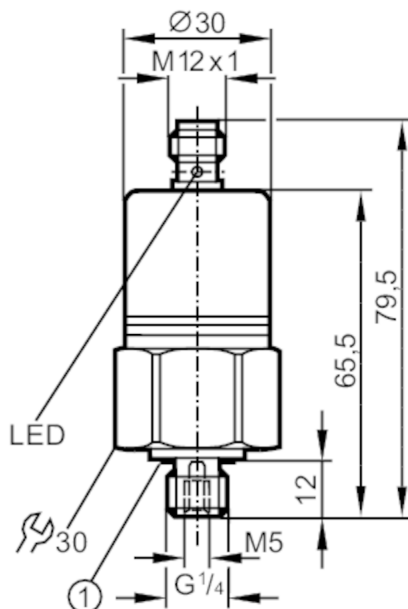




Pressure switch with ceramic measuring cell

PP-060-SBG14-QFPKG/US/ IV



1 Sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	0...60 bar	0...871 psi	0...6 MPa
Process connection	threaded connection G 1/4 external thread internal thread:M5		

Application

Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-25...90		
Min. bursting pressure	500 bar	7200 psi	50 MPa
Pressure rating	200 bar	3000 psi	20 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
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Outputs

Total number of outputs	2
Output signal	switching signal; (configurable)
Electrical design	PNP



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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...60 bar	0...871 psi	0...6 MPa
Set point SP	1...60 bar	15...871 psi	0.1...6 MPa
Reset point rP	0.7...59.7 bar	11...866 psi	0.07...5.97 MPa
In steps of	0.1 bar	1 psi	0.01 MPa
Factory setting		SP1 = 15 bar	rP1 = 13.8 bar
		SP2 = 45 bar	rP2 = 43.8 bar
		OUT1 = Hno	OUT2 = Hno

Accuracy / deviations	
Switch point accuracy [% of the span]	< ± 0,8
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)
Characteristics deviation [% of the span]	< ± 0,4 (BFSL) / < ± 0,8 (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 69K; IP 68; (7 days / 1 m water depth / 0.1 bar)



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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	10 V
	immunity	according to the automotive directive 1995/54/EC / 04/104EG / 05/83/EG
Shock resistance	absorber chamber test to ISO 11452-2:	80 V/m
	EN 50155	Klasse T3, C1, S1
	DIN IEC 60068-2-27 / DIN IEC 60068-2-29	1000 g
Vibration resistance	DIN EN 61373	category 3
	DIN IEC 68-2-6	20 g (10...2000 Hz)
	DIN EN 60068-2-64	14 g
	DIN EN 61373	category 2
MTTF	[years]	308
UL approval	File number UL	E174189
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight	[g]	211.1
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		
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Connector: 1 x M12; coding: A



PP7523



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Connection



OUT1	switching output
OUT2	switching output
	Diagnostic output