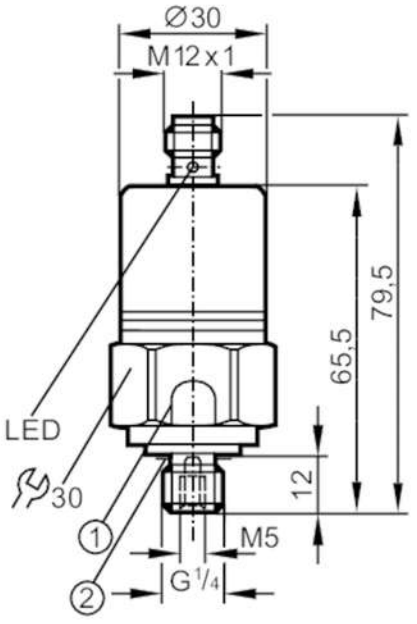
PP0521

Pressure switch with ceramic measuring cell

PP-250-SBG14-QFNKG/US/ /V



1 pressure relief mechanism
- No mechanical force must be exerted on the pressure relief mechanism.
2 Sealing

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	0...250 bar	0...3625 psi	0...25 MPa
Process connection	threaded connection G 1/4 external thread internal thread:M5		
Application			
Application	for industrial applications		
Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...90		
Min. bursting pressure	850 bar	12300 psi	85 MPa
Pressure rating	400 bar	5800 psi	40 MPa
Type of pressure	relative pressure		
Electrical data			
Operating voltage [V]	9.6...36 DC; (communication mode: 18...32)		
Current consumption [mA]	< 45		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Power-on delay time [s]	0.3		
Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 2		
Outputs			
Total number of outputs	2		

PP0521

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Output signal			switching signal	
Electrical design			NPN	
Number of digital outputs			2	
Output function			normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC	[V]		2	
Permanent current rating of switching output DC	[mA]		250	
Switching frequency DC	[Hz]		170	
Short-circuit protection			yes	
Type of short-circuit protection			pulsed	
Overload protection			yes	
Measuring/setting range				
Measuring range		0...250 bar	0...3625 psi	0...25 MPa
Set point SP		2...250 bar	40...3620 psi	0.2...25 MPa
Reset point rP		1...249 bar	20...3600 psi	0.1...24.9 MPa
In steps of		1 bar	20 psi	0.1 MPa
Factory setting			SP1 = 63 bar	rP1 = 58 bar
			SP2 = 188 bar	rP2 = 183 bar
			OUT1 = Hno	OUT2 = Hno
Accuracy / deviations				
Switch point accuracy	[% of the span]		< ± 0,5	
Repeatability	[% of the span]		< ± 0,1; (with temperature fluctuations < 10 K)	
Characteristics deviation	[% of the span]		< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)	
Hysteresis deviation	[% of the span]		< ± 0,1	
Long-term stability	[% of the span]		< ± 0,1; (per year)	
Temperature coefficient zero point	[% of the span / 10 K]		< ± 0,2; (0...80 °C)	
Temperature coefficient span	[% of the span / 10 K]		< ± 0,2; (0...80 °C)	
Response times				
Response time	[ms]		< 3	
Damping process value dAP in steps	[s]		0,003 - 0,006 - 0,010 - 0,017 - 0,060 - 0,125 - 0,250 - 0,500	
Operating conditions				
Ambient temperature	[°C]		-25...85	
Storage temperature	[°C]		-40...100	
Protection			IP 68; (7 days / 1 m water depth / 0.1 bar)	

PP0521

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Tests / approvals			
EMC		immunity	EN 61000-6-2
		EN 61000-4-2 ESD	4 kV contact discharge / 15 kV air discharge
		EN 61000-4-3 HF radiated	20 V/m
		EN 61000-4-4 Burst	4 kV coupling clamp
		EN 61000-4-5 Surge	0,5 kV supply / 1 kV signal for DC units
		EN 61000-4-6 HF conducted	30 V
Shock resistance		DIN IEC 60068-2-27 / DIN IEC 60068-2-29	1000 g
		DIN EN 61373	category 3
Vibration resistance		DIN IEC 68-2-6	20 g (10...2000 Hz)
		DIN EN 60068-2-64	14 g
		DIN EN 61373	category 2
MTTF	[years]	309	
UL approval		UL Approval no.	J010
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	226	
Housing		cylindrical	
Dimensions	[mm]	Ø 30 / L = 79.5	
Materials		stainless steel (304/1.4301); FKM; EPDM/X; PA	
Materials (wetted parts)		stainless steel (303/1.4305); ceramics; FKM	
Min. pressure cycles		100 million	
Process connection		threaded connection G 1/4 external thread internal thread:M5	
Restrictor element integrated		no (can be retrofitted)	
Displays / operating elements			
Display		operation	2 x LED, green
		switching status	2 x LED, yellow
Teach function		yes	
Remarks			
Pack quantity		1 pcs.	

Electrical connection

Connector: 1 x M12; coding: A

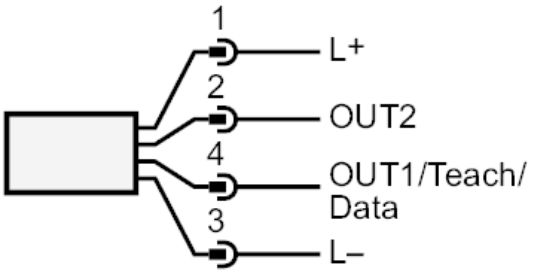


PP0521

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Connection



OUT1	switching output
OUT2	switching output
	Diagnostic output