

PP003E



Pressure switch with ceramic measuring cell

PP-025-RBG14-QFPKG/US/ IV



- 1 ventilation
- 2 sealing



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	0...25 bar	0...363 psi	0...2.5 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	350 bar	5075 psi	35 MPa
Pressure rating	150 bar	2175 psi	15 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		
Outputs			
Total number of outputs	2		
Output signal	switching signal; IO-Link; (configurable)		



Pressure switch with ceramic measuring cell

PP-025-RBG14-QFPKG/US/ IV

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	0...25 bar	0...363 psi	0...2.5 MPa
Set point SP	0.2...25 bar	4...362 psi	0.02...2.5 MPa
Reset point rP	0.1...24.9 bar	2...360 psi	0.01...2.49 MPa
In steps of	0.1 bar	2 psi	0.01 MPa
Factory setting		SP1 = 6.3 bar	rP1 = 5.8 bar
		SP2 = 18.8 bar	rP2 = 18.3 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)

Reaction 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 class	A
Process data analog	1

PP003E



Pressure switch with ceramic measuring cell

PP-025-RBG14-QFPKG/US/ IV

Process data binary	2	
Min. process cycle time [ms]	2.3	
Supported DeviceIDs	Type of operation	DeviceID
	default	5
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	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]	223.5	
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.	

PP003E



Pressure switch with ceramic measuring cell

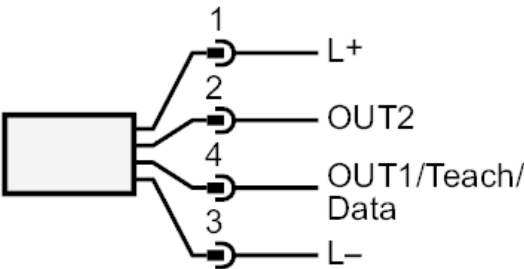
PP-025-RBG14-QFPKG/US/ IV

Electrical connection

Connector: 1 x M12; coding: A



Connection



OUT1	Switching output
OUT2	Switching output
	Diagnostic output