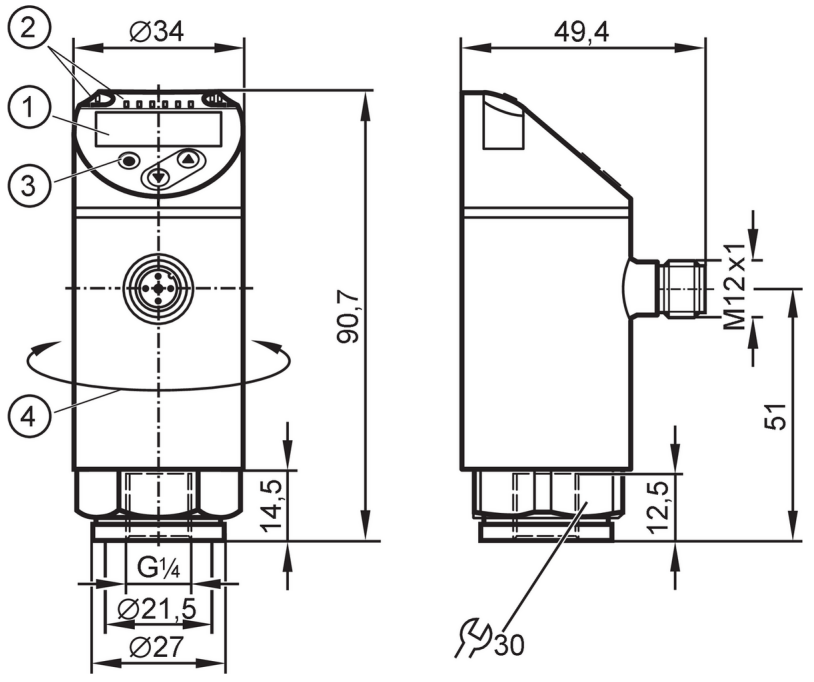
PN3092

Pressure sensor with display

PN-100-SER14-MFRKG/US/ /V



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			
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1		
Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Process connection	threaded connection G 1/4 internal thread M6 I		
Application			
Special feature	Gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Application	for industrial applications		
Media	Liquids		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...80		
Min. burst pressure	650 bar	9400 psi	65 MPa
Pressure rating	300 bar	4350 psi	30 MPa
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure		
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		

PN3092

Pressure sensor with display

PN-100-SER14-MFRKG/US/ /V

Integrated watchdog	yes		
Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1		
Outputs			
Total number of outputs	2		
Output signal	switching signal; analogue signal; IO-Link; (configurable)		
Electrical design	PNP		
Number of digital outputs	1		
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		
Number of analogue outputs	1		
Analogue current output [mA]	4...20		
Max. load [Ω]	500		
Analogue voltage output [V]	0...10		
Min. load resistance [Ω]	2000		
Short-circuit protection	yes		
Type of short-circuit protection	pulsed		
Overload protection	yes		
Measuring/setting range			
Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Factory setting / CMPT = 2			
Set point SP	1...100 bar	10...1450 psi	0.1...10 MPa
Reset point rP	0.5...99.5 bar	5...1445 psi	0.05...9.95 MPa
Min. difference between SP and rP	0.5 bar	10 psi	0.05 MPa
In steps of	0.5 bar	5 psi	0.05 MPa
Status_B High Resolution / CMPT = 3			
Set point SP	0.8...100 bar	12...1450 psi	0.08...10 MPa
Reset point rP	0.3...99.5 bar	5...1443 psi	0.03...9.95 MPa
Min. difference between SP and rP	0.5 bar	0.8 psi	0.05 MPa
In steps of	1 bar	1 psi	0.1 MPa
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	< ± 0,05; (per 6 months)		

PN3092

Pressure sensor with display

PN-100-SER14-MFRKG/US/ /V

[% of the span]			
Temperature coefficient zero point [% of the span / 10 K]	< ± 0,2; (-25...80 °C)		
Temperature coefficient span [% of the span / 10 K]	< ± 0,2; (-25...80 °C)		
Response times			
Response time [ms]	< 3		
Delay time programmable dS, dr [s]	0...50		
Damping process value dAP [s]	0...4		
Damping for the analogue output dAA [s]	0...4		
Max. response time analogue output [ms]	3		
Software / programming			
Parameter setting options	hysteresis / window; normally open / normally closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output		
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		
Process data analogue	1		
Process data binary	1		
Supported DeviceIDs	**Type of operation**	**DeviceID**	
	Factory setting / CMPT = 2	429	
	Status_B High Resolution / CMPT = 3	608	
Note	For further information please see the IODD PDF file under "Downloads"		
Factory setting / CMPT = 2			
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor	
	Function	Device identification	
	Function	Process data variable	
	Function	Device diagnosis	
Min. process cycle time [ms]	2.3		
IO-Link resolution pressure	0.1 bar	0.01 MPa	
IO-Link process data (cyclical)	**function**	**bit length**	
	pressure	14	
	binary switching information	1	
IO-Link functions (acyclical)	application specific tag		
Status_B High Resolution / CMPT = 3			
Profiles	Smart Sensor - SSP 3.1	Measuring Sensor	
	Common - I&D	Identification and Diagnosis	
Min. process cycle time [ms]	3		
IO-Link resolution pressure	0.05 bar	0.005 MPa	

PN3092

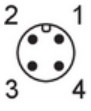
Pressure sensor with display

PN-100-SER14-MFRKG/US/ /V

IO-Link process data (cyclical)		**function**	**bit length**
		pressure	16
		device status	4
		binary switching information	1
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]	225	
UL approval		UL approval no.	J005
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	275.8	
Housing		cylindrical	
Dimensions	[mm]	Ø 34 / L = 90.7	
Materials		stainless steel (316L/1.4404); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)		stainless steel (316L/1.4404); Al2O3 (ceramics); FKM	
Min. pressure cycles		100 million	
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 internal thread M6 I	
Restrictor element integrated		no (can be retrofitted)	
Displays / operating elements			
Display		Display unit	3 x LED, green (bar, psi, MPa)
		switching status	1 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

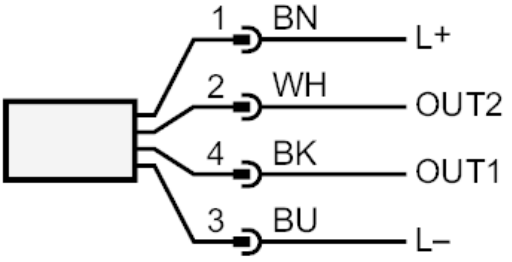


PN3092

Pressure sensor with display

PN-100-SER14-MFRKG/US/ /V

Connection



OUT1	switching output IO-Link
OUT2	analogue output
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white