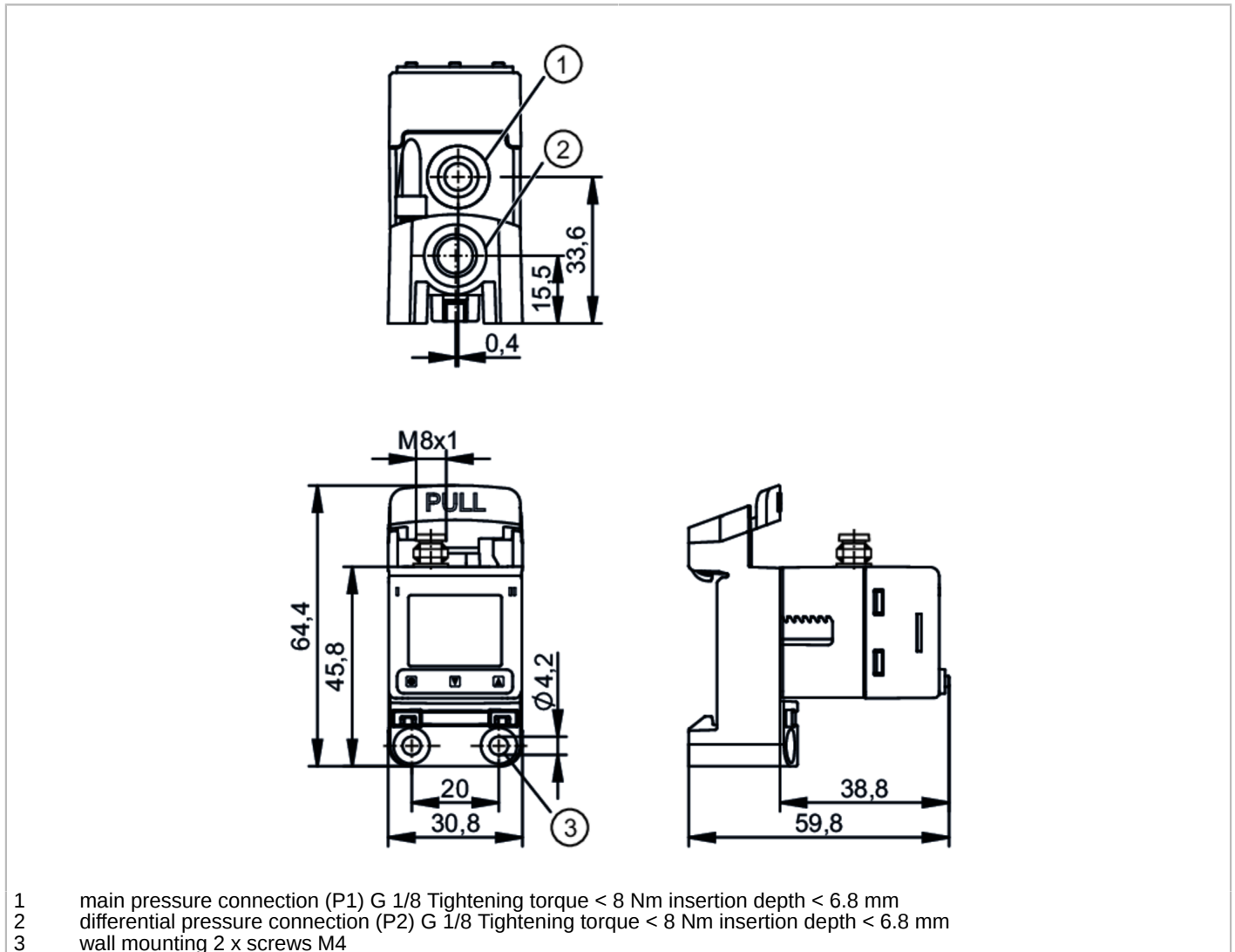


PQD389



Pressure sensor for pneumatics

PQ-001BKHR18-MFPKG/AS/



- 1 main pressure connection (P1) G 1/8 Tightening torque < 8 Nm insertion depth < 6.8 mm
- 2 differential pressure connection (P2) G 1/8 Tightening torque < 8 Nm insertion depth < 6.8 mm
- 3 wall mounting 2 x screws M4



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	-14.5...14.5 psi	-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	0...60 °C	32...140 °F	
Min. burst pressure	20 bar	290 psi	2 MPa
Pressure rating	10 bar	145 psi	1 MPa
Vacuum resistance	-1000 mbar	-14.5 psi	-0.1 MPa
Type of pressure	relative pressure; vacuum; differential pressure		

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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			
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	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa
Set point SP		-1...1 bar		-14.5...14.5 psi	-100...100 kPa
Analogue start point		-1...0.6 bar		-14.5...8.7 psi	-100...60 kPa
Analogue end point		-0.6...1 bar		-8.7...14.5 psi	-60...100 kPa
In steps of		0.001 bar		0.01 psi	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]				
Hysteresis deviation		< ± 0,25; (turn down 1:1)			

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	[% of the span]	
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	1.1.4	
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)	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	1996

Operating conditions

Ambient temperature	0...60 °C	32...140 °F
Storage temperature	-25...85 °C	-13...185 °F
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)
Pressure Equipment Directive	Sound engineering practice; can be used for stable gases fluid group 2	

Mechanical data		
Weight	[g]	84
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; psi; mmHg; inHg; kgf/cm ²

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

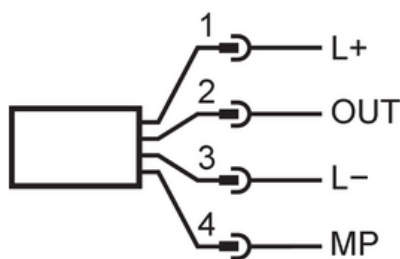
Remarks	
Pack quantity	1 pcs.

Electrical connection - plug

Connector: 1 x M8; coding: A; Contacts: 4, gold-plated



Connection



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

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