

# PN7292



## Pressure sensor with display

PN-100-SEN14-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	0...100 bar	0...1450 psi	0...10 MPa
Process connection	threaded connection 1/4" NPT internal thread		

### 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. bursting pressure	650 bar	9400 psi	65 MPa
Pressure rating	300 bar	4350 psi	30 MPa
Type of pressure	relative pressure		
MAWP (for applications according to CRN) [bar]	125		

# PN7292



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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		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	8 psi	0.05 MPa
In steps of		0.1 bar	1 psi	0.01 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		< ± 0,25		

# PN7292



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	[% of the span]	
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

Delay time programmable dS, dr	[s]	0...50
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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
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### 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	452
	Status_B High Resolution / CMPT = 3	629
Note	For further information please see the IODD PDF file under "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	[bar]	0.1
IO-Link resolution pressure	[MPa]	0.01
IO-Link process data (cyclical)	function	bit length
	pressure	14
	binary switching information	2
IO-Link functions (acyclical)	application specific tag	

### 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	[bar]	0.05
IO-Link resolution pressure	[MPa]	0.005
IO-Link process data (cyclical)	function	bit length
	pressure	16
	device status	4
	binary switching information	2
IO-Link functions (acyclical)	application specific tag	

# PN7292



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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]	286
UL approval	UL Approval no.	J002
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	260
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]	2...3 turns after hand-fastening; recommended tightening torque; depends on lubrication, seal and pressure rating
Process connection	threaded connection 1/4" NPT internal thread	
Restrictor element integrated	no (can be retrofitted)	
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; Contacts: gold-plated		

# PN7292



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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