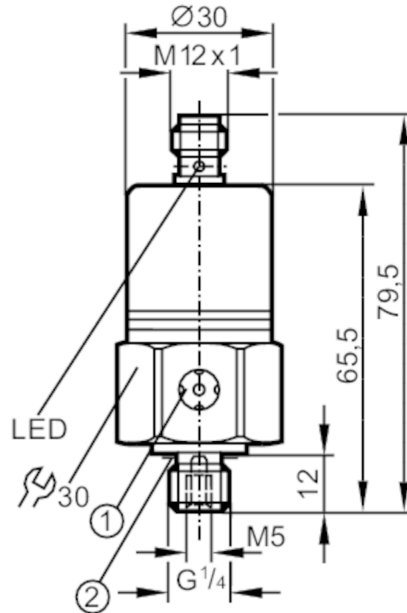


PP7556



Pressure switch with ceramic measuring cell

PP-2,5-RBG14-QFPKG/US/ IV



- 1 ventilation
- 2 Sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2			
Measuring range	0...2.5 bar	0...2500 mbar	0...36.3 psi	0...250 kPa
Process connection	threaded connection G 1/4 external thread internal thread:M5			

Application

Application	for industrial applications; for railway applications		
Media	liquids and gases		
Medium temperature [°C]	-25...90		
Min. burst pressure	50 bar	725 psi	5000 kPa
Pressure rating	20 bar	290 psi	2000 kPa
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; 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	0...2.5 bar	0...2500 mbar	0...36.3 psi	0...250 kPa
Set point SP	0.02...2.5 bar	0.4...36.2 psi	2...250 kPa	
Reset point rP	0.01...2.49 bar	0.2...36 psi	1...249 kPa	
In steps of	0.01 bar	0.2 psi	1 kPa	
Factory setting		SP1 = 0.63 bar	rP1 = 0.58 bar	
		SP2 = 1.88 bar	rP2 = 1.83 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	7

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]	227
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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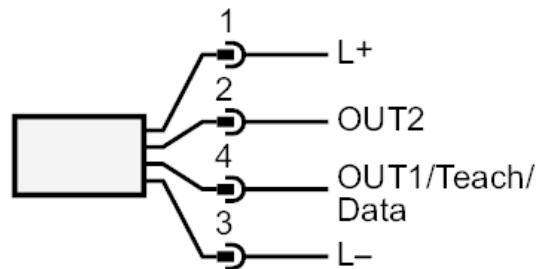
PP-2,5-RBG14-QFPKG/US/ IV

Electrical connection

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



Connection



OUT1	switching output
OUT2	switching output
	Diagnostic output