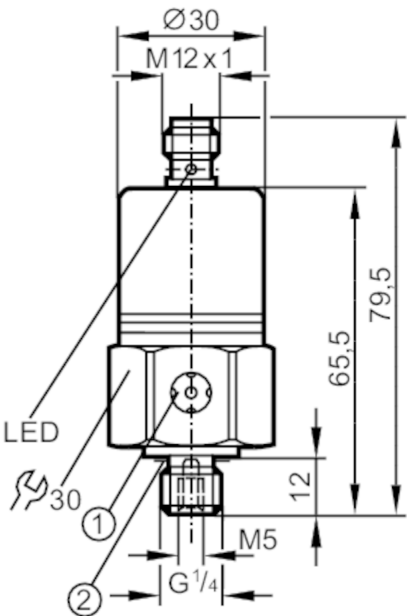


PP7554



Pressure switch with ceramic measuring cell

PP-010-RBG14-QFPKG/US/ IV



- 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 / closed; (configurable)
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	yes (non-latching)
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 stabilization [% of the span]	Switching output, Display 1,0
Zero-point stabilization [% of the span]	IO-Link 1,0; (see operating instructions zero-point behavior)
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)

Reaction times

Response time [ms]	< 3
Damping process value dAP [s] in steps	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 class	A				
Process data analog	1				
Process data binary	2				
Min. process cycle time [ms]	2.3				
Supported DeviceIDs	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>6</td></tr> </table>	Type of operation	DeviceID	default	6
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	noise 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
	noise 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	tubular	
Dimensions [mm]	Ø 30 / L = 79.5	
Material	stainless steel (1.4301 / 304); FKM; EPDM/X; PA	
Materials (wetted parts)	stainless steel (1.4305 / 303); 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	Power	2 x LED, green
	Switching status	2 x LED, yellow
Teach function	yes	

Remarks		
Remarks	referring to UL: "limited voltage" with overcurrent protection in accordance with UL508	
Pack quantity	1 pcs.	

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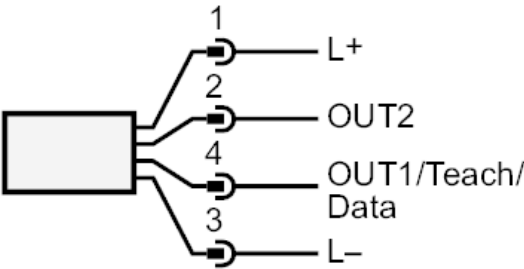
PP-010-RBG14-QFPKG/US/ IV

Electrical connection

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



Connection



OUT1	Switching output
OUT2	Switching output
	Diagnostic output