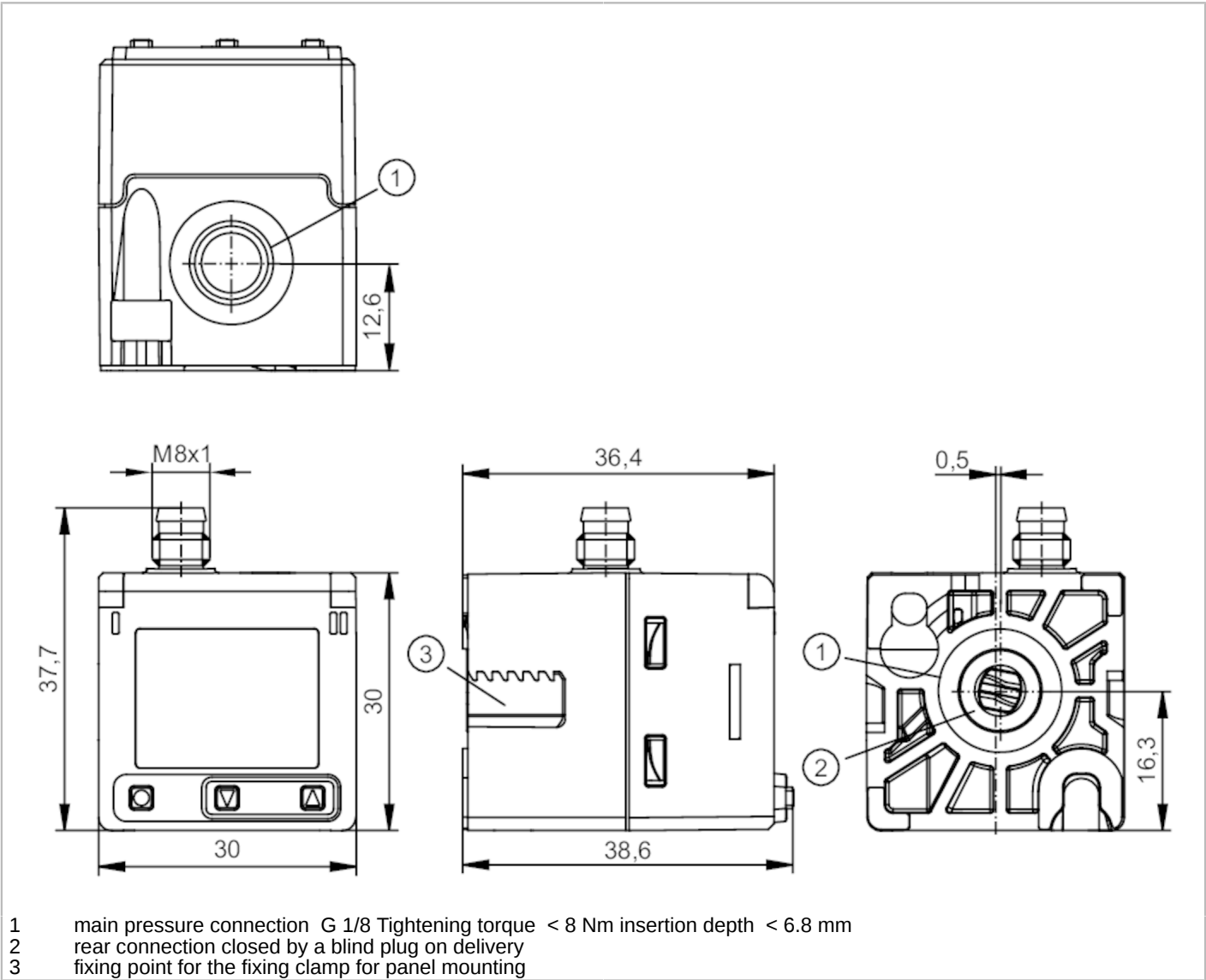


PQC816



Pressure sensor for pneumatics

PQ-001BKHR18-MFPKG/AS/



Product characteristics		
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1	
Measuring range	-1...1 bar	-100...100 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. bursting pressure	30 bar	3 MPa
Pressure rating	20 bar	2 MPa
Vacuum resistance [mbar]	-1000	
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...1 bar	-100...100 kPa
Set point SP	-1...1 bar	-100...100 kPa
Analogue start point	-1...0.6 bar	-100...60 kPa
Analogue end point	-0.6...1 bar	-60...100 kPa
In steps of	0.001 bar	0.1 kPa
Accuracy / deviations		
Switch point accuracy		< ± 0,5; (turn down 1:1)
	[% of the span]	
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K: turn down 1:1)
	[% of the span]	
Characteristics deviation		< ± 0,5; (turn down 1:1; including linearity, hysteresis and repeatability)
	[% of the span]	
Linearity deviation		< ± 0.5 % (limit value setting according to DIN EN IEC 62828-1) turn down 1:1
	[% of the span]	



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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	Identification and Diagnosis (0x4000), Measurement Data Channel (0x800A), SSP 4.1.1 (0x0010), Quantity detection nach Smart Sensor Profil (0x8014)	
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)	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

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)

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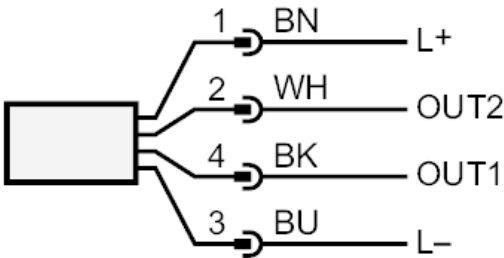
MTTF	[years]	392
Pressure Equipment Directive	Sound engineering practice; can be used for stable gases fluid group 2	
Mechanical data		
Weight	[g]	53
Materials	PBT; PC; TPE; NBR; FKM; brass; silicon (coated)	
Materials (wetted parts)	PBT; FKM; brass; silicon (coated)	
Min. pressure cycles	50 million	
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	bar; MPa; mmHg; kgf/cm²	
Remarks		
Pack quantity	1 pcs.	

Electrical connection

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



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

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Diagrams and graphs

Bohrbild

