

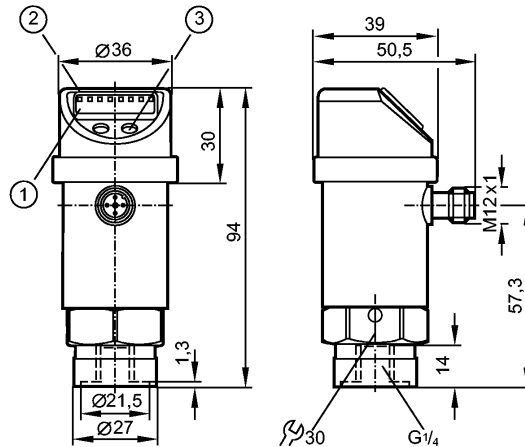


PN007A

PN-001-RBR14-MFPKG/US/3D IV



Pressure sensors



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



Product characteristics

Combined pressure sensor

Quick disconnect

Function programmable

ATEX approval

Group II, category 3D

Process connection: G 1/4 I

Switching output, Analog output

4-digit alphanumeric display

Measuring range: 0...1000 mbar

Application

Application	Type of pressure: relative pressure Liquids and gases
Pressure rating [mbar]	10000
Bursting pressure min. [mbar]	30000
Medium temperature [°C]	-20...60

Electrical data

Electrical design	DC PNP
Operating voltage [V]	18...36 DC ¹⁾
Current consumption [mA]	< 50
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)
Switching frequency [Hz]	≤ 170



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PN-001-RBR14-MFPKG/US/3D /V



Pressure sensors

Analog output	4...20 mA / 0...10 V
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Max. load [Ω]	4...20 mA: max. 500 / 0...10 V: min. 2000
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Measuring / setting range

Display unit	mbar, kPa, psi, inHg
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Measuring range [mbar]	0...1000
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Setting range	
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Set point, SP [mbar]	10...1000
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Reset point, rP [mbar]	5...995
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in steps of [mbar]	5
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Factory setting	SP1 = 250 mbar; rP1 = 230 mbar
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Accuracy / deviations

Accuracy / deviations (in % of the span)	
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Switch point accuracy	< ± 0.5
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Characteristics deviation *)	< ± 0.25 (BFSL) / < ± 0.5 (LS)
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Hysteresis	< ± 0.25
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Repeatability **)	< ± 0.1
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Long-term stability ***)	< ± 0.05
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Temperature coefficients (TEMPCO) in the temperature range 0...60° C (in % of the span per 10 K)	
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Greatest TEMPCO of the zero point	0.2
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Greatest TEMPCO of the span	0.2
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Reaction times

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

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

Ambient temperature [°C]	-20...60
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Storage temperature [°C]	-40...100
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Protection	IP 65
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Tests / approvals

Marking of the unit	Ex II 3D Ex tc IIIC T80°C Dc X
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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:	50 g (11 ms)
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Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)
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MTTF [Years]	213
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Mechanical data

Process connection	G ¼ I
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Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
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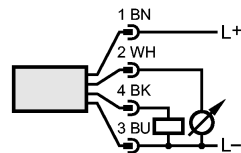
Pressure sensors

Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.305

Displays / operating elements	
Display	Display unit 4 x LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; gold-plated contacts

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

Pack quantity [piece]	1
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