

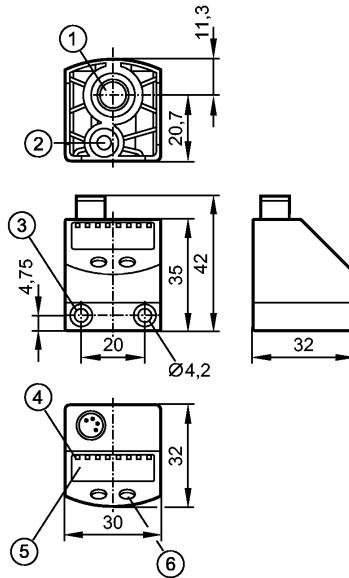


PQ3809

PQ-1-1-KHR18-KFPKG/AS/



Pressure sensors



- 1: Main pressure connection G 1/8; tightening torque max. 8 Nm, insertion depth max. 7.5 mm
- 2: Auxiliary pressure connection M5; tightening torque max. 2.5 Nm, insertion depth max. 7.5 mm
- 3: for mounting screw M4; max. tightening torque 2.5 Nm
- 4: LEDs (display unit / switching status)
- 5: 4-digit alphanumeric display
- 6: Programming button



Product characteristics

Electronic pressure sensor

Function programmable

Process connection: G 1/8 I / M5 I

2 outputs

OUT1 = switching output, IO-Link

OUT2 = analogue output

4-digit alphanumeric display

Measuring range: -1.00...1.00 bar / -100...100 kPa / -14.6...14.6 psi / -29.4...29.4 inHg

Application

Application	Type of pressure: relative pressure, differential pressure Compressed air****)			
Pressure rating	20 bar	2000 kPa	290 psi	591 inHg
Bursting pressure min.	30 bar *****)	3000 kPa *****)	435 psi *****)	886 inHg *****)
Medium temperature [°C]	0...60			

Electrical data

Electrical design	DC PNP
Operating voltage [V]	18...32 DC 1)
Current consumption [mA]	< 50
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes
Oversvoltage protection [V]	up to 40 V

Outputs



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Pressure sensors

Output	2 outputs OUT1 = switching output, IO-Link OUT2 = analogue output
Output function	1 x NO / NC programmable + 1 x analog current
Current rating [mA]	100
Voltage drop [V]	< 2
Short-circuit protection	yes (non-latching)
Switching frequency [Hz]	≤ 100
Analog output	4...20 mA
Max. load [Ω]	500

Measuring / setting range				
Display unit	bar, kPa, psi, inHg			
Measuring range	-1.00...1.00 bar	-100...100 kPa	-14.6...14.6 psi	-29.4...29.4 inHg
Setting range				
Set point, SP	-0.98...1.00 bar	-98...100 kPa	-14.2...14.6 psi	-28.8...29.4 inHg
Reset point, rP	-0.99...0.99 bar	-99...99 kPa	-14.4...14.4 psi	-29.1...29.1 inHg
in steps of	0.01 bar	1 kPa	0.2 psi	0.3 inHg

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 0...60° 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]	0.5
Min. response time switching output [ms]	6
Delay time programmable dS, dr [s]	0; 0.002...5
Step response time analogue output [ms]	6
Integrated watchdog	yes

Software / programming	
Programming options	Hysteresis / window; NO / NC; analogue output; IO-Link; switching logic; switch-on/switch-off delay; damping, display unit

Interfaces	
IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9 FDIS
IO-Link Device ID	366 d / 00 01 6E h
Profiles	Smart Sensor: Process Data Variable; Device Identification
SIO mode	yes



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Pressure sensors

Required master port class	A
Process data analogue	1
Process data binary	2
Min. process cycle time [ms]	2.3

Environment	
Ambient temperature [°C]	0...70
Storage temperature [°C]	-25...85
Protection	IP 65

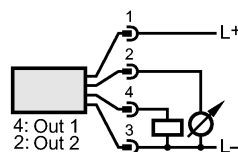
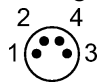
Tests / approvals	
EMC	DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance	DIN EN 60068-2-27 50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6 20 g (10...2000 Hz)
MTTF [Years]	437

Mechanical data	
Process connection	G 1/8 I / M5 I
Materials (wetted parts)	brass; FPM; silicon (coated); PBT
Housing materials	PBT; FPM; polyester
Switching cycles min.	50 million
Weight [kg]	0.11

Displays / operating elements	
Display	Display unit 4 x LED green Switching status 1 x LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

Electrical connection	
Connection	M8 connector; gold-plated contacts

Wiring



Programming of the outputs:

----- OUT1 -----

Hno = hysteresis / NO

Hnc = hysteresis / NC

Fno = window / NO

Fnc = window / NC

IO-Link

----- OUT2 -----

Current output (4...20 mA)

Remarks

Remarks	1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in% of the span / 6 months ****) other media on request
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Pressure sensors

*****) Max. overpressure on second pressure connection: 12 bar /
1200 kPa / 174 psi / 354.4 inHg / 1.2 MPa

Pack quantity	[piece]	1
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