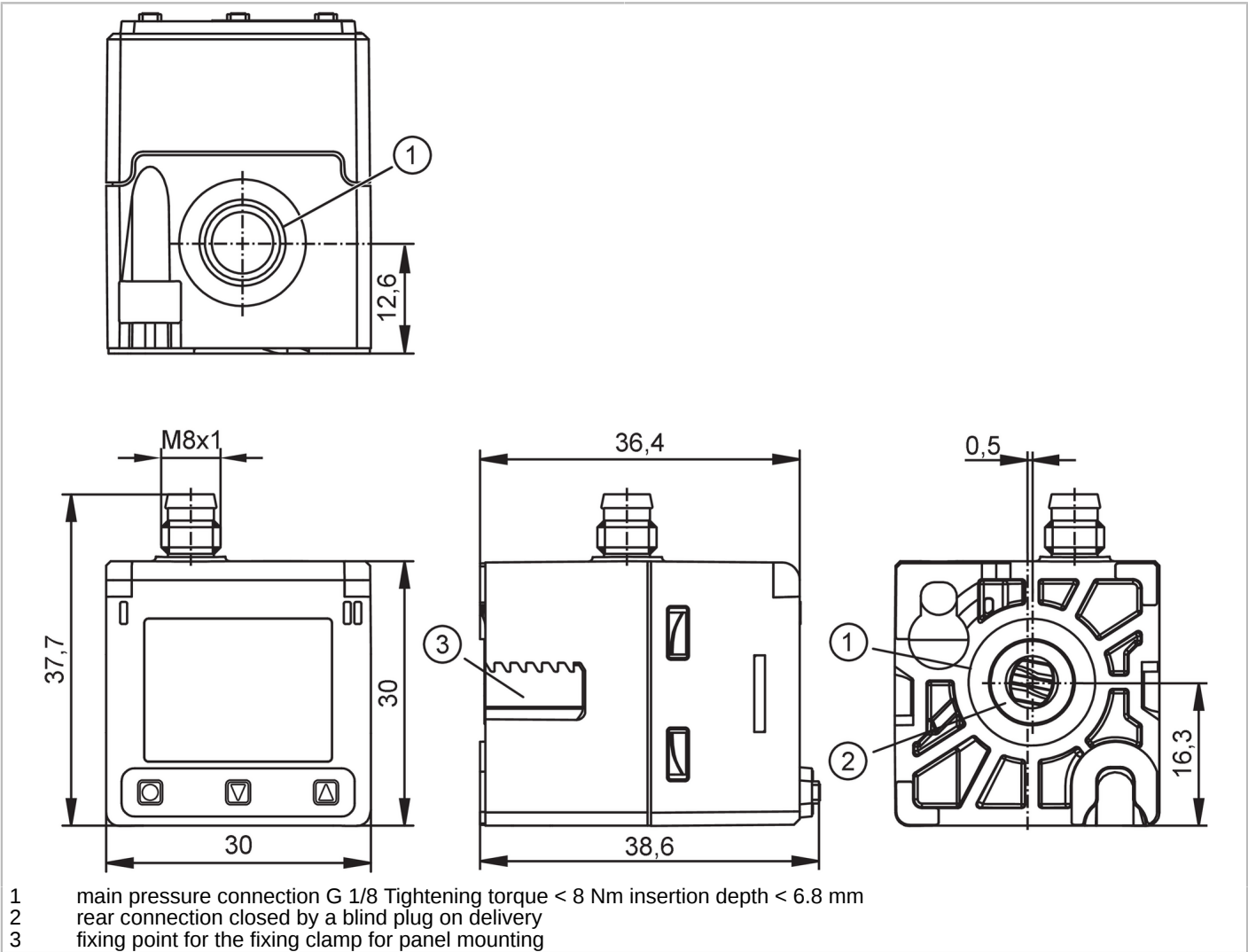


PQS819



Pressure sensor for pneumatics

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Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	-1...0 bar	-1000...0 mbar	-100...0 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 [°C]	0...60		
Min. burst pressure	20 bar	2 MPa	
Pressure rating	10 bar	1 MPa	
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure; vacuum		
Electrical data			
Operating voltage [V]	18...30 DC		



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Current consumption	[mA]	< 30
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]	0.3
Integrated watchdog		yes

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2
------------------------------	------------------------------

Outputs

Total number of outputs	2
Output signal	switching signal; IO-Link; (configurable)
Electrical design	PNP/NPN; (configurable)
Number of digital outputs	2
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
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Measuring/setting range

Measuring range	-1...0 bar	-1000...0 mbar	-100...0 kPa
Set point SP	-1...0 bar	-100...0 kPa	
In steps of	0.001 bar	0.1 kPa	0.0001 MPa

Accuracy / deviations

Switch point accuracy	[% of the span] < ± 1
Repeatability	[% of the span] < ± 0,1; (with temperature fluctuations < 10 K:)
Characteristics deviation	[% of the span] < ± 1; (including linearity, hysteresis and repeatability)
Linearity deviation	[% of the span] < ± 1 % (limit value setting to DIN EN IEC 62828-1)
Hysteresis deviation	[% of the span] < ± 0,25
Long-term stability	[% of the span] < ± 0,1; (per year)
Temperature coefficient zero point	[% of the span / 10 K] 0,2
Temperature coefficient span	[% of the span / 10 K] 0,2



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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; Teach function; simulation function; Diagnostic function	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM3 (230,4 kBaud)	
IO-Link revision	1.1.3	
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	1745
Operating conditions		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	-25...85
Protection	IP 65	
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]	508
UL approval	UL approval number	J065
	File number UL	E174189
Pressure equipment directive	sound engineering practice; can be used for stable gases fluid group 2	

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Mechanical data		
Weight	[g]	53.05
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	2 x LED, yellow
Display unit		mbar; kPa; mmHg; kgf/cm²; %
Accessories		
Items supplied		head cap screw: 2 x (M3 x 8 mm)
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M8; coding: A; Contacts: 4, gold-plated		
Connection		
Electrical connection - plug		
1	L+	
2	OUT	DO
3	L-	
4	MP	DO, IO-Link
DO: digital output; MP: multi-function connection		

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Diagrams and graphs

drilling template

