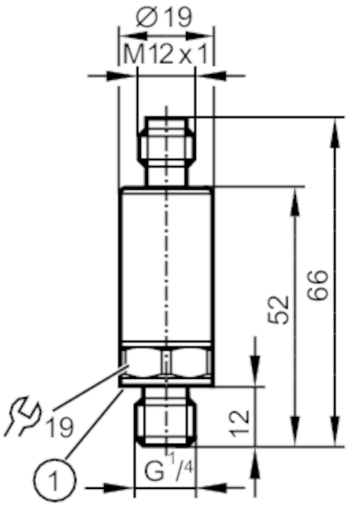
PV7002

Pressure switch with IO-Link

PV-100-SEG14-UFRVG/US/ /



1 Sealing

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Process connection	threaded connection G 1/4 external thread (DIN EN ISO 1179-2); internal thread:M5		
Application			
Measuring element	metallic thin film cell		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-40...90		
Min. bursting pressure	1000 bar	14500 psi	100 MPa
Pressure rating	250 bar	3625 psi	25 MPa
Note on pressure rating	static		
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
Electrical data			
Operating voltage [V]	18...30 DC		
Current consumption [mA]	< 15		
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)		
Electrical design	PNP/NPN		

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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]	100		
Switching frequency DC	[Hz]	< 170		
Short-circuit protection		yes		
Type of short-circuit protection		pulsed		
Overload protection		yes		
Measuring/setting range				
Measuring range		0...100 bar	0...1450 psi	0...10 MPa
Set point SP		1...100 bar	15...1450 psi	0.1...10 MPa
Reset point rP		0.5...99.5 bar	7...1443 psi	0.05...9.95 MPa
In steps of		0.05 bar	1 psi	0.005 MPa
Factory setting		SP1 = 25 bar	rP1 = 23 bar	ou1 = Hno;
		SP2 = 75 bar	rP2 = 73 bar	ou2 = Hno;
		dS1/dS2 = 0 ms	dr1/dr2 = 0 ms	
		coF = 0 %	P-n = PnP	dAP= 60 ms
Accuracy / deviations				
Switch point accuracy	[% of the span]	< ± 0,5 (nach DIN EN 61298-2)		
Repeatability	[% of the span]	< ± 0,05; (with temperature fluctuations < 10 K)		
Characteristics deviation	[% of the span]	< ± 0,5; (linearity incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)		
Linearity deviation	[% of the span]	< ± 0,1 (BFSL) / < ± 0,2 (LS)		
Hysteresis deviation	[% of the span]	< ± 0,2		
Long-term stability	[% of the span]	< ± 0,1; (per 6 months)		
Temperature coefficient zero point	[% of the span / 10 K]	< 0,1 (-25...90 °C) / < 0,2 (-40...-25 °C)		
Temperature coefficient span	[% of the span / 10 K]	< 0,1 (-25...90 °C) / < 0,2 (-40...-25 °C)		
Response times				
Response time	[ms]	< 3		
Software / programming				
Parameter setting options		hysteresis / window; normally open / normally closed; switching logic; switch-on/switch-off delay; Damping		
Interfaces				
Communication interface		IO-Link		
Transmission type		COM2 (38,4 kBaud)		
IO-Link revision		1.1		
SDCI standard		IEC 61131-9		

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Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
SIO mode		yes	
Required master port type		A	
Process data analogue		2	
Process data binary		2	
Min. process cycle time	[ms]	5	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	710

Operating conditions			
Ambient temperature	[°C]	-40...90	
Storage temperature	[°C]	-40...100	
Protection		IP 67; IP 69K	

Tests / approvals			
EMC		DIN EN 61326-1	
Shock resistance		DIN EN 60068-2-27	500 g (1 ms)
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF	[years]	667.77	
UL approval		UL Approval no.	J016
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight	[g]	63
Materials		stainless steel (630/1.4542/17-4 PH); stainless steel (316L/1.4404); PEI
Materials (wetted parts)		stainless steel (303/1.4305); stainless steel (630/1.4542/17-4 PH)
Min. pressure cycles		60 million; (at 1.2 times nominal pressure)
Tightening torque	[Nm]	25...35; (recommended tightening torque; depends on lubrication, seal and pressure rating)
Process connection		threaded connection G 1/4 external thread (DIN EN ISO 1179-2); internal thread:M5
Process connection sealing		FKM (DIN EN ISO 1179-2)
Restrictor element integrated		yes

Remarks	
Remarks	BFSL = Best Fit Straight Line
	LS = limit value setting
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A

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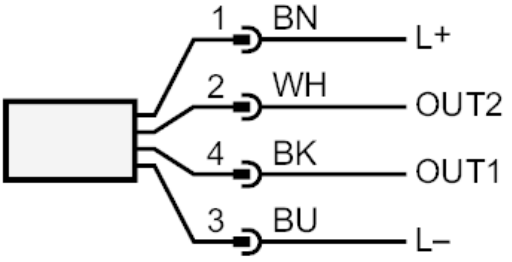
Connection



OUT1	switching output IO-Link
OUT2	switching output
	colours to DIN EN 60947-5-2
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white