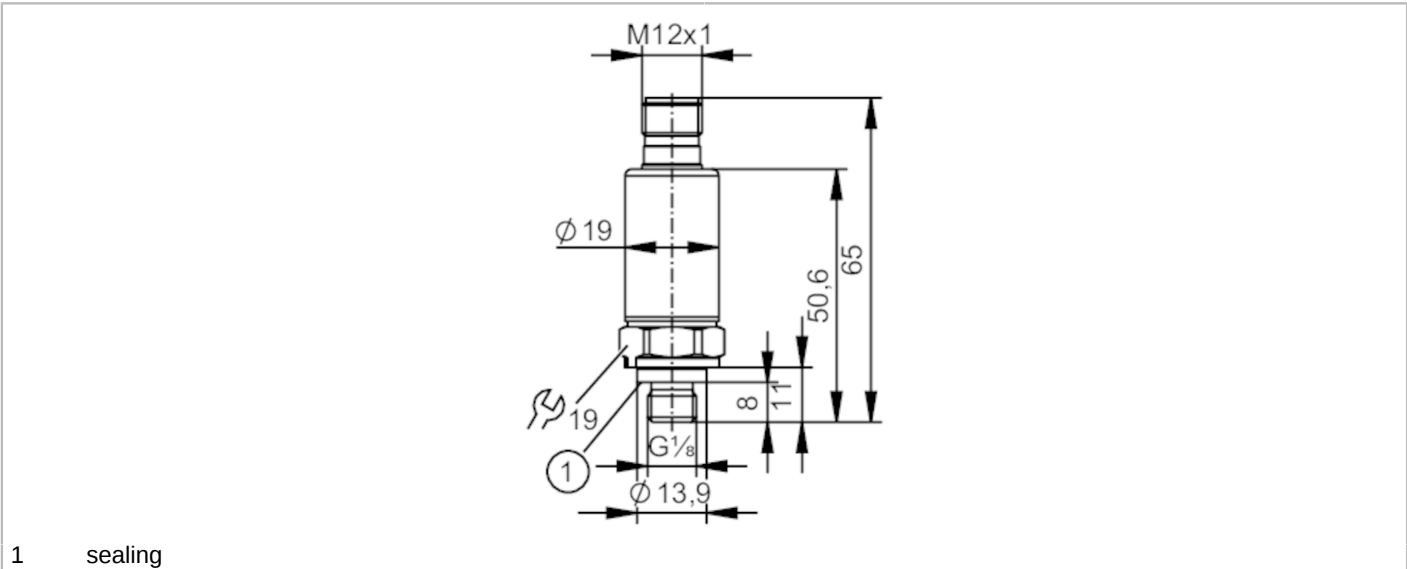


PV7809



Pressure switch with IO-Link

PV-1-1-REG18-UFRVG/US/ I



1 sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2				
Measuring range	-1...1 bar	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa	-0.1...0.1 MPa
Process connection	threaded connection G 1/8 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	200 bar	2900 psi	20 MPa
Pressure rating	15 bar	217 psi	1.5 MPa
Note on pressure rating	static		
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure; vacuum		

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]	< 60

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



Pressure switch with IO-Link

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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]	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	-1...1 bar	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa	-0.1...0.1 MPa
Set point SP	-0.98...1 bar	-980...1000 mbar	-14.2...14.5 psi	-98...100 kPa	-0.098...0.1 MPa
Reset point rP	-0.99...0.99 bar	-990...990 mbar	-14.4...14.4 psi	-99...99 kPa	-0.099...0.099 MPa
In steps of	0.001 bar	1 mbar	0.1 psi	0.1 kPa	0.0001 MPa
Factory setting	SP1 = -500 mbar		rP1 = -540 mbar		ou1 = Hno;
	SP2 = 500 mbar		rP2 = 460 mbar		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]	< ± 1,5 (nach DIN EN 61298-2)
Repeatability [% of the span]	< ± 0,15; (with temperature fluctuations < 10 K)
Characteristics deviation [% of the span]	< ± 1,5; (linearity incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation [% of the span]	< ± 0,2 (BFSL) / < ± 0,4 (LS)
Zero-point stabilization [% of the span]	IO-Link, 0; (see operating instructions zero-point behavior)
	Switching output 0,75
Hysteresis deviation [% of the span]	< ± 0,4
Long-term stability [% of the span]	< ± 0,2; (per 6 months)
Temperature coefficient zero point [% of the span / 10 K]	< 0,3 (-25...90 °C)
Temperature coefficient span [% of the span / 10 K]	< 0,2 (-25...90 °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

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Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
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	1830
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	
UL approval	UL approval number	J015
	File number UL	E174189
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight [g]	54.3	
Housing	tubular	
Dimensions [mm]	Ø 19 / L = 66	
Material	Process connection , measuring cell: stainless steel (630/1.4542/17-4 PH); M12-plug: stainless steel (1.4404 / 316L); M12-plug: acrylate, PEI; ventilation diaphragm: PTFE	
Materials (wetted parts)	Process connection , measuring cell: stainless steel (630/1.4542/17-4 PH); sealing: FKM	
Min. pressure cycles	60 million; (at 1.2 times nominal pressure)	
Tightening torque [Nm]	20...25; (recommended tightening torque; Depends on lubrication, seal and pressure rating)	
Process connection	threaded connection G 1/8 external thread DIN EN ISO 1179-2 Internal thread:M5	
Process connection sealing	FKM (DIN EN ISO 1179-2)	
Restrictor element integrated	no	
Remarks		
Remarks	BFSL = Best Fit Straight Line	
	LS = limit value setting	
Pack quantity	1 pcs.	

PV7809



Pressure switch with IO-Link

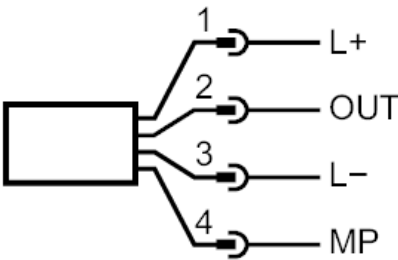
PV-1-1-REG18-UFRVG/US/ I

Electrical connection

Connector: 1 x M12; coding: A



Connection



1	L+	
2	OUT	DO2 (NO/NC)
3	L-	
4	MP	DO1 (NO/NC), IO-Link