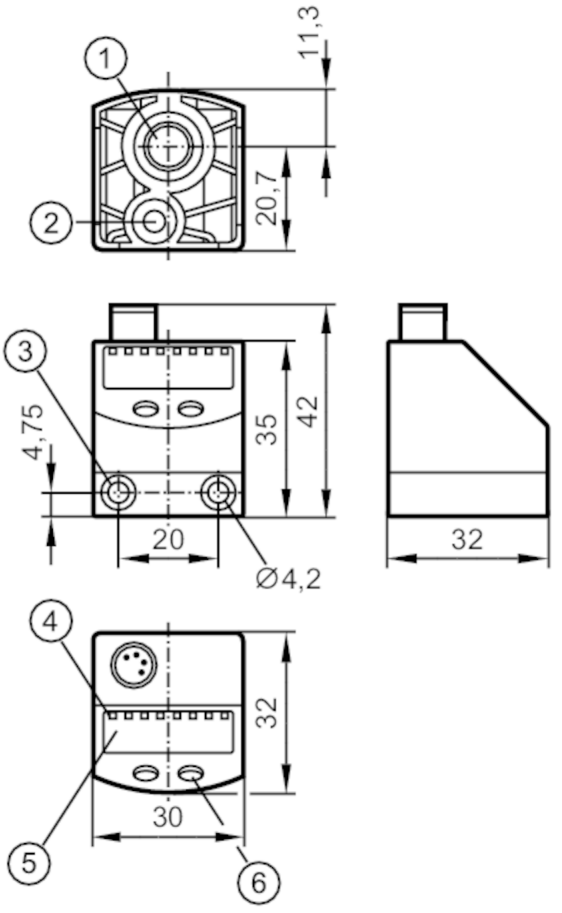
PQ3809

Pressure sensor for pneumatics

PQ-1-1-KHR18-KFPKG/AS/

phase-out article

Alternative articles: PQD489 or PQD389
When selecting an alternative article and accessories please note that technical data may differ!



1 main pressure connection G 1/8 Tightening torque < 8 Nm insertion depth < 7.5 mm
2 auxiliary pressure connection M 5 Tightening torque < 2.5 Nm insertion depth < 7.5 mm
3 Tightening torque < 0.5 Nm
4 LEDs Display unit / switching status
5 alphanumeric display 4-digit
6 programming button

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	-14.6...14.6 psi	-29.4...29.4 inHg	-100...100 kPa
Process connection		threaded connection G 1/8 internal thread internal thread:M5				
Application						
Special feature		Gold-plated contacts				
Application		for industrial applications				
Conditionally suitable for		other media on request				
Medium temperature	[°C]	0...60				

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Min. burst pressure	30 bar	435 psi	886 inHg	3000 kPa	
Note on min. burst pressure	max. overpressure on second pressure connection: 12 bar / 1200 kPa / 174 PSI / 354,4 inHg / 1,2 MPa				
Pressure rating	20 bar	290 psi	591 inHg	2000 kPa	
Vacuum resistance	-1000 mbar		-0.1 MPa		
Type of pressure	relative pressure; differential pressure; vacuum				
Electrical data					
Operating voltage [V]	18...32 DC; (to SELV/PELV)				
Current consumption [mA]	< 50				
Min. insulation resistance [MΩ]	100; (500 V DC)				
Protection class	III				
Reverse polarity protection	yes				
Power-on delay time [s]	0.5				
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				
Number of digital outputs	1				
Output function	normally open / normally closed; (parameterisable)				
Max. voltage drop switching output DC [V]	2				
Permanent current rating of switching output DC [mA]	100				
Switching frequency DC [Hz]	< 100				
Number of analogue outputs	1				
Analogue current output [mA]	4...20				
Max. load [Ω]	500				
Short-circuit protection	yes				
Type of short-circuit protection	pulsed				
Measuring/setting range					
Measuring range	-1...1 bar	-1000...1000 mbar	-14.6...14.6 psi	-29.4...29.4 inHg	-100...100 kPa
Set point SP	-0.98...1 bar	-14.2...14.6 psi	-28.8...29.4 inHg	-98...100 kPa	
Reset point rP	-0.99...0.99 bar	-14.4...14.4 psi	-29.1...29.1 inHg	-99...99 kPa	
In steps of	0.01 bar	0.2 psi	0.3 inHg	1 kPa	
Accuracy / deviations					
Switch point accuracy [% of the span]	< ± 0,5				
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)				
Characteristics deviation [% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)				
Hysteresis deviation	< ± 0,25				

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[% of the span]			
Long-term stability [% of the span]	< ± 0,05; (per 6 months)		
Temperature coefficient zero point [% of the span / 10 K]	0,2; (0...60 °C)		
Temperature coefficient span [% of the span / 10 K]	0,2; (0...60 °C)		
Response times			
Response time [ms]	< 6		
Delay time programmable dS, dr [s]	0; 0,002...5		
Step response time analogue output [ms]	6		
Software / programming			
Parameter setting options	hysteresis / window; normally open / normally closed; analogue output; IO-Link; switching logic; switch-on/switch-off delay; Damping; Display unit		
Interfaces			
Communication interface	IO-Link		
Transmission type	COM2 (38,4 kBaud)		
IO-Link revision	1.1		
SDCI standard	IEC 61131-9 FDIS		
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor	
	Function	Device identification	
	Function	Process data variable	
SIO mode	yes		
Required master port type	A		
Process data analogue	1		
Process data binary	2		
Min. process cycle time [ms]	2.3		
Supported DeviceIDs	**Type of operation**	**DeviceID**	
	default	366	
Operating conditions			
Ambient temperature [°C]	0...70		
Storage temperature [°C]	-25...85		
Protection	IP 65		
Tests / approvals			
EMC	DIN EN 61000-6-2		
	DIN EN 61000-6-3		
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]	437		
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request		
Mechanical data			
Weight [g]	87		
Housing	rectangular		

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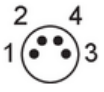
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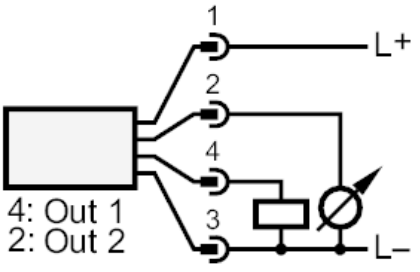
Dimensions [mm]		42 x 30 x 32
Materials		PBT; FKM; polyester
Materials (wetted parts)		brass; FKM; silicon (coated); PBT
Min. pressure cycles		50 million
Process connection		threaded connection G 1/8 internal thread internal thread:M5
Displays / operating elements		
Display	Display unit	4 x LED, green
	switching status	1 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Display unit		bar; kPa; psi; inHg
Remarks		
Pack quantity		1 pcs.

Electrical connection

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



Connection



OUT1	switching output IO-Link
OUT2	analogue output