

PP7550



Pressure switch with ceramic measuring cell

PP-400-SBG14-QFPKG/US/ IV



- 1 Pressure relief mechanism
No mechanical force must be exerted on the pressure relief mechanism.
- 2 sealing



Product characteristics

Output signal	switching signal; IO-Link; (configurable)		
Measuring range	0...400 bar	0...5800 psi	0...40 MPa
Process connection	threaded connection G 1/4 external thread Internal thread:M5		

Application

Application	for industrial applications		
Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...90		
Min. bursting pressure	1000 bar	14500 psi	100 MPa
Pressure rating	600 bar	8700 psi	60 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
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Outputs				
Total number of outputs		2		
Output signal		switching signal; IO-Link; (configurable)		
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...400 bar	0...5800 psi	0...40 MPa
Set point SP		4...400 bar	60...5790 psi	0.4...40 MPa
Reset point rP		2...398 bar	30...5760 psi	0.2...39.8 MPa
In steps of		2 bar	30 psi	0.2 MPa
Factory setting			SP1 = 100 bar	rP1 = 92 bar
			SP2 = 300 bar	rP2 = 292 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 for the switching output dAP in steps [s]		0,003 - 0,006 - 0,010 - 0,017 - 0,060 - 0,125 - 0,250 - 0,500		

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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	
Process data binary	2	
Min. process cycle time [ms]	2.3	
Supported DeviceIDs	Type of operation	DeviceID
	default	2
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
	EN 50155	Klasse T3, C1, S1
	DIN IEC 60068-2-27 / DIN IEC 60068-2-29	1000 g
Shock resistance	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]	218	
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	yes	
Displays / operating elements		
Display	Power	2 x LED, green
	Switching status	2 x LED, yellow
Teach function	yes	

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Remarks

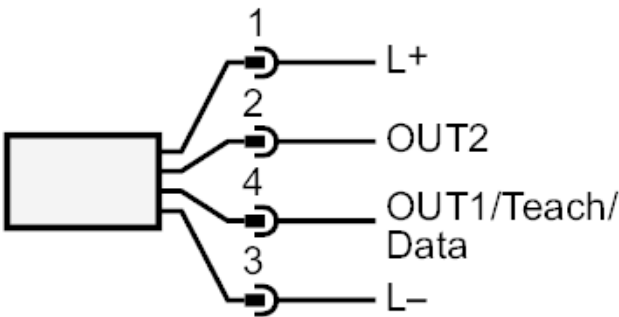
Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12



Connection



OUT1	Switching output
OUT2	Switching output
	Diagnostic output