

PV7023



Pressure switch with IO-Link

PV-060-SEG14-UFRVG/US/ I



1 Sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	0...60 bar	0...870 psi	0...6 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	900 bar	13050 psi	90 MPa
Pressure rating	150 bar	2175 psi	15 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



Pressure switch with IO-Link

PV-060-SEG14-UFRVG/US/ I

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...60 bar	0...870 psi	0...6 MPa
Set point SP	0.6...60 bar	9...870 psi	0.06...6 MPa
Reset point rP	0.3...59.7 bar	4...866 psi	0.03...5.97 MPa
In steps of	0.02 bar	1 psi	0.002 MPa
Factory setting	SP1 = 15 bar	rP1 = 13.8 bar	ou1 = Hno;
	SP2 = 45 bar	rP2 = 43.8 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



Pressure switch with IO-Link

PV-060-SEG14-UFRVG/US/ /

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	711

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.	J015
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





Pressure switch with IO-Link

PV-060-SEG14-UFRVG/US/ /

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