

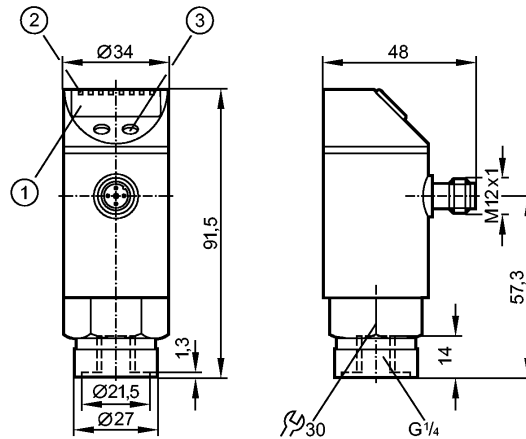


# PE3003

PE-025-RDR14-MFPKG/US/IE



Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button



### Product characteristics

Combined pressure sensor

Quick disconnect

Sealing of the measuring cell: EPDM

Function programmable

Process connection: G 1/4 I

Switching output, Analog output

4-digit alphanumeric display

Measuring range: 0...25 bar / 0...363 psi / 0...2.5 MPa

### Application

Application	Type of pressure: relative pressure Liquids and gases Cannot be used for oils		
Pressure rating	150 bar	2175 psi	15 MPa
Bursting pressure min.	350 bar	5075 psi	35 MPa
Medium temperature [°C]	-25...80		

### Electrical data

Electrical design	DC PNP		
Operating voltage [V]	18...36 DC <sup>1)</sup>		
Current consumption [mA]	< 50		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Overvoltage protection [V]	up to 40 V		

### Outputs

Output	Switching output, Analog output		
Output function	normally open / closed programmable; 4...20 mA or 0...10 V		
Current rating [mA]	250		
Voltage drop [V]	< 2		
Short-circuit protection	yes (non-latching)		



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Switching frequency [Hz]	≤ 170
Analog output	4...20 mA / 0...10 V
Max. load [Ω]	4...20 mA: max. 500 / 0...10 V: min. 2000

Measuring / setting range			
Measuring range	0...25 bar	0...363 psi	0...2.5 MPa
Setting range			
Set point, SP	0.2...25.0 bar	4...362 psi	0.02...2.50 MPa
Reset point, rP	0.1...24.9 bar	2...360 psi	0.01...2.49 MPa
in steps of	0.1 bar	2 psi	0.01 MPa
Factory setting	SP1 = 6.3 bar; rP1 = 5.8 bar		

Accuracy / deviations	
Accuracy / deviations (in % of the span)	
Switch point accuracy	< ± 0.5
Characteristics deviation *)	< ± 0.25 (BFSL) / < ± 0.5 (LS)
Hysteresis	< ± 0.25
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.05
Temperature coefficients (TEMPCO) in the temperature range -20...80° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	0.2
Greatest TEMPCO of the span	0.2

Reaction times	
Power-on delay time [s]	0.3
Delay time programmable dS, dr [s]	0; 0.2...50
Response time analog output [ms]	< 3
Integrated watchdog	yes

Software / programming	
Programming options	hysteresis / window function; N.O. / N.C; on delay, off delay; damping; display unit; current / voltage output

Environment	
Ambient temperature [°C]	-20...80
Storage temperature [°C]	-40...100
Protection	IP 67

Tests / approvals		
EMC	EN 61000-4-2 ESD:	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated:	10 V/m
	EN 61000-4-4 Burst:	2 kV
	EN 61000-4-5 Surge:	0.5/1 kV
	EN 61000-4-6 HF conducted:	10 V
	Shock resistance	DIN IEC 68-2-27:
Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)
MTTF [Years]		231

Mechanical data	
Process connection	G ¼ I
Materials (wetted parts)	stainless steel 316L / 1.4404; ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); EPDM
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE



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Switching cycles min.	100 million
Weight [kg]	0.261

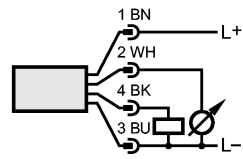
### Displays / operating elements

Display	Display unit 3 x LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display
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### Electrical connection

Connection	M12 connector; gold-plated contacts
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### Wiring



### Remarks

Remarks	1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in % of value of measuring range / 6 months
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Pack quantity [piece]	1
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