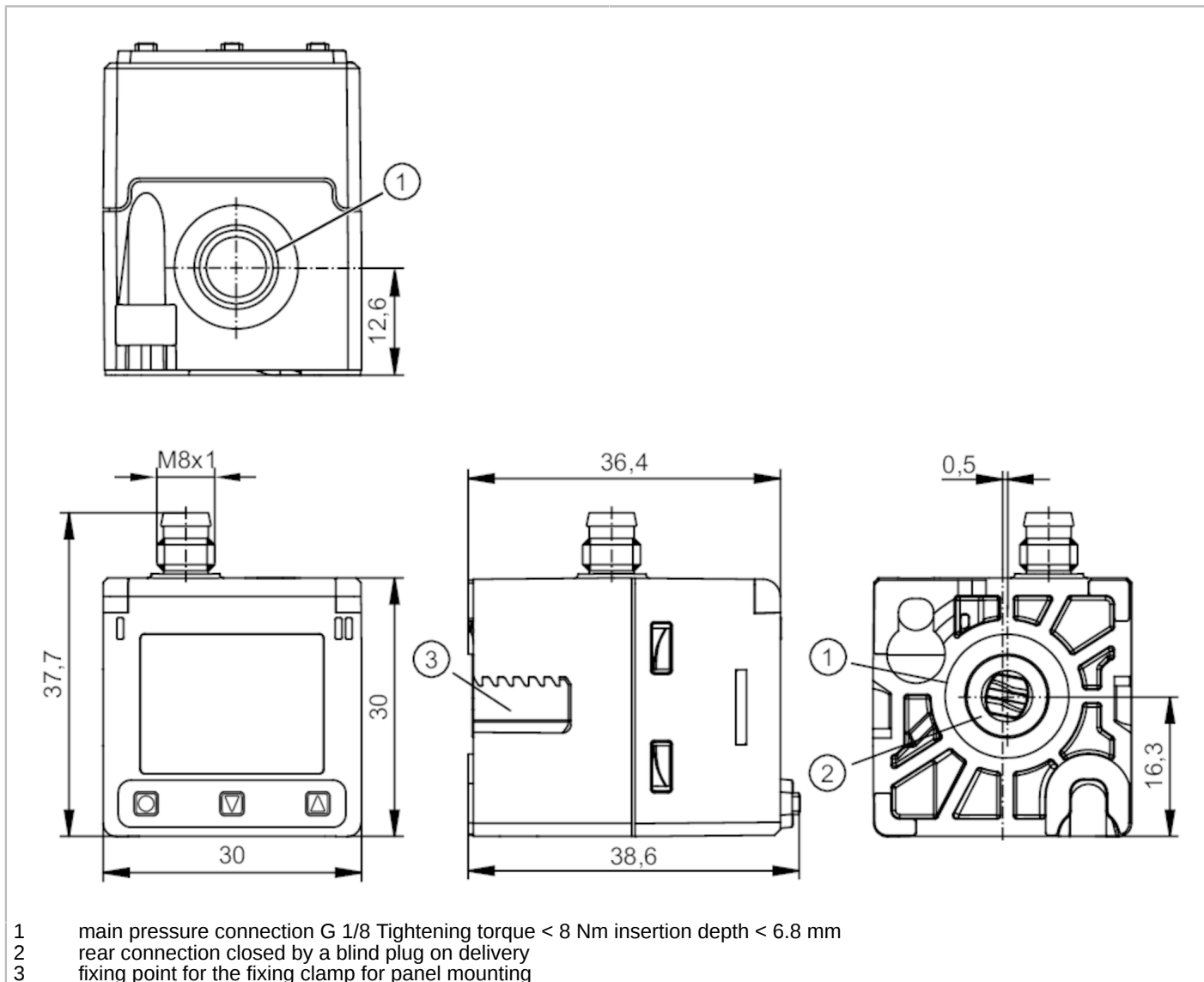


# PQS812



## Pressure sensor for pneumatics

PQ-010-KHR18-MFPKG/AS/



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 2	
Measuring range	-1...10 bar	-0.1...1 MPa
Process connection	threaded connection G 1/8 internal thread (2x)	

### Application

Special feature	Gold-plated contacts	
Application	for industrial applications	
Media	compressed air; nitrogen (N2)	
Conditionally suitable for	other media on request	
Medium temperature [°C]	0...60	
Min. burst pressure	30 bar	3 MPa
Pressure rating	20 bar	2 MPa
Vacuum resistance	-1000 mbar	-0.1 MPa
Type of pressure	relative pressure; vacuum	



## Pressure sensor for pneumatics

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Electrical data		
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 30
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]	0.3
Integrated watchdog		yes
Inputs / outputs		
Number of inputs and outputs		Number of digital outputs: 2
Outputs		
Total number of outputs		2
Output signal		switching signal; IO-Link; (configurable)
Electrical design		PNP/NPN; (configurable)
Number of digital outputs		2
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	< 170
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
Measuring/setting range		
Measuring range	-1...10 bar	-0.1...1 MPa
Set point SP	-1...10 bar	-0.1...1 MPa
In steps of	0.01 bar	0.001 MPa
Accuracy / deviations		
Switch point accuracy		< ± 0,5
	[% of the span]	
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K:)
	[% of the span]	
Characteristics deviation		< ± 0,5; (including linearity, hysteresis and repeatability)
	[% of the span]	
Linearity deviation		< ± 0.5 % (limit value setting according to DIN EN IEC 62828-1)
	[% of the span]	
Hysteresis deviation		< ± 0,25
	[% of the span]	
Long-term stability		< ± 0,1; (per year)
	[% of the span]	
Temperature coefficient zero point		0,2
	[% of the span / 10 K]	
Temperature coefficient span		0,2



## Pressure sensor for pneumatics

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[% of the span / 10 K]

Response times													
Response time [ms]	6												
Damping process value dAP [s]	0...4												
Damping for the analogue output dAA [s]	0...99.99												
Software / programming													
Parameter setting options	display can be rotated and switched off; Teach function; simulation function; diagnostic function												
Interfaces													
Communication interface	IO-Link												
Transmission type	COM3 (230,4 kBaud)												
IO-Link revision	1.1.3												
SDCI standard	IEC 61131-9: 2019-06												
Profiles	<table border="1"> <tr> <td>Smart Sensor - SSP 4.1.1</td> <td>Measuring and Switching Sensor, 1 channel</td> </tr> <tr> <td>BLOB</td> <td>Binary Large Object transfer</td> </tr> <tr> <td>Common - I&amp;D</td> <td>Identification and Diagnosis</td> </tr> <tr> <td>Extension</td> <td>Quantity detection, switches when value exceeds the setpoint</td> </tr> <tr> <td>Function</td> <td>Locator</td> </tr> <tr> <td>Function</td> <td>ProductURI</td> </tr> </table>	Smart Sensor - SSP 4.1.1	Measuring and Switching Sensor, 1 channel	BLOB	Binary Large Object transfer	Common - I&D	Identification and Diagnosis	Extension	Quantity detection, switches when value exceeds the setpoint	Function	Locator	Function	ProductURI
Smart Sensor - SSP 4.1.1	Measuring and Switching Sensor, 1 channel												
BLOB	Binary Large Object transfer												
Common - I&D	Identification and Diagnosis												
Extension	Quantity detection, switches when value exceeds the setpoint												
Function	Locator												
Function	ProductURI												
SIO mode	yes												
Required master port type	A												
Process data analogue	1												
Process data binary	2												
Min. process cycle time [ms]	0.6												
IO-Link resolution pressure [bar]	0.001												
IO-Link process data (cyclical)	<table border="1"> <thead> <tr> <th>function</th> <th>bit length</th> </tr> </thead> <tbody> <tr> <td>pressure</td> <td>16</td> </tr> <tr> <td>device status</td> <td>4</td> </tr> <tr> <td>SSC1.1</td> <td>1</td> </tr> <tr> <td>SSC1.2</td> <td>1</td> </tr> </tbody> </table>	function	bit length	pressure	16	device status	4	SSC1.1	1	SSC1.2	1		
function	bit length												
pressure	16												
device status	4												
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SSC1.2	1												
IO-Link functions (acyclical)	application specific tag; internal temperature; Medium temperature												
Supported DeviceIDs	<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>1617</td> </tr> </tbody> </table>	Type of operation	DeviceID	default	1617								
Type of operation	DeviceID												
default	1617												
Operating conditions													
Ambient temperature [°C]	0...60												
Storage temperature [°C]	-25...85												
Protection	IP 65												
Tests / approvals													
EMC	DIN EN 61326-1												
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]	508												
UL approval	UL approval no. J065												
Pressure Equipment Directive	Sound engineering practice; can be used for stable gases fluid group 2												

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Mechanical data	
Weight [g]	52
Housing	rectangular
Dimensions [mm]	37.7 x 30 x 38.6
Materials	PBT; PC; TPE; NBR; FKM; brass; silicon (coated)
Materials (wetted parts)	PBT; FKM; brass; silicon (coated)
Min. pressure cycles	50 million
Process connection	threaded connection G 1/8 internal thread (2x)

Displays / operating elements		
Display	Display 1"	128 x 96 pixels
	switching status	2 x LED, yellow
Display unit	bar; MPa; mmHg; kgf/cm <sup>2</sup>	

Accessories	
Items supplied	head cap screw: 2 x (M3 x 8 mm)

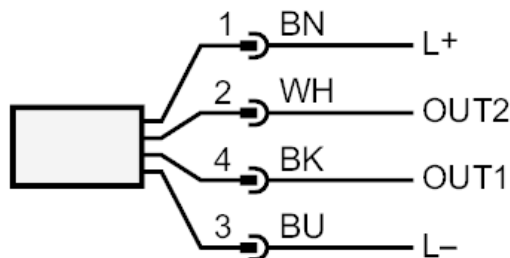
Remarks	
Pack quantity	1 pcs.

### Electrical connection

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



### Connection



- OUT1      switching output / IO-Link
- OUT2      switching output
- colours to DIN EN 60947-5-2
- Core colours
- BK=        black
- BN=        brown
- BU=        blue
- WH=        white

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### Diagrams and graphs

drilling template

