

# PE2592



## Pressure sensor with display

PE-100-SEG14-MFRKG/US/ /E



- 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; Number of analogue outputs: 1		
Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Process connection	threaded connection G 1/4 external thread internal thread:M5; DIN EN ISO 1179-2		

### 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	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		

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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; Number of analogue outputs: 1	
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### Outputs

Total number of outputs		2
Output signal		switching signal; analogue 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
Permanent current rating of switching output DC	[mA]	250
Switching frequency DC	[Hz]	< 500
Number of analogue outputs		1
Analogue current output	[mA]	4...20; (scalable 1:5)
Max. load	[Ω]	500
Analogue voltage output	[V]	0...10; (scalable 1:5)
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
Set point SP	0.6...100 bar	10...1450 psi	0.06...10 MPa
Reset point rP	0.2...99.6 bar	4...1444 psi	0.02...9.96 MPa
Analogue start point	0...80 bar	0...1160 psi	0...8 MPa
Analogue end point	20...100 bar	290...1450 psi	2...10 MPa
In steps of	0.2 bar	2 psi	0.02 MPa

### Accuracy / deviations

Switch point accuracy		< ± 0,4; (Turn down 1:1)
	[% of the span]	
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
	[% of the span]	
Characteristics deviation		< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)
	[% of the span]	
Hysteresis deviation		< ± 0,1; (Turn down 1:1)
	[% of the span]	
Long-term stability		< ± 0,05; (Turn down 1:1; per 6 months)
	[% of the span]	
Temperature coefficient zero point		0,2; (-25...80 °C)
	[% of the span / 10 K]	
Temperature coefficient span		0,2; (-25...80 °C)

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[% of the span / 10 K]	
Notes on the accuracy / deviation	switch point accuracy, linearity error under DNV GL: <math>\lt; \pm 1\%</math>: <math>\lt; \pm 1\%</math>

### Response times

Response time [ms]	<math>\lt; 1.5</math>
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
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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
Profiles	Smart Sensor - SSP 0      Generic Profiled Sensor
	Function      Device identification
	Function      Process data variable
	Function      Device diagnosis
SIO mode	yes
Required master port type	A
Process data analogue	1
Process data binary	2
Min. process cycle time [ms]	2.3
Supported DeviceIDs	<b>Type of operation</b> <b>DeviceID</b>
	default      461

### 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]		161
UL approval	UL approval no.	J012
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

### Mechanical data

Weight [g]	298
Housing	cylindrical

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Dimensions	[mm]	Ø 34 / L = 92.7
Materials		stainless steel (316L/1.4404); PBT+PC-GF30; PBT-GF20; PC; EPDM
Materials (wetted parts)		stainless steel (316L/1.4404); Al2O3 (99.9%; ceramics); EPDM
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; DIN EN ISO 1179-2
Process connection sealing		EPDM
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

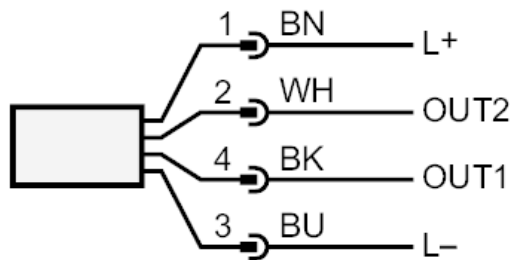
Pack quantity	1 pcs.
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### Electrical connection

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



### Connection



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