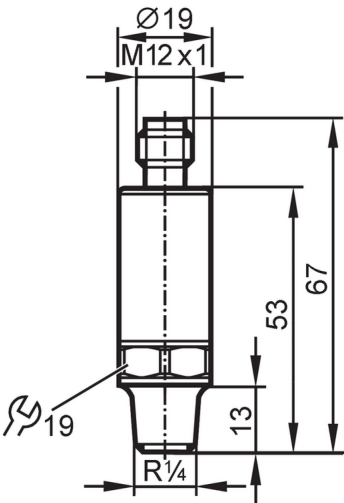


PV2102



Pressure switch with IO-Link

PV-100MSER14-UFRVG/US/ /



Product characteristics			
Number of inputs and outputs		Number of digital outputs: 2	
Measuring range [MPa]		0...10	
Process connection		threaded connection R 1/4 external thread 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 [MPa]		100	
Pressure rating [MPa]		25	
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	
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 [MPa]	0...10		
Set point SP [MPa]	0.1...10		
Reset point rP [MPa]	0.05...9.95		
In steps of [MPa]	0.005		
Factory setting	SP1 = 2 MPa	rP1 = 1.95 MPa	ou1 = Hno;
	SP2 = 2 MPa	rP2 = 1.95 MPa	ou2 = Hnc;
	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	543

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]	668	
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]	55	
Housing	tubular	
Dimensions [mm]	Ø 19 / L = 67	
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]	50; (recommended tightening torque; Depends on lubrication, seal and pressure rating)	
Process connection	threaded connection R 1/4 external thread Internal thread:M5	
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; Contacts: 4



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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