

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. burst pressure	1000 bar	14500 psi	100 MPa
Pressure rating	250 bar	3625 psi	25 MPa
Note on pressure rating	static		
Vacuum resistance	-1000 mbar	-0.1 MPa	
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
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Outputs

Total number of outputs	2
Output signal	switching signal; IO-Link; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2



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Output function	normally open / closed; (configurable)		
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	yes (non-latching)		
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)

Reaction times	
Response time [ms]	< 3

Software / programming	
Parameter setting options	hysteresis / window; normally open / 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 - SSP 0		Generic Profiled Sensor
	Function	Device identification	
	Function	Process data variable	
	Function	Device diagnosis	
SIO mode	yes		
Required master port class	A		
Process data analog	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 number	J016	
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request		
Mechanical data			
Weight [g]	63		
Housing	tubular		
Dimensions [mm]	Ø 19 / L = 66		
Material	stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PEI		
Materials (wetted parts)	stainless steel (1.4305 / 303); 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.		

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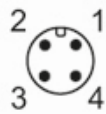


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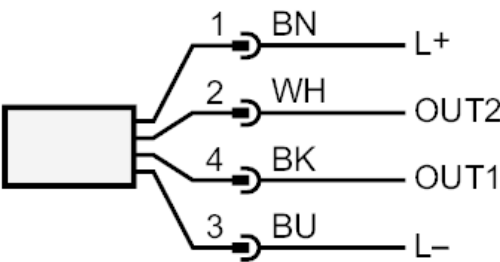
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Electrical connection

Connector: 1 x M12; coding: A



Connection



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