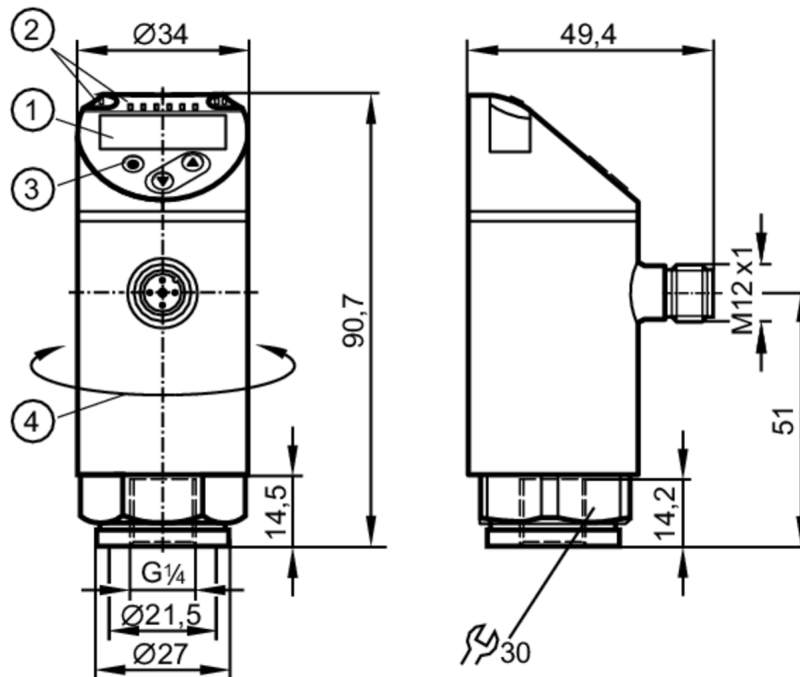


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Pressure sensor with display

PN-010-RER14-QFRKG/US/ IV



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / switching status
- 3 programming button
- 4 upper part of the housing can be rotated 345°



Product characteristics

Output signal	switching signal; IO-Link; (configurable)	
Measuring range	-100...1000 kPa	-0.1...1 MPa
Process connection	threaded connection G 1/4 internal thread	

Application

Special feature	Gold-plated contacts
Measuring element	ceramic-capacitive pressure measuring cell
Application	for industrial applications
Media	liquids and gases
Medium temperature [°C]	-25...80
Pressure rating [MPa]	7.5
Min. bursting pressure [MPa]	15
Type of pressure	relative pressure; vacuum

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Electrical data		
Operating voltage [V]	18...30 DC; (according to EN 50178 SELV/PELV)	
Current consumption [mA]	< 35	
Min. insulation resistance [MΩ]	100; (500 V DC)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	< 0.3	
Integrated watchdog	yes	
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	
Output function	normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC [V]	2.5	
Permanent current rating of switching output DC [mA]	150; (200 (...60 °C) 250 (...40 °C))	
Switching frequency DC [Hz]	< 170	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Measuring/setting range		
Measuring range	-100...1000 kPa	-0.1...1 MPa
Factory setting / CMPT = 2		
Set point SP [MPa]	-0.09...1	
Reset point rP [MPa]	-0.095...0.995	
Min. difference between SP and rP [MPa]	0.005	
In steps of [MPa]	0.005	
Status_B High Resolution / CMPT = 3		
Set point SP [MPa]	-0.092...1	
Reset point rP [MPa]	-0.097...0.995	
Min. difference between SP and rP [MPa]	0.005	
In steps of [MPa]	0.001	
Accuracy / deviations		
Switch point accuracy [% of the span]	< ± 0,5	
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)	
Characteristics deviation	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)	

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	[% of the span]	
Hysteresis deviation	[% of the span]	< ± 0,25
Long-term stability	[% of the span]	< ± 0,05; (per 6 months)
Temperature coefficient zero point	[% of the span / 10 K]	< ± 0,2; (-0...80 °C)
Temperature coefficient span	[% of the span / 10 K]	< ± 0,2; (-0...80 °C)
Response times		
Response time	[ms]	< 3
Delay time programmable dS, dr	[s]	0...50
Software / programming		
Parameter setting options	hysteresis / window; normally open / normally closed; switching logic; switch-on/switch-off delay; Damping; Display unit	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
SIO mode	yes	
Required master port type	A; (when pin 2 not connected: B)	
Supported DeviceIDs	Type of operation	DeviceID
	Factory setting / CMPT = 2	439 d / 00 01 b7 h
	Status_B High Resolution / CMPT = 3	624 d / 00 02 70 h
Note	For further information please see the IODD PDF file at "Downloads"	
Factory setting / CMPT = 2		
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
Min. process cycle time	[ms]	2.3
IO-Link resolution pressure	[MPa]	0.001
IO-Link resolution pressure	[MPa]	0.001
IO-Link functions (cyclical)	function	bit length
	pressure	14
	binary switching information	2
IO-Link functions (acyclical)	application specific tag	

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Status_B High Resolution / CMPT = 3		
Profiles	Smart Sensor ED2: Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)	
Min. process cycle time [ms]	3	
IO-Link resolution pressure [MPa]	0.001	
IO-Link resolution pressure [MPa]	0.001	
IO-Link functions (cyclical)	function	bit length
	pressure	16
	device status	4
	binary switching information	2
IO-Link functions (acyclical)	application specific tag	
Operating conditions		
Ambient temperature [°C]	-25...80	
Storage temperature [°C]	-40...100	
Protection	IP 65; IP 67	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF [years]	260	
UL approval	UL Approval no.	J001
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight [g]	226	
Materials	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)	stainless steel (1.4404 / 316L); ceramics; FKM	
Min. pressure cycles	100 million	
Tightening torque [Nm]	25...35; (recommended tightening torque; depends on lubrication, seal and pressure rating)	
Process connection	threaded connection G 1/4 internal thread	
Restrictor element integrated	no (can be retrofitted)	
Displays / operating elements		
Display	Display unit	3 x LED, green (MPa)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, red/green 4-digit
Remarks		
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		

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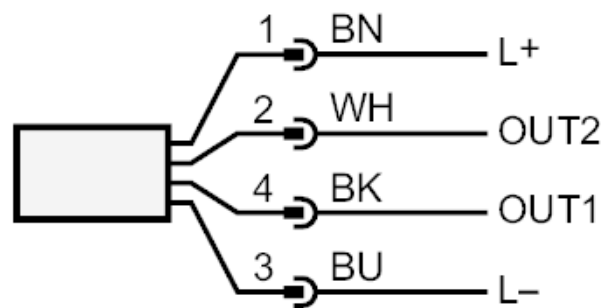


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Connection



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