

PQ3809



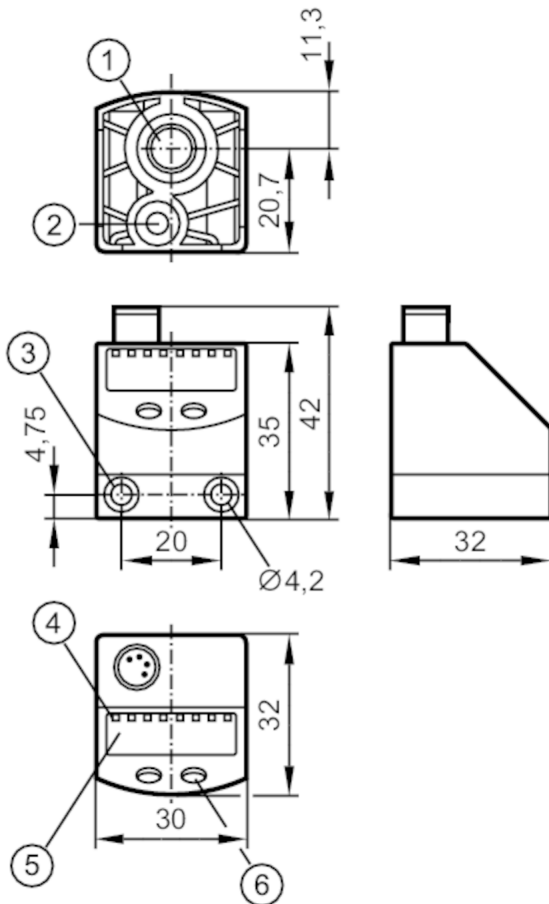
Pressure sensor for pneumatics

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

phase-out article

Alternative articles: PQC816

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			
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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
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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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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

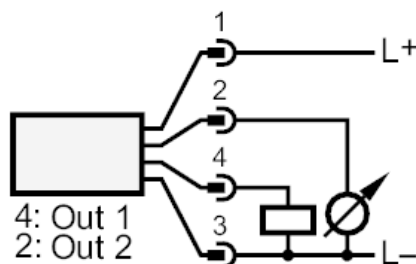
Pack quantity	1 pcs.
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Electrical connection

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



Connection



OUT1	switching output
	IO-Link
OUT2	analogue output