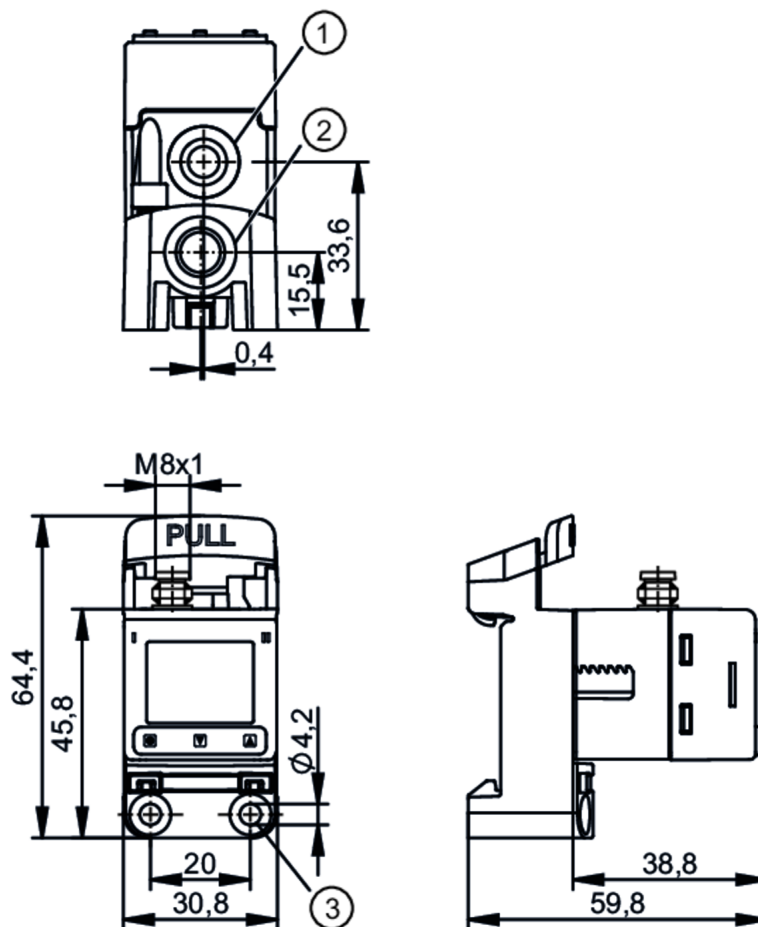


PQD389



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 analog 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 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	-14.5...14.5 psi -100...100 kPa
Set point SP		-1...1 bar	-14.5...14.5 psi	-100...100 kPa
Analog start point		-1...0.6 bar	-14.5...8.7 psi	-100...60 kPa
Analog 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		< ± 0,1; (Turn down 1:1; per year)
	[% of the span]	
Temperature coefficient zero point		0,2; (Turn down 1:1)
	[% of the span / 10 K]	
Temperature coefficient span		0,2; (Turn down 1:1)
	[% of the span / 10 K]	
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	
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 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	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)
MTTF [years]	429	
UL approval	UL approval number	J085
	File number UL	E174189
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	
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; psi; mmHg; inHg; kgf/cm²	

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

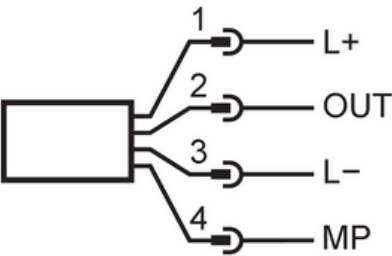
Remarks	
Pack quantity	1 pcs.

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