

# PV7023



## Pressure switch with IO-Link

PV-060-SEG14-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]	150
Note on pressure rating	static
Min. bursting pressure [bar]	900
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]	0...60		
Set point SP [bar]	0.6...60		
Reset point rP [bar]	0.3...59.7		
In steps of [bar]	0.02		
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 (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	711 d / 00 02 c7 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]	64
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



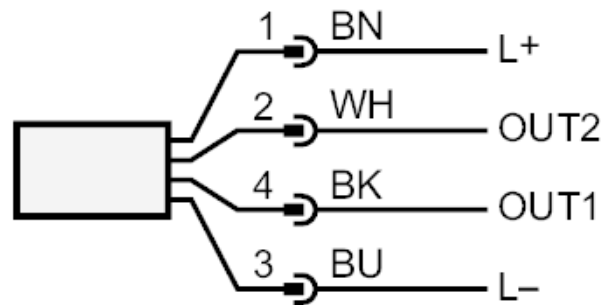
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### Connection



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