

PN7543



Pressure sensor with display

PN-040-SEG14-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°
- 5 Sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	0...40 bar	0...580 psi	0...4 MPa
Process connection	threaded connection G 1/4 external thread internal thread:M5		

Application

Special feature	Gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Application	for industrial applications		
Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...80		
Min. burst pressure	500 bar	7200 psi	50 MPa
Pressure rating	200 bar	3000 psi	20 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		



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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
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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	0...40 bar	0...580 psi	0...4 MPa
Set point SP	0.3...40 bar	5...580 psi	0.032...4 MPa
Reset point rP	0.1...39.8 bar	2...577 psi	0.012...3.98 MPa
Min. difference between SP and rP	0.2 bar	3 psi	0.02 MPa
In steps of	0.1 bar	1 psi	0.01 MPa

Accuracy / deviations

Switch point accuracy [% of the span]	< ± 0,8
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)
Characteristics deviation [% of the span]	< ± 0,4 (BFSL) / < ± 0,8 (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)

Response times

Response time [ms]	< 3
Delay time programmable dS, dr [s]	0...50
Damping process value dAP [s]	0...4



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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	
Profiles		Smart Sensor - SSP 3.1	Measuring Sensor
		Common - I&D	Identification and Diagnosis
SIO mode		yes	
Required master port type		A; (when pin 2 not connected: B)	
Min. process cycle time [ms]		3	
IO-Link resolution pressure [bar]		0.02	
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	1198
Note		For further information please see the IODD PDF file under "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 no.	J002
		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]		278.45	
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 external thread internal thread:M5	
Restrictor element integrated		no (can be retrofitted)	

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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

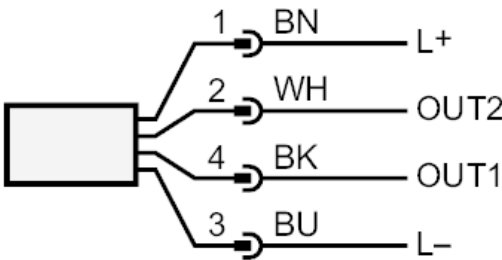
Remarks	
Pack quantity	1 pcs.

Electrical connection

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



Connection



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