

IDS 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

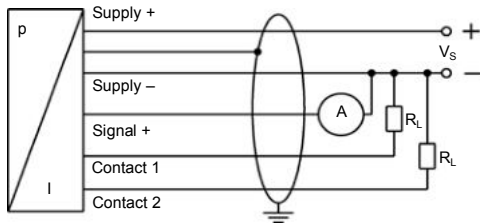
Input pressure range													
Nominal pressure gauge	[bar]	6	10	16	25	40	60	100	160	250	400	600	
Overpressure (static)	[bar]	14	35	35	70	140	140	350	350	700	1 200	1 200	
Burst pressure \geq	[bar]	28	70	70	140	280	280	700	700	1 400	1 500	1 500	
Vacuum resistance		unlimited											
Contact													
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 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		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)													
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

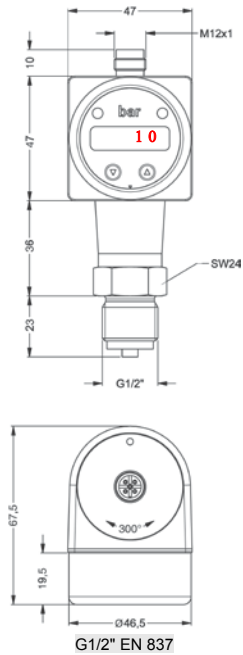
3-wire-system (current)



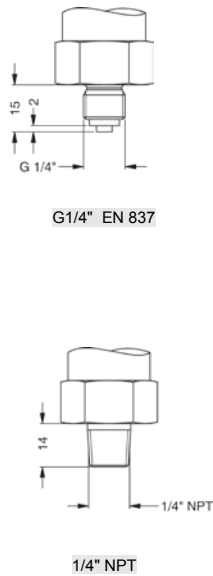
Pin configuration

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

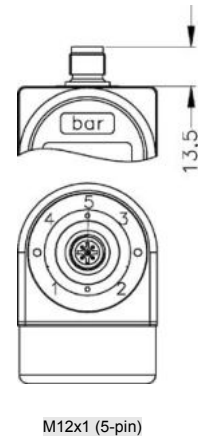
Connections (dimensions in mm)



Mechanical connections - optional



Electronical connections



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