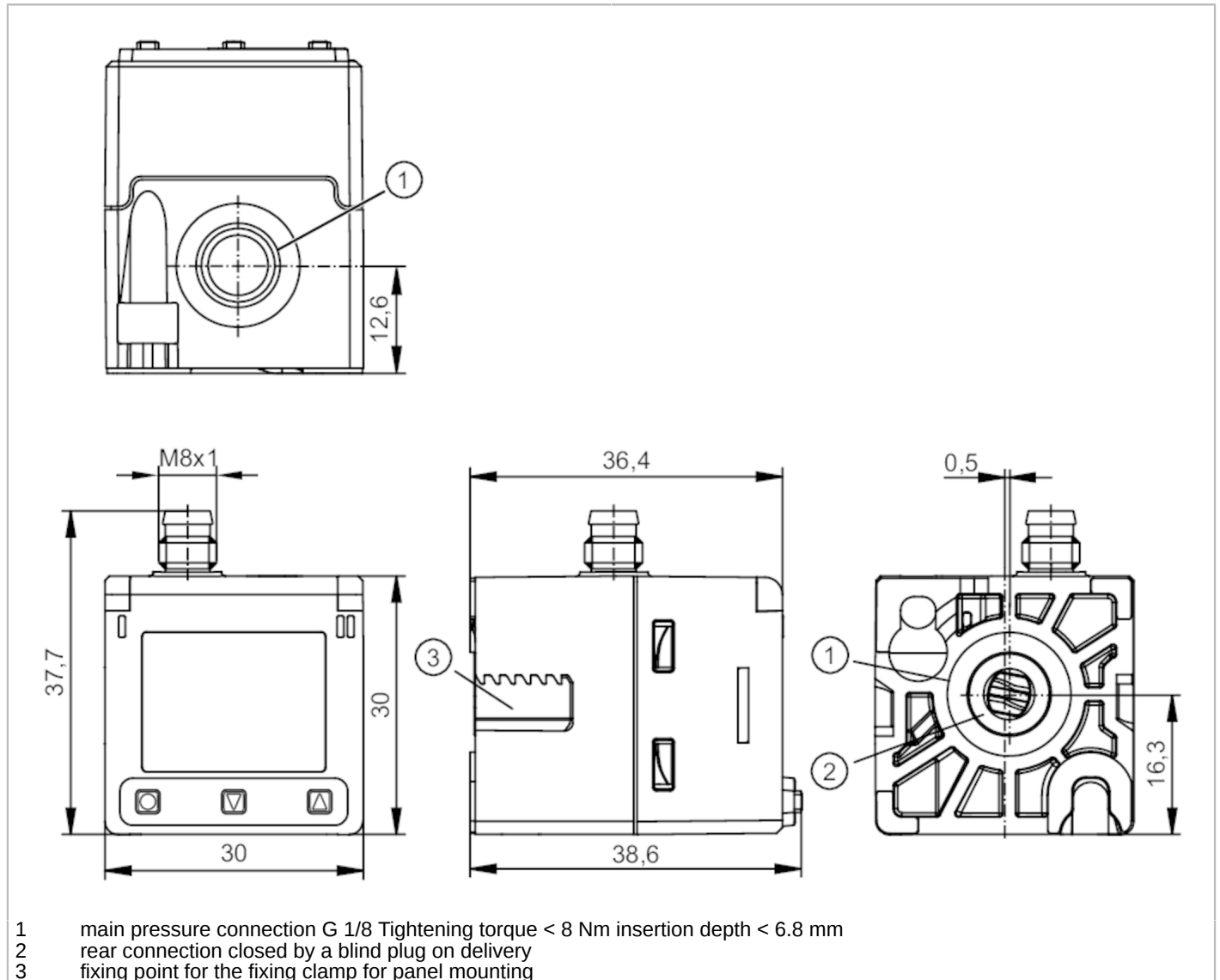


# PQC819



## Pressure sensor for pneumatics

PQ-0-1BKHR18-MFPKG/AS/



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1
Measuring range	-1...0 bar      -1000...0 mbar      -100...0 kPa
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	10 bar      1 MPa
Vacuum resistance	-1000 mbar      -0.1 MPa
Type of pressure	relative pressure; vacuum

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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: 1; Number of analogue outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analogue signal; IO-Link; (configurable)	
Electrical design		PNP/NPN; (configurable)	
Number of digital outputs		1	
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	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20, invertible; (scalable)	
Max. load	[Ω]	500	
Analogue voltage output	[V]	0...10 / 1...5, invertible; (scalable)	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Overload protection		yes	
Measuring/setting range			
Measuring range		-1...0 bar	-1000...0 mbar      -100...0 kPa
Set point SP		-1...0 bar	-100...0 kPa
Analogue start point		-1...-0.2 bar	-100...-20 kPa
Analogue end point		-0.8...0 bar	-80...0 kPa
In steps of		0.001 bar	0.1 kPa
Accuracy / deviations			
Switch point accuracy	[% of the span]	< ± 1; (turn down 1:1)	
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K: turn down 1:1)	
Characteristics deviation	[% of the span]	< ± 1; (turn down 1:1; including linearity, hysteresis and repeatability)	
Linearity deviation	[% of the span]	< ± 1 % (limit value setting to DIN EN IEC 62828-1)	



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Hysteresis deviation [% of the span]	< ± 0,25; (turn down 1:1)
Long-term stability [% of the span]	< ± 0,1; (turn down 1:1; per year)
Temperature coefficient zero point [% of the span / 10 K]	0,2; (Turn down 1:1)
Temperature coefficient span [% of the span / 10 K]	0,2; (Turn down 1:1)

### 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; analogue output selectable and scalable; Teach function; simulation function; diagnostic function
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### 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	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]	0.0001	
IO-Link process data (cyclical)	<b>function</b>	<b>bit length</b>
	pressure	16
	device status	4
	SSC1.1	1
	SSC1.2	1
IO-Link functions (acyclical)	application specific tag; internal temperature; Medium temperature	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	1726

### Operating conditions


Ambient temperature [°C]	0...60
Storage temperature [°C]	-25...85
Protection	IP 65

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## Pressure sensor for pneumatics

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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]		392
UL approval	UL approval no.	J067
Pressure Equipment Directive	Sound engineering practice; can be used for stable gases fluid group 2	
Mechanical data		
Weight [g]		53.2
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	1 x LED, yellow
Display unit	mbar; kPa; 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		
		

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## Pressure sensor for pneumatics

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### Connection



OUT1            switching output / IO-Link  
OUT2            analogue output  
                  colours to DIN EN 60947-5-2  
                  Core colours

BK=            black  
BN=            brown  
BU=            blue  
WH=            white

### Diagrams and graphs

drilling template

