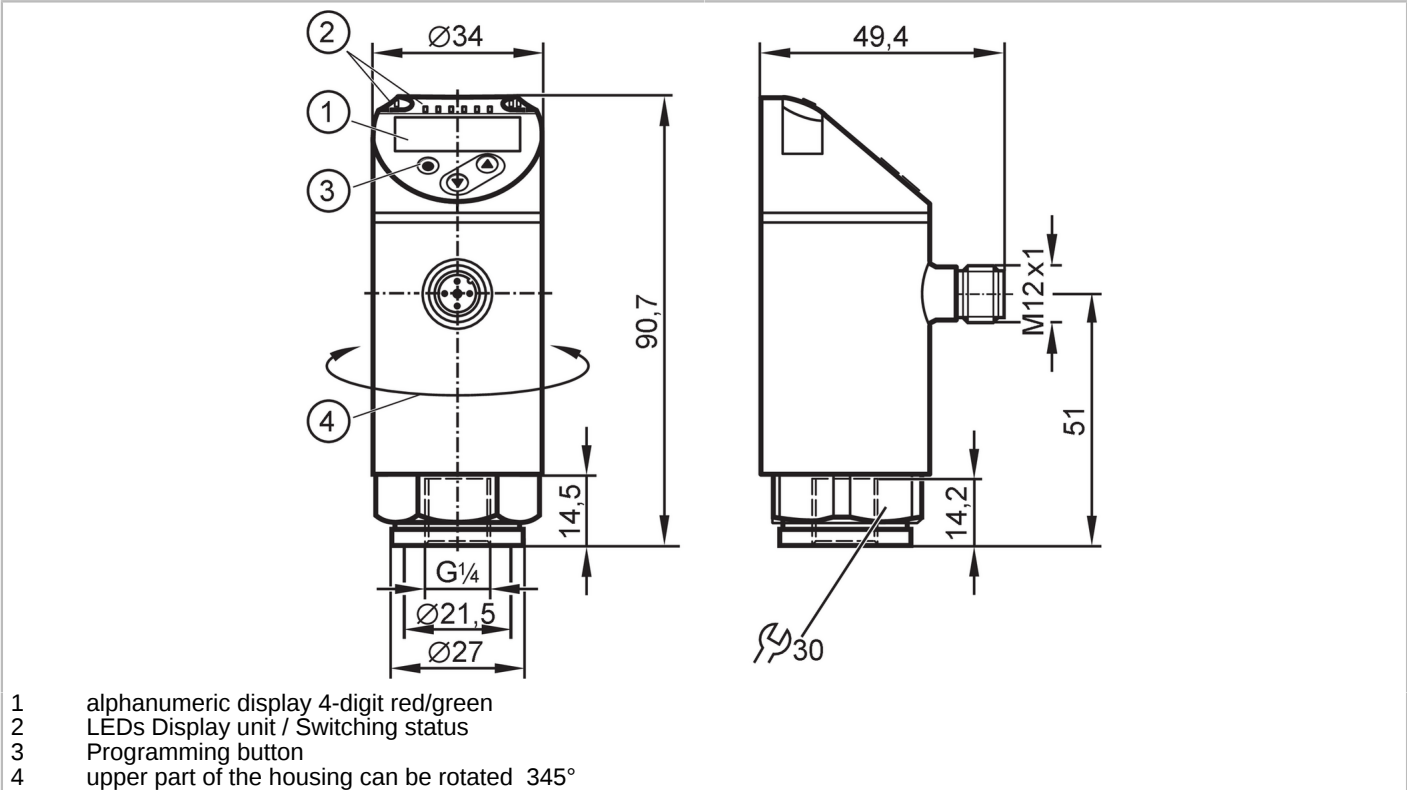


PN3070



Pressure sensor with display

PN-400-SER14-MFRKG/US/ I/V



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range	0...400 bar	0...5800 psi	0...40 MPa
Process connection	threaded connection G 1/4 Internal thread M6 I		
Application			
Special feature	gold-plated contacts		
Measuring element	metallic thin film cell		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature	-25...80		
Min. burst pressure	1700 bar	24650 psi	170 MPa
Pressure rating	800 bar	11580 psi	80 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	
Integrated watchdog		yes	



Pressure sensor with display

PN-400-SER14-MFRKG/US/ /V

Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 1; Number of analog outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analog signal; IO-Link; (configurable)	
Electrical design		PNP	
Number of digital outputs		1	
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	
Number of analog outputs		1	
Analog current output	[mA]	4...20	
Max. load	[Ω]	500	
Analog voltage output	[V]	0...10	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		yes (non-latching)	
Overload protection		yes	
Measuring/setting range			
Measuring range		0...400 bar	0...5800 psi
			0...40 MPa
Factory setting / CMPT = 2			
Set point SP		4...400 bar	40...5800 psi
Reset point rP		2...398 bar	20...5780 psi
Min. difference between SP and rP		2 bar	40 psi
In steps of		2 bar	20 psi
			0.2 MPa
Status_B High Resolution / CMPT = 3			
Set point SP		3...400 bar	49...5802 psi
Reset point rP		1...398 bar	20...5773 psi
Min. difference between SP and rP		2 bar	30 psi
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 [% of the span]		< ± 0,05; (per 6 months)	



Pressure sensor with display

PN-400-SER14-MFRKG/US/ /V

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)	
Reaction times		
Response time [ms]	< 3	
Delay time programmable dS, dr [s]	0...50	
Damping process value dAP [s]	0...4	
Damping for the analog output dAA [s]	0...4	
Max. response time analog output [ms]	3	
Software / programming		
Parameter setting options	hysteresis / window; normally open / 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 class	A	
Process data analog	1	
Process data binary	1	
Supported DeviceIDs	Type of operation	DeviceID
	Factory setting / CMPT = 2	427
	Status_B High Resolution / CMPT = 3	606
Note	For further information please see the IODD PDF file at "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	1 bar	0.1 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	0.2 bar	0.02 MPa

PN3070



Pressure sensor with display

PN-400-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]	190
UL approval	UL approval number	J006
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight	[g]	231.5
Housing		tubular
Dimensions	[mm]	Ø 34 / L = 90.7
Material		stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC
Materials (wetted parts)		stainless steel (630/1.4542/17-4 PH)
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 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



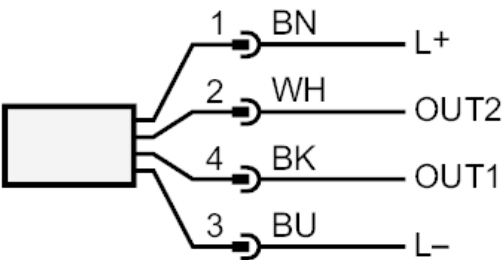
PN3070



Pressure sensor with display

PN-400-SER14-MFRKG/US/ /V

Connection



OUT1	Switching output
	IO-Link
OUT2	analog output
	Core colors :
BK =	black
BN =	brown
BU =	blue
WH =	white