 Hz												
Switching cycles		$> 100 \times 10^6$												
Delay time		0 ... 100 sec												
Thermal effects (Offset and Span) / Permissible temperatures														
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	
CE-conformity	EMC Directive: 2004/108/EC	Pressure Equipment Directive: 97/23/EC (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	

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

Ordering code DS 217

DS 217



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
										consult