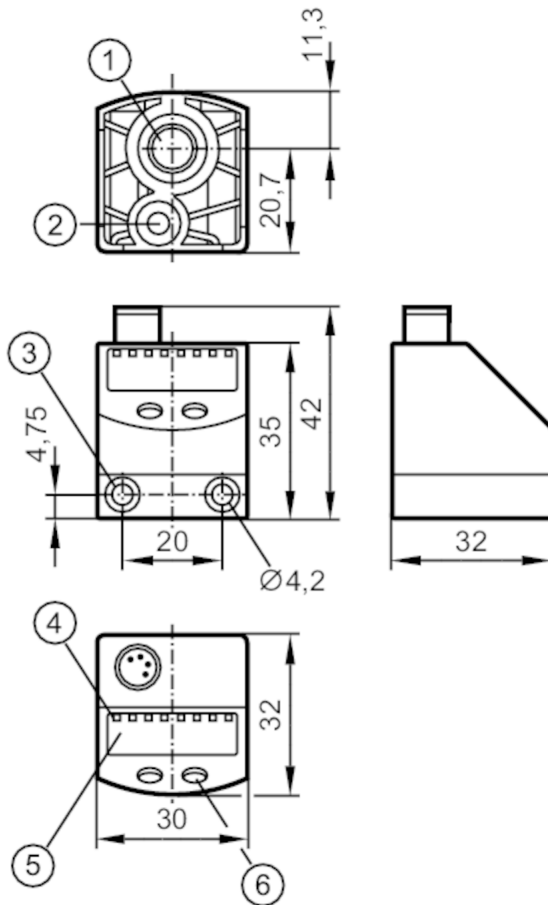


# PQ3809



## Pressure sensor for pneumatics

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



- 1 main pressure connection G 1/8 Tightening torque < 8 Nm insertion depth < 7.5 mm
- 2 auxiliary pressure connection M 5 Tightening torque < 2.5 Nm insertion depth < 7.5 mm
- 3 Tightening torque < 0.5 Nm
- 4 LEDs Display unit / switching status
- 5 alphanumeric display 4-digit
- 6 programming button



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1			
Measuring range	-1...1 bar	-1000...1000 mbar	-14.6...14.6 psi	-29.4...29.4 inHg -100...100 kPa
Process connection	threaded connection G 1/8 internal thread internal thread:M5			

### Application

Special feature	Gold-plated contacts			
Application	for industrial applications			
Conditionally suitable for	other media on request			
Medium temperature [°C]	0...60			
Min. bursting pressure	30 bar	435 psi	886 inHg	3000 kPa
Note on min. burst pressure	max. overpressure on second pressure connection: 12 bar / 1200 kPa / 174 PSI / 354,4 inHg / 1,2 MPa			
Pressure rating	20 bar	290 psi	591 inHg	2000 kPa
Vacuum resistance [mbar]	-1000			

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Type of pressure	relative pressure; differential pressure; vacuum				
<b>Electrical data</b>					
Operating voltage [V]	18...32 DC; (to SELV/PELV)				
Current consumption [mA]	< 50				
Min. insulation resistance [MΩ]	100; (500 V DC)				
Protection class	III				
Reverse polarity protection	yes				
Overvoltage protection	yes; (< 40 V)				
Power-on delay time [s]	0.5				
Integrated watchdog	yes				
<b>Inputs / outputs</b>					
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1				
<b>Outputs</b>					
Total number of outputs	2				
Output signal	switching signal; analogue signal; IO-Link; (configurable)				
Electrical design	PNP				
Number of digital outputs	1				
Output function	normally open / normally closed; (parameterisable)				
Max. voltage drop switching output DC [V]	2				
Permanent current rating of switching output DC [mA]	100				
Switching frequency DC [Hz]	< 100				
Number of analogue outputs	1				
Analogue current output [mA]	4...20				
Max. load [Ω]	500				
Short-circuit protection	yes				
Type of short-circuit protection	pulsed				
<b>Measuring/setting range</b>					
Measuring range	-1...1 bar	-1000...1000 mbar	-14.6...14.6 psi	-29.4...29.4 inHg	-100...100 kPa
Set point SP	-0.98...1 bar	-14.2...14.6 psi	-28.8...29.4 inHg	-98...100 kPa	
Reset point rP	-0.99...0.99 bar	-14.4...14.4 psi	-29.1...29.1 inHg	-99...99 kPa	
In steps of	0.01 bar	0.2 psi	0.3 inHg	1 kPa	
<b>Accuracy / deviations</b>					
Switch point accuracy [% of the span]	< ± 0,5				
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)				
Characteristics deviation [% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)				
Hysteresis deviation [% of the span]	< ± 0,25				
Long-term stability [% of the span]	< ± 0,05; (per 6 months)				

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## Pressure sensor for pneumatics

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Temperature coefficient zero point [% of the span / 10 K]	0,2; (0...60 °C)				
Temperature coefficient span [% of the span / 10 K]	0,2; (0...60 °C)				
<b>Response times</b>					
Response time [ms]	< 6				
Delay time programmable dS, dr [s]	0; 0,002...5				
Step response time analogue output [ms]	6				
<b>Software / programming</b>					
Parameter setting options	hysteresis / window; normally open / normally closed; analogue output; IO-Link; switching logic; switch-on/switch-off delay; Damping; Display unit				
<b>Interfaces</b>					
Communication interface	IO-Link				
Transmission type	COM2 (38,4 kBaud)				
IO-Link revision	1.1				
SDCI standard	IEC 61131-9 FDIS				
Profiles	Smart Sensor: Process Data Variable; Device Identification				
SIO mode	yes				
Required master port type	A				
Process data analogue	1				
Process data binary	2				
Min. process cycle time [ms]	2.3				
Supported DeviceIDs	<table border="1"><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>366</td></tr></tbody></table>	Type of operation	DeviceID	default	366
Type of operation	DeviceID				
default	366				
<b>Operating conditions</b>					
Ambient temperature [°C]	0...70				
Storage temperature [°C]	-25...85				
Protection	IP 65				
<b>Tests / approvals</b>					
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				
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request				
<b>Mechanical data</b>					
Weight [g]	87				
Materials	PBT; FKM; polyester				
Materials (wetted parts)	brass; FKM; silicon (coated); PBT				
Min. pressure cycles	50 million				
Process connection	threaded connection G 1/8 internal thread internal thread:M5				

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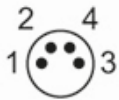
## Pressure sensor for pneumatics

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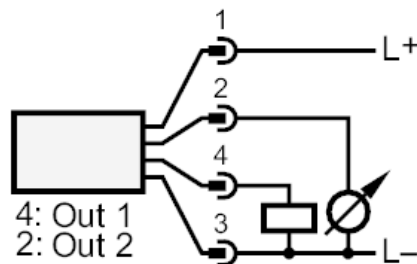
Displays / operating elements		
Display	Display unit	4 x LED, green
	switching status	1 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Display unit	bar; kPa; psi; inHg	

Remarks	
Pack quantity	1 pcs.

**Electrical connection**  
Connector: 1 x M8; coding: A; Contacts: gold-plated



### Connection



OUT1	switching output
OUT2	IO-Link analogue output