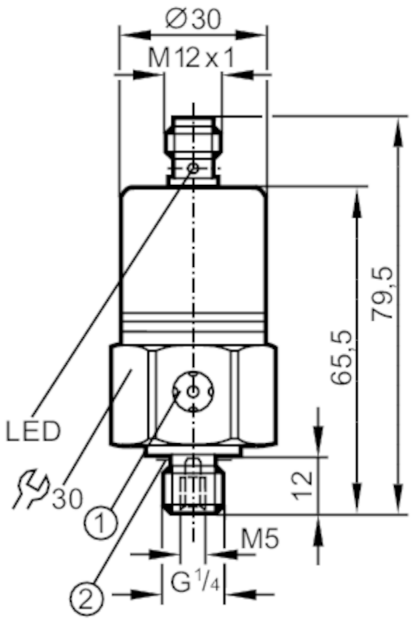
PP7554

Pressure switch with ceramic measuring cell

PP-010-RBG14-QFPKG/US/ /V



1 ventilation
2 Sealing

Product characteristics				
Number of inputs and outputs		Number of digital outputs: 2		
Measuring range		-1...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
Process connection		threaded connection G 1/4 external thread internal thread:M5		
Application				
Application		for mobile applications; for industrial applications; for railway applications		
Media		liquids and gases		
Medium temperature	[°C]	-25...90		
Min. burst pressure		150 bar	2175 psi	15 MPa
Pressure rating		75 bar	1087 psi	7.5 MPa
Type of pressure		relative pressure; vacuum		
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		
Output signal		switching signal; IO-Link; (configurable)		

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Electrical design		PNP		
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		-1...10 bar	-14.5...145 psi	-100...1000 kPa / -0.1...1 MPa
Set point SP		-0.9...10 bar	-13...145 psi	-0.09...1 MPa
Reset point rP		-0.95...9.95 bar	-14...144 psi	-0.095...0.995 MPa
In steps of		0.05 bar	1 psi	0.005 MPa
Factory setting			SP1 = 2.50 bar	rP1 = 2.30 bar
			SP2 = 7.50 bar	rP2 = 7.30 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)		
Zero-point stabilisation	[% of the span]	switching output, display	1,0	
Zero-point stabilisation	[% of the span]	IO-Link	1,0; (see operating instructions zero-point behaviour)	
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		
Interfaces				
Communication interface		IO-Link		
Transmission type		COM2 (38,4 kBaud)		
IO-Link revision		1.0		

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SIO mode		yes	
Required master port type		A	
Process data analogue		1	
Process data binary		2	
Min. process cycle time	[ms]	2.3	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	6
Operating conditions			
Ambient temperature	[°C]	-25...85	
Storage temperature	[°C]	-40...100	
Protection		IP 68; (7 days / 1 m water depth / 0.1 bar)	
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
		absorber chamber test to ISO 11452-2:	80 V/m
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]	310	
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Railway applications		DIN EN 50155	Klasse T3, C1, S1
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			
Remarks		with reference to UL: "limited voltage" with overcurrent protection in accordance with UL508	
Pack quantity		1 pcs.	

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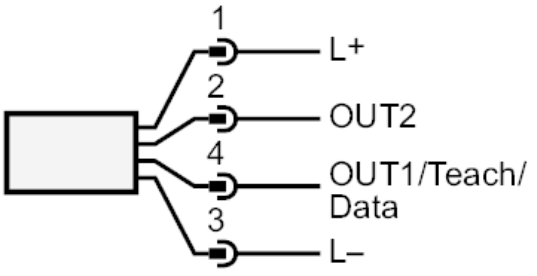
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4



Connection



OUT1	switching output
OUT2	switching output Diagnostic output