

PV7604



Pressure switch with IO-Link

PV-010-SEN14-UFRVG/US/ I



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	-1...10 bar	-14.5...145 psi	-100...1000 kPa -0.1...1 MPa
Process connection	threaded connection 1/4" NPT 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. bursting pressure	300 bar	4350 psi	30 MPa
Pressure rating	25 bar	360 psi	2.5 MPa
Note on pressure rating	static		
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure; vacuum		
MAWP (for applications according to CRN) [bar]	25		
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		

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Output signal	switching signal; IO-Link; (configurable)
Electrical design	PNP/NPN
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...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
Set point SP	-0.9...10 bar	-13.1...145 psi	-0.09...1 MPa	
Reset point rP	-0.95...9.95 bar	-13.8...144.3 psi	-0.095...0.995 MPa	
In steps of	0.005 bar	0.1 psi	0.0005 MPa	
Factory setting	SP1 = 2.5 bar	rP1 = 2.3 bar	ou1 = Hno;	
	SP2 = 7.5 bar	rP2 = 7.3 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)

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IO-Link revision	1.1				
SDCI standard	IEC 61131-9				
Profiles	Smart Sensor: Process Data Variable; Device Identification, 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	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>855</td></tr> </table>	Type of operation	DeviceID	default	855
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default	855				

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 J015
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request

Mechanical data	
Weight [g]	66
Housing	tubular
Dimensions [mm]	Ø 18.9 / L = 66.9
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 1/4" NPT 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



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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