



DS 217

Pressure Switch with welded Stainless Steel Sensor

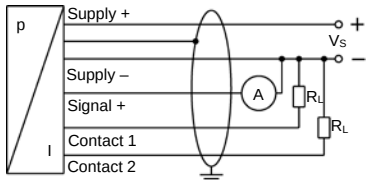
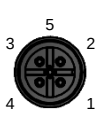
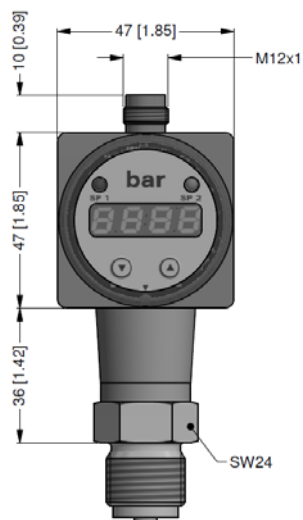
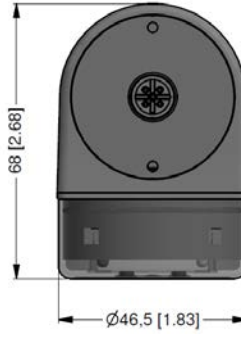
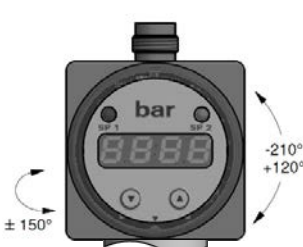
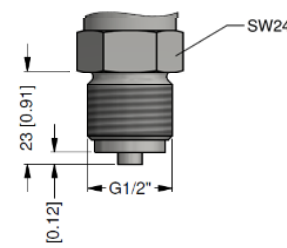
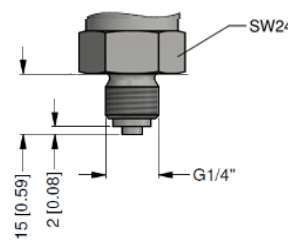
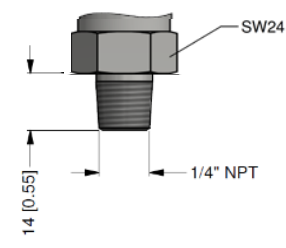
Characteristics:

- ▶ 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 ≥	[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		≤ ± 1.5 % FSO										
Repeatability		≤ ± 0.5 % FSO										
Switching frequency		max. 10 Hz										
Switching cycles		> 100 x 10 ⁶										
Delay time		0 ... 100 sec										
Analogue output (optionally) / Supply												
3-wire current signal		4 ... 20 mA / V _S = 24 V _{DC} ± 10 %										
Accuracy ¹		≤ ± 0.5 % FSO										
Permissible load		R _{max} = 500 Ω										
Influence effects		supply: 0.05 % FSO / 10 V							load: 0.05 % FSO / kΩ			
Measuring rate		10 Hz										
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (offset and span)												
Thermal error		≤ ± 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			
3-wire-system (current) 	Electrical connections	M12x1, plastic (5-pin)	
	Supply +	1	
	Supply -	3	
	Signal + (only 3-wire)	2	
	Contact 1	4	
Contact 2	5		
	Shield	via pressure port	
Dimensions (mm / in)			
  top view  Rotatability of display module			
Mechanical connection (dimensions mm / in)			
 G1/2" EN 837  G1/4" EN 837  1/4" NPT			