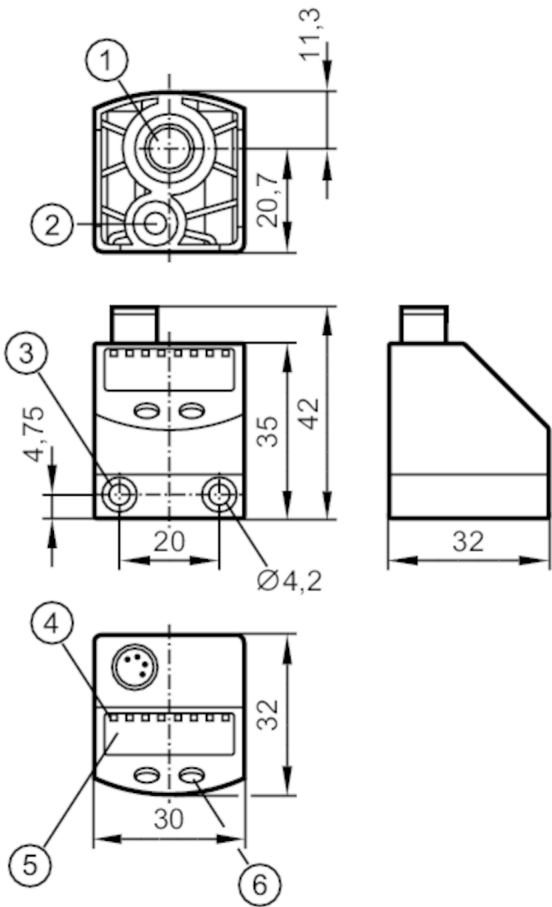


PQ3809



Pressure sensor for pneumatics

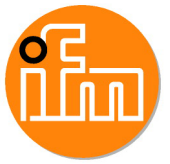
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- 1 main pressure connection G 1/8 Tightening torque < 8 Nm insertion depth < 7.5 mm
- 2 auxiliary pressure connection M 5 Tightening torque < 2.5 Nm insertion depth < 7.5 mm
- 3 Tightening torque < 0.5 Nm
- 4 LEDs Display unit / Switching status
-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



Product characteristics					
Number of inputs and outputs	Number of digital outputs: 1; Number of analog 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					
System	gold-plated contacts				
Application	for industrial applications				
Conditionally suitable for	other media on request				
Medium temperature [°C]	0...60				
Min. bursting 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 [mbar]	-1000				



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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				
Overvoltage protection		yes; (< 40 V)				
Power-on delay time	[s]	0.5				
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				
Number of digital outputs		1				
Output function		normally open / closed; (configurable)				
Max. voltage drop switching output DC	[V]	2				
Permanent current rating of switching output DC	[mA]	100				
Switching frequency DC	[Hz]	< 100				
Number of analog outputs		1				
Analog current output	[mA]	4...20				
Max. load	[Ω]	500				
Short-circuit protection		yes				
Type of short-circuit protection		yes (non-latching)				
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		< ± 0,5				
	[% of the span]					
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				
	[% of the span]					
Long-term stability		< ± 0,05; (per 6 months)				
	[% of the span]					



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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)	
Reaction times			
Response time	[ms]	< 6	
Delay time programmable dS, dr	[s]	0; 0,002...5	
Step response time analog output	[ms]	6	
Software / programming			
Parameter setting options	hysteresis / window; normally open / closed; analog 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: Process Data Variable; Device Identification		
SIO mode	yes		
Required master port class	A		
Process data analog	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	
Material	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		

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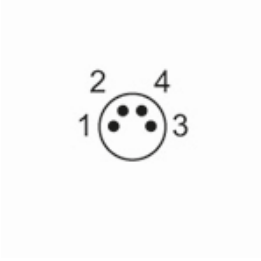
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Displays / operating elements		
Display	Display unit	4 x LED, green
	Switching status	1 x LED, yellow
	Function display	alphanumeric display, 4-digit
	Measured values	alphanumeric display, 4-digit
Display unit	bar; kPa; psi; inHg	

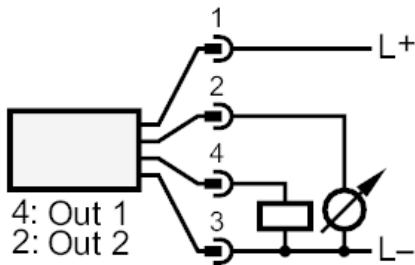
Remarks	
Pack quantity	1 pcs.

Electrical connection

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



Connection



OUT1	Switching output
	IO-Link
OUT2	analog output