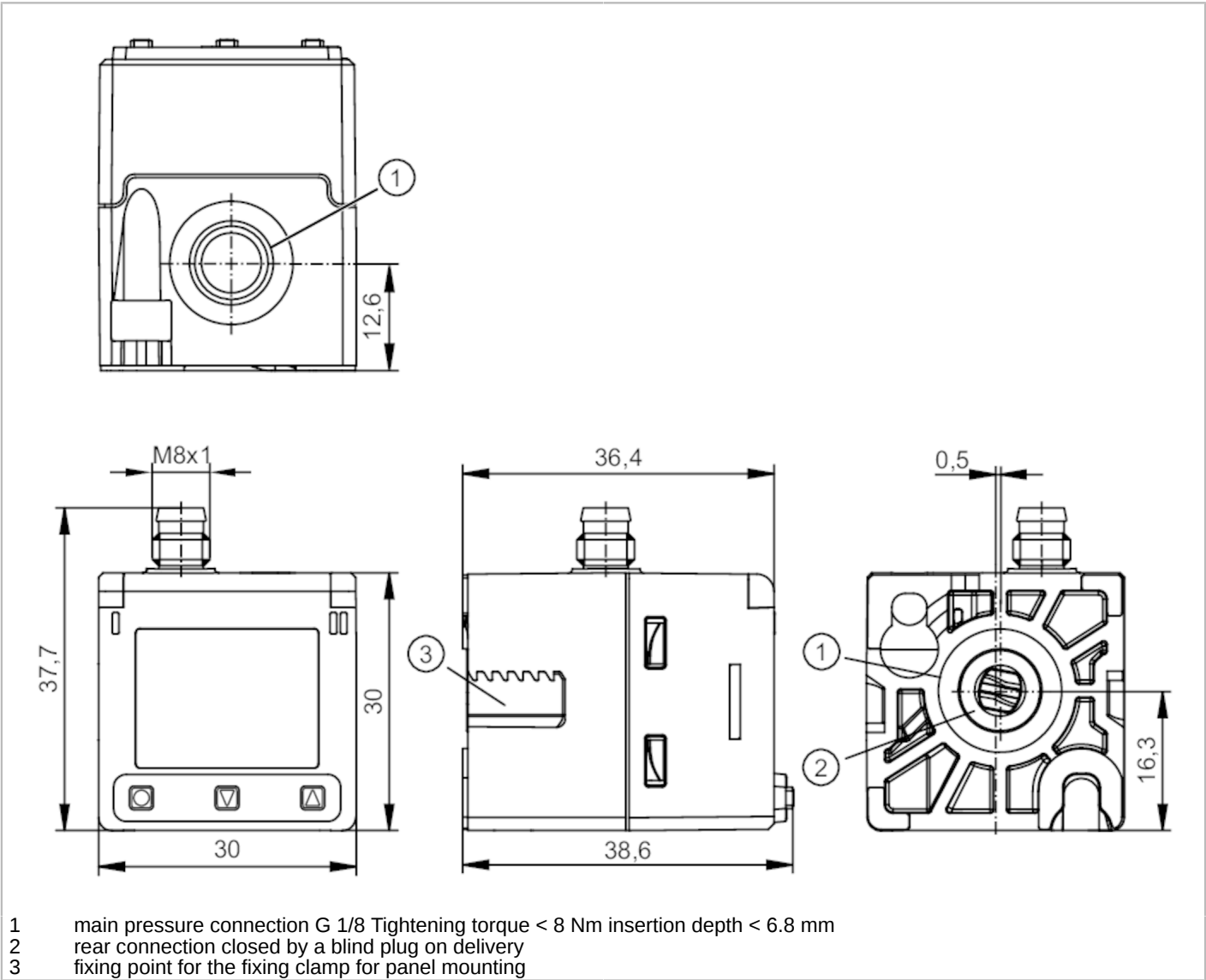


PQC816



Pressure sensor for pneumatics

PQ-001BKHR18-MFPKG/AS/



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range	-1...1 bar	-1000...1000 mbar	-100...100 kPa
Process connection	threaded connection G 1/8 Internal thread (2x)		
Application			
System	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	20 bar	2 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 analog outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analog signal; IO-Link; (configurable)	
Electrical design		PNP/NPN; (configurable)	
Number of digital outputs		1	
Output function		normally open / closed; (configurable)	
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 analog outputs		1	
Analog current output	[mA]	4...20, invertible; (scalable)	
Max. load	[Ω]	500	
Analog voltage output	[V]	0...10 / 1...5, invertible; (scalable)	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		yes (non-latching)	
Overload protection		yes	
Measuring/setting range			
Measuring range	-1...1 bar	-1000...1000 mbar	-100...100 kPa
Set point SP	-1...1 bar	-100...100 kPa	
Analog start point	-1...0.6 bar	-100...60 kPa	
Analog end point	-0.6...1 bar	-60...100 kPa	
In steps of	0.001 bar	0.1 kPa	
Accuracy / deviations			
Switch point accuracy	[% of the span]	< ± 0,5; (Turn down 1:1)	
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K: Turn down 1:1)	
Characteristics deviation	[% of the span]	< ± 0,5; (Turn down 1:1; including linearity, hysteresis and repeatability)	
Linearity deviation		< ± 0.5 % (limit value setting according to DIN EN IEC 62828-1) Turn down 1:1	



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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)

Reaction times

Response time [ms]	6
Damping process value dAP [s]	0...4
Damping for the analog output dAA [s]	0...99.99

Software / programming

Parameter setting options	display can be rotated and switched off; analog 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 class	A	
Process data analog	1	
Process data binary	2	
Min. process cycle time [ms]	0.6	
IO-Link resolution pressure [bar]	0.0001	
IO-Link process data (cyclical)	Function	bit length
	pressure	16
	device status	4
	SSC1.1	1
	SSC1.2	1
IO-Link functions (acyclical)	application specific tag; internal temperature; Medium temperature	
Supported DeviceIDs	Type of operation	DeviceID
	default	1725

Operating conditions

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

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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	
Pressure equipment directive	sound engineering practice; can be used for stable gases fluid group 2	

Mechanical data		
Weight [g]	53	
Housing	rectangular	
Dimensions [mm]	37.7 x 30 x 38.6	
Material	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/cm²	

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

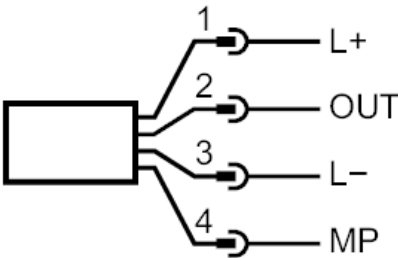
Remarks	
Pack quantity	1 pcs.

Electrical connection

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



Connection



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Electrical connection - plug

- | | | |
|---|-----|-------------|
| 1 | L+ | |
| 2 | OUT | AO |
| 3 | L- | |
| 4 | MP | DO, IO-Link |

AO: analog output; DO: digital output; MP: multi-function connection

Diagrams and graphs

drilling template

