

PV7001



Pressure switch with IO-Link

PV-250-SEG14-UFRVG/US/ I



1 Sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	0...250 bar	0...3626 psi	0...25 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	1200 bar	17400 psi	120 MPa
Pressure rating	625 bar	9060 psi	62.5 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-250-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...250 bar	0...3626 psi	0...25 MPa
Set point SP	2.5...250 bar	37...3626 psi	0.25...25 MPa
Reset point rP	1.3...248.8 bar	18...3608 psi	0.13...24.88 MPa
In steps of	0.1 bar	1 psi	0.01 MPa
Factory setting	SP1 = 62.5 bar SP2 = 187.5 bar dS1/dS2 = 0 ms coF = 0 %	rP1 = 57.5 bar rP2 = 182.5 bar dr1/dr2 = 0 ms P-n = PnP	ou1 = Hno; ou2 = Hno; 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

PV7001



Pressure switch with IO-Link

PV-250-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	709

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.	J016
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight [g]	64.5	
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



PV7001



Pressure switch with IO-Link

PV-250-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