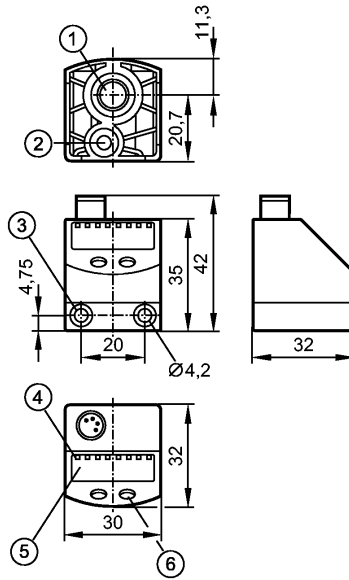


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PQ-010-KHR18-KFPKG/AS/

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

Made in Germany



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...10.00 bar / -100...1000 kPa / -15...145 psi / -30...296 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
Overvoltage 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 current output			
Current rating [mA]	100			
Voltage drop [V]	< 2			
Short-circuit protection	pulsed			
Switching frequency [Hz]	≤ 100			
Analogue output	4...20 mA			
Max. load [Ω]	500			

Measuring / setting range				
Display unit	bar, kPa, psi, inHg			
Measuring range	-1.00...10.00 bar	-100...1000 kPa	-15...145 psi	-30...296 inHg
Setting range				
Set point, SP	-0.9...10.00 bar	-90...1000 kPa	-13...145 psi	-26...296 inHg
Reset point, rP	-0.95...9.95 bar	-95...995 kPa	-14...144 psi	-28...294 inHg
in steps of	0.05 bar	5 kPa	1 psi	2 inHg

Accuracy / deviations	
Accuracy / deviations (in % of the span)	< ± 0.5
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	367 d / 00 01 6F h
Profiles	Smart Sensor: Process Data Variable; Device Identification
SIO mode	yes

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Pressure sensors

Required master port type	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

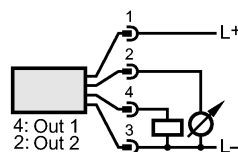
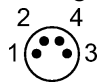
Tests / approvals	
EMC	DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance	DIN EN 60068-2-27: 50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6: 20 g (10...2000 Hz)
MTTF [Years]	437

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]	0.107

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 in Hg / 1.2 MPa

Pack quantity	[piece]	1
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