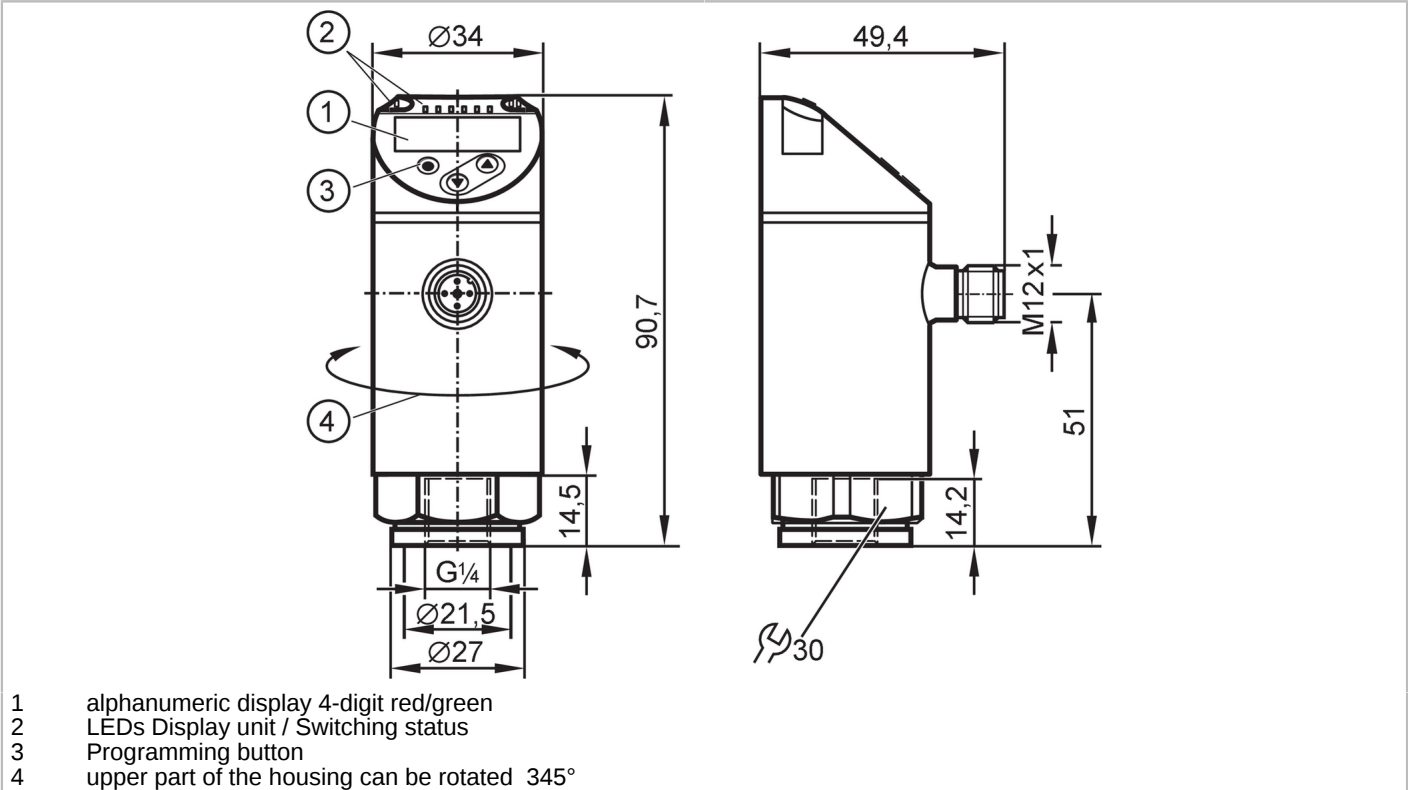


PN7015



Pressure sensor with display

PN-006-RER14-QFRKG/US/ IV



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	-1...6 bar	-14.5...87 psi	100...600 kPa
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			
Min. burst pressure	100 bar	1500 psi	10000 kPa	10 MPa
Pressure rating	40 bar	600 psi	4000 kPa	4 MPa
Vacuum resistance	-1000 mbar		-0.1 MPa	
Type of pressure	relative pressure; vacuum			

Electrical data

Operating voltage [V]	18...30 DC; (to 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			

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Pressure sensor with display

PN-006-RER14-QFRKG/US/ IV

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 / closed; (configurable)		
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		yes (non-latching)		
Overload protection		yes		
Measuring/setting range				
Measuring range		-1...6 bar	-14.5...87 psi	100...600 kPa
Set point SP		-0.95...6 bar	-13.8...87 psi	-95...600 kPa -0.09...1 MPa
Reset point rP		-0.98...5.97 bar	-14.2...86.6 psi	-98...597 kPa -0.095...0.995 MPa
Min. difference between SP and rP		0.03 bar	0.5 psi	3 kPa
In steps of		0.001 bar	0.1 psi	1 kPa
Accuracy / deviations				
Switch point accuracy [% of the span]		< ± 0,5		
Repeatability [% of the span]		< ± 0,1; (with temperature fluctuations < 10 K)		
Characteristics deviation [% of the span]		< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)		
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)		
Reaction times				
Response time [ms]		< 3		
Delay time programmable dS, dr [s]		0...50		
Damping process value dAP [s]		0...4		
Software / programming				
Parameter setting options		hysteresis / window; normally open / closed; switching logic; switch-on/switch-off delay; Damping; Display unit		



Pressure sensor with display

PN-006-RER14-QFRKG/US/ IV

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 3.1	Measuring Sensor
	Common - I&D	Identification and Diagnosis
SIO mode	yes	
Required master port class	A; (when pin 2 not connected: B)	
Process data analog	1	
Process data binary	2	
Min. process cycle time [ms]	3	
IO-Link resolution pressure [bar]	0.002	
IO-Link process data (cyclical)	Function	bit length
	pressure	16
	device status	4
	binary switching information	2
IO-Link functions (acyclical)	application specific tag	
Supported DeviceIDs	Type of operation	DeviceID
	default	1199
Note	For further information please see the IODD PDF file at "Downloads"	
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]	249	
UL approval	UL approval number	J001
	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]	244	
Housing	tubular	
Dimensions [mm]	Ø 34 / L = 90.7	
Material	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)	stainless steel (1.4404 / 316L); Al2O3 (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)	

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Pressure sensor with display

PN-006-RER14-QFRKG/US/ IV

Displays / operating elements		
Display	Display unit	3 x LED, green (bar, psi, MPa)
	Switching status	2 x LED, yellow
	Measured values	alphanumeric display, red/green 4-digit

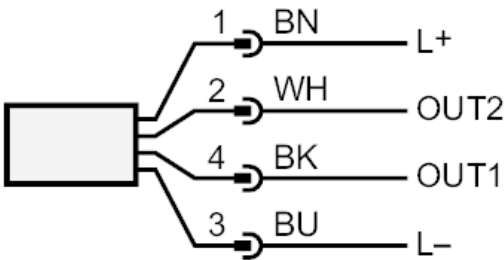
Remarks	
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



OUT1	Switching output IO-Link
OUT2	Switching output Colors to DIN EN 60947-5-2 Core colors :
BK =	black
BN =	brown
BU =	blue
WH =	white