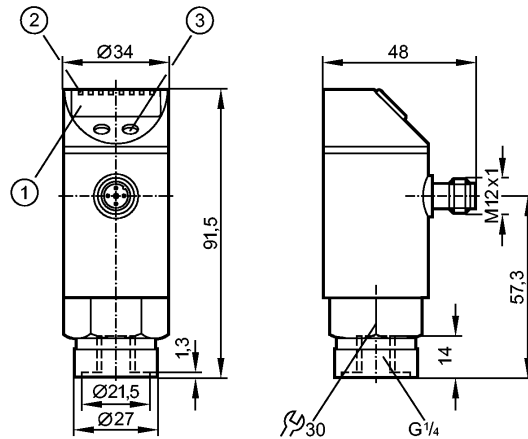


**PE7004**

PE-010-RDR14-QFRKG/US/ /E

Pressure sensors



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



**Product characteristics**

Electronic pressure monitor
Quick disconnect
Sealing of the measuring cell: EPDM
Function programmable
Process connection: G 1/4 I
2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
4-digit alphanumeric display
Measuring range: -1...10 bar / -14.5...145 psi / -0.1...1.0 MPa

**Application**

Application	Type of pressure: relative pressure Liquids and gases Cannot be used for oils		
Pressure rating	75 bar	1087 psi	7.5 MPa
Bursting pressure min.	150 bar	2175 psi	15 MPa
Medium temperature [°C]	-25...80		

**Electrical data**

Electrical design	DC PNP/NPN
Operating voltage [V]	18...36 DC 1)
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	2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
Output function	2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x normally closed (diagnostic function)

**PE7004**

PE-010-RDR14-QFRKG/US/ /E

**Pressure sensors**

Current rating	[mA]	250
Voltage drop	[V]	< 2
Short-circuit protection		yes (non-latching)
Switching frequency	[Hz]	≤ 170

Measuring / setting range			
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1.0 MPa
Setting range			
Set point, SP	-0.90...10.00 bar	-12...145 psi	-0.090...1.000 MPa
Reset point, rP	-0.95...9.95 bar	-13...144 psi	-0.095...0.995 MPa
in steps of	0.05 bar	1 psi	0.005 MPa
Factory setting	SP1 = 2.50 bar; rP1 = 2.30 bar SP2 = 7.50 bar; rP2 = 7.30 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
Integrated watchdog	yes

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

Interfaces	
IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.1
IO-Link Device ID	311 d / 00 01 37 h
Profiles	no profile
SIO mode	yes
Required master port class	A
Process data analogue	1
Process data binary	2
Min. process cycle time	[ms] 2.3

Environment	
Ambient temperature	[°C] -20...80 (UB < 32 V) / -20...60 (UB > 32 V)
Storage temperature	[°C] -40...100
Protection	IP 67

**Tests / approvals**

**PE7004**

PE-010-RDR14-QFRKG/US/ /E

**Pressure sensors**

EMC	EN 61000-6-2 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]	237

**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> ); Sealing of the measuring cell; EPDM
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC; PBT; PEI; FPM; EPDM/X; PTFE
Switching cycles min.	100 million
Weight [kg]	0.262

**Displays / operating elements**

Display	Display unit      3 x LED green Switching status      2 x 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**

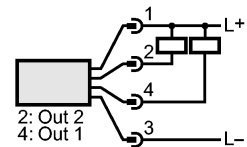
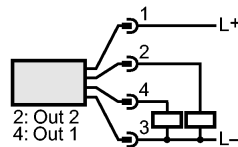
Programming of the output function

-----OUT1-----

Hno = hysteresis / normally open  
Hnc = hysteresis / normally closed  
Fno = window function / normally open  
Fnc = window function / normally closed

-----OUT2-----

Hno = hysteresis / normally open  
Hnc = hysteresis / normally closed  
Fno = window function / normally open  
Fnc = window function / normally closed  
dESI = diagnostic function (normally closed)



**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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