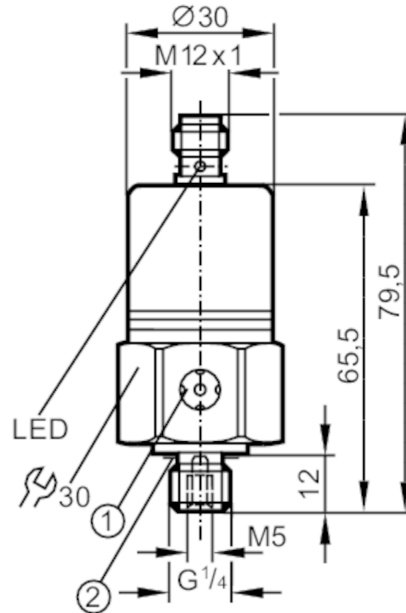


# PP004E



## 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		
Media	liquids and gases		
Medium temperature [°C]	-25...90		
Min. bursting 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)

# PP004E



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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)
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
Profiles	no profile
SIO mode	yes
Required master port type	A
Process data analogue	1

# PP004E



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Process data binary		2
Min. process cycle time	[ms]	2.3
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	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	ECE R 10, Rev. 5
	absorber chamber test to ISO 11452-2:	80 V/m
	EN 50155	Klasse T3, C1, S1
	Shock resistance	DIN IEC 60068-2-27 / DIN IEC 60068-2-29
	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

Mechanical data		
Weight	[g]	224
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.

# PP004E



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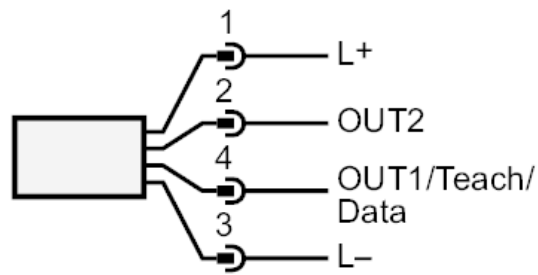
PP-010-RBG14-QFPKG/US/ IV

### Electrical connection

Connector: 1 x M12; coding: A



### Connection



OUT1	switching output
OUT2	switching output
	Diagnostic output