

PV7004



Pressure switch with IO-Link

PV-010-REG14-UFRVG/US /



1 Sealing



Application

Measuring element	metallic thin film cell
Application	for industrial applications
Media	liquids and gases
Medium temperature [°C]	-40...90
Pressure rating [bar]	25
Note on pressure rating	static
Min. bursting pressure [bar]	300
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
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Outputs			
Total number of outputs		2	
Output signal		switching signal; IO-Link; (configurable)	
Electrical design		PNP/NPN	
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	[bar]	-1...10	
Set point SP	[bar]	-0.9...10	
Reset point rP	[bar]	-0.95...9.95	
In steps of	[bar]	0.005	
Factory setting		SP1 = 2.5 bar	rP1 = 2.3 bar
		SP2 = 7.5 bar	rP2 = 7.3 bar
		dS1/dS2 = 0 ms	dr1/dr2 = 0 ms
		coF = 0 %	P-n = PnP
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 (nach DIN EN 61298-2); (incl. drift when overtightened, zero point and span error, non-linearity, hysteresis)	
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	

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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	
IO-Link device ID	713 d / 00 02 c9 h	
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

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
Pressure Equipment Directive	Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight	[g]	60.2
Materials	1.4542 (17-4 PH / 630); stainless steel (1.4404 / 316L); PEI	
Materials (wetted parts)	stainless steel (1.4305 / 303); 1.4542 (17-4 PH / 630)	
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 (to DIN 3869)	
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



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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