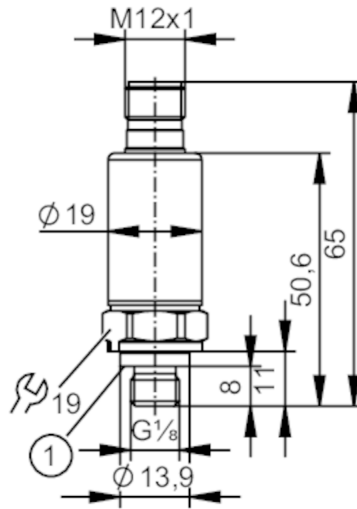


# PV7804



## Pressure switch with IO-Link

PV-010-REG18-UFRVG/US/ /



1 sealing



### 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 G 1/8 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. burst 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		

### 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
Number of digital outputs	2

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## Pressure switch with IO-Link

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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	-90...1000 kPa	-0.09...1 MPa
Reset point rP	-0.95...9.95 bar	-13.8...144.3 psi	-95...995 kPa	-0.095...0.995 MPa
In steps of	0.005 bar	0.1 psi	0.5 kPa	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)
Zero-point stabilization [% of the span]	IO-Link, 0,25; (see operating instructions zero-point behavior)
	Switching output 0,5
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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## Pressure switch with IO-Link

PV-010-REG18-UFRVG/US /

IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	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	<b>Type of operation</b>	<b>DeviceID</b>
	default	727

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	
UL approval	UL approval number	J015
	File number UL	E174189
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight [g]	55	
Housing	tubular	
Dimensions [mm]	Ø 19 / L = 66	
Material	Process connection: stainless steel (630/1.4542/17-4 PH); measuring cell: stainless steel (630/1.4542/17-4 PH); plug: stainless steel (1.4404 / 316L); plug: acrylate, PEI; ventilation diaphragm: PTFE	
Materials (wetted parts)	Process connection: stainless steel (630/1.4542/17-4 PH); measuring cell: stainless steel (630/1.4542/17-4 PH); sealing: FKM	
Min. pressure cycles	60 million; (at 1.2 times nominal pressure)	
Tightening torque [Nm]	20...25; (recommended tightening torque; Depends on lubrication, seal and pressure rating)	
Process connection	threaded connection G 1/8 external thread DIN EN ISO 1179-2 Internal thread:M5	
Process connection sealing	FKM (DIN EN ISO 1179-2)	
Restrictor element integrated	no	

Remarks		
Remarks	BFSL = Best Fit Straight Line	
	LS = limit value setting	
Pack quantity	1 pcs.	

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## Pressure switch with IO-Link

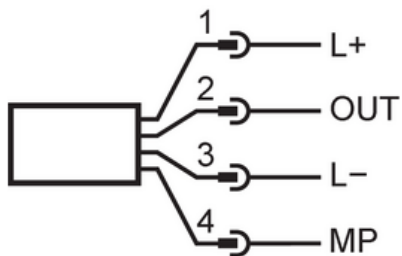
PV-010-REG18-UFRVG/US/ /

### Electrical connection

Connector: 1 x M12; coding: A



### Connection



1	L+	
2	OUT	DO2 (NO/NC)
3	L-	
4	MP	DO1 (NO/NC), IO-Link