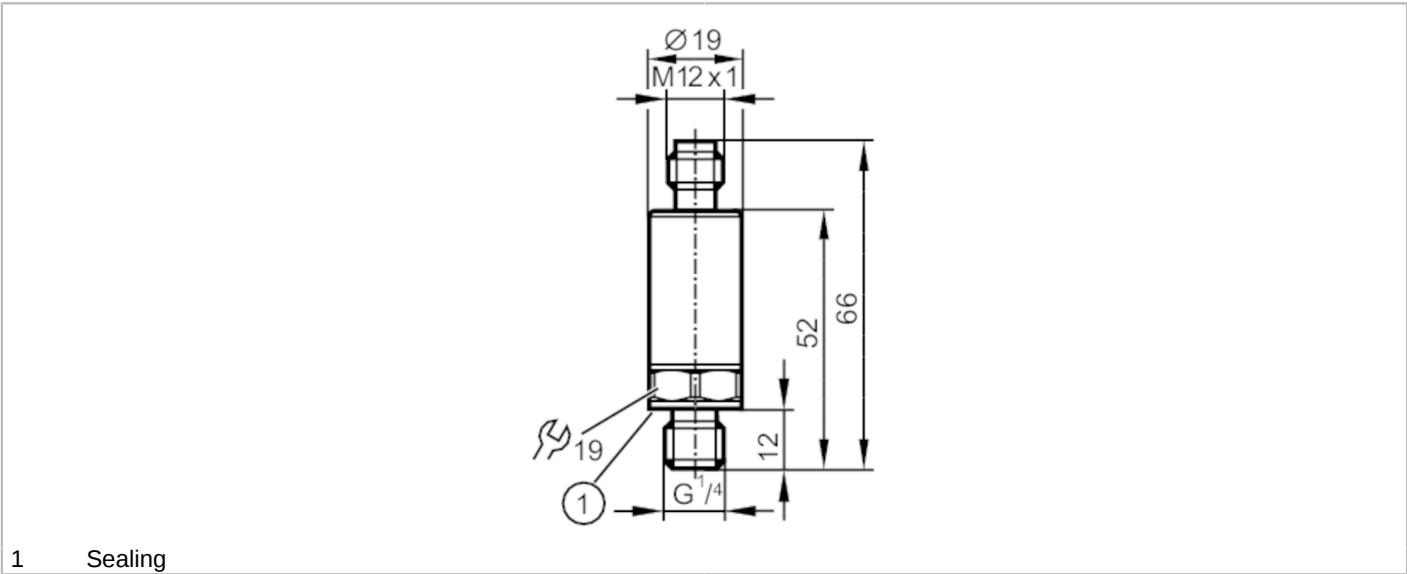




Pressure switch with IO-Link

PV-010-REG14-UFRVG/US/ I



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 1/4 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. 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



Pressure switch with IO-Link

PV-010-REG14-UFRVG/US/ I

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	-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	-0.09...1 MPa	
Reset point rP	-0.95...9.95 bar	-13.8...144.3 psi	-0.095...0.995 MPa	
In steps of	0.005 bar	0.1 psi	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]	< ± 0,8 (-25...65 °C); < ± 1,5 (-40...90 °C); (DIN EN 61298-2)	
Repeatability [% of the span]	< ± 0,05; (with temperature fluctuations < 10 K)	
Characteristics deviation [% of the span]	< ± 0,8 (-25...65 °C); < ± 1,5 (-40...90 °C); (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 stabilisation [% of the span]	IO-Link	1,0; (see operating instructions zero-point behaviour)
	switching output	1,0
Hysteresis deviation [% of the span]	< ± 0,2	
Long-term stability [% of the span]	< ± 0,1; (per 6 months)	
Temperature coefficient zero point and span [% of the span / 10 K]	< 0,25 (-40...90 °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-010-REG14-UFRVG/US /

Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	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	713

Operating conditions		
Ambient temperature [°C]		-40...90
Storage temperature [°C]		-40...100
Protection		IP 67; IP 69

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 no.	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]		58
Housing		cylindrical
Dimensions [mm]		Ø 19 / L = 66
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 the lubrication, the seal and the pressure load)	
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 - plug

Connector: 1 x M12; coding: A; Contacts: 4



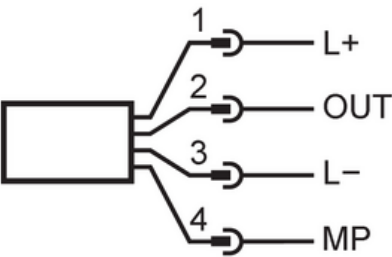
PV2504



Pressure switch with IO-Link

PV-010-REG14-UFRVG/US/ /

Connection



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

DO: digital output; MP: multi-function connection