

New generation available: PI2899 or PI2799

When selecting an alternative article and accessories please note that technical data may differ!

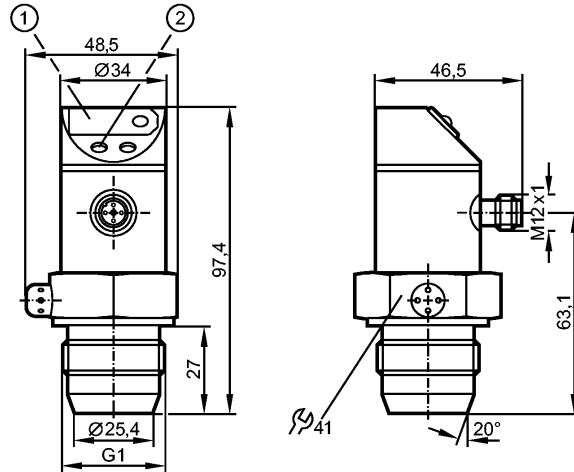
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PF2609

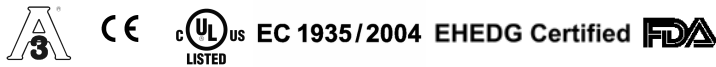


PF-1-1BREA01-MFRKG/US/ /P

Pressure sensors



- 1: 7-segment LED display
- 2: Programming button



Product characteristics

Combined pressure sensor

Quick disconnect

no dead space

Freely rotatable housing 350°

Zero and span adjustable

Function programmable

Sealing cone G 1 male

Process connection: Sealing cone G 1 male

2 outputs

OUT1 = switching output

OUT2 = switching output or analog output

7-segment LED display

Measuring range: -0.99...1.00 bar / -30...30 inHg / -99...100 kPa

Application

Application

Type of pressure: relative pressure  
 Hygienic systems, viscous media and liquids with suspended particles  
 Liquids and gases

Pressure rating	20 bar	590 inHg	2000 kPa
Bursting pressure min.	50 bar	1475 inHg	5000 kPa
Medium temperature [°C]	-25...80		
Electrical data	DC PNP/NPN		
Electrical design	DC PNP/NPN		
Operating voltage [V]	20...30 DC		
Current consumption [mA]	< 60		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Outputs	2 outputs		
Output	OUT1 = switching output OUT2 = switching output or analog output		

**PF2609 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02**

Output function	2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x analog (4...20 mA / 0...10 V; programmable 1:4)		
Current rating [mA]	2 x 250		
Voltage drop [V]	< 2		
Short-circuit protection	yes (non-latching)		
Overload protection	yes		
Switching frequency [Hz]	≤ 170		
Analog output	4...20 mA / 0...10 V		
Max. load [Ω]	4...20 mA: max. (U <sub>b</sub> - 10 V) x 50 / 0...10 V: min. 2000		
Measuring / setting range			
Display unit	bar, inHg, kPa		
Measuring range	-0.99...1.00 bar	-30...30 inHg	-99...100 kPa
Setting range			
Set point, SP	-0.97...1.00 bar	-29...30 inHg	-97...100 kPa
Reset point, rP	-0.99...0.98 bar	-30...29 inHg	-99...98 kPa
Analog start point, ASP	-0.99...-0.20 bar	-30...-6 inHg	-99...-20 kPa
Analog end point, AEP	-0.50...1.00 bar	-15...30 inHg	-50...100 kPa
in steps of	0.01 bar	1 inHg	1 kPa
Factory setting	SP1 = -0.50 bar; rP1 = -0.54 bar ASP = -0.99 bar; AEP = 1.00 bar		
Accuracy / deviations			
Accuracy / deviations (in % of the span) Turn down 1:1			
Characteristics deviation *)	< ± 0.6		
Linearity	< ± 0.5		
Hysteresis	< ± 0.1		
Repeatability **)	< ± 0.1		
Long-term stability ***)	< ± 0.1		
Temperature coefficients (TEMPCO) in the temperature range 0...80° C (in % of the span per 10 K)			
Greatest TEMPCO of the zero point	< ± 0.1		
Greatest TEMPCO of the span	< ± 0.2		
Reaction times			
Power-on delay time [s]	0.2		
Min. response time switching output [ms]	3		
Damping for the switching output (dAP) [s]	0...4		
Damping for the analog output (dAA) [s]	0 - 0.1 - 0.5 - 2		
Response time analog output [ms]	3		
Integrated watchdog	yes		
Software / programming			
Programming options	hysteresis / window function; N.O. / N.C.; output polarity; current / voltage outputs; damping; calibration of displayed values; display can be rotated / deactivated; display unit		
Environment			
Ambient temperature [°C]	-25...80		
Storage temperature [°C]	-40...100		
Protection	IP 67		
Tests / approvals			
EMC	EN 61000-4-2 ESD:	4 kV CD / 8 kV AD	
	EN 61000-4-3 HF radiated:	10 V/m	
	EN 61000-4-4 Burst:	2 kV	
	EN 61000-4-6 HF conducted:	10 V	
Shock resistance	DIN IEC 68-2-27:	50 g (11 ms)	
Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)	
MTTF [Years]	170		
Mechanical data			

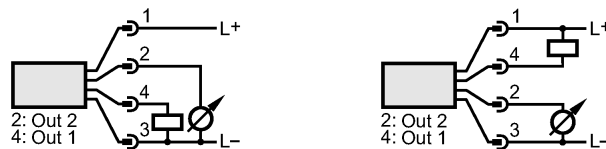
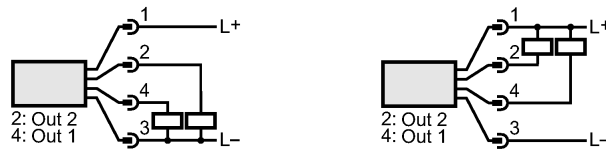
**PF2609 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02**

Process connection	Sealing cone G 1 male
Materials (wetted parts)	ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
Housing materials	stainless steel 316L / 1.4404; PBT (Pocan); PC (Makrolon); PEI; EPDM/X (Santoprene); FPM (Viton)
Switching cycles min.	100 million
Weight [kg]	0.379
Displays / operating elements	
Display	Switching status 2 x LED red Function display 7-segment LED display Measured values 7-segment LED display
Electrical connection	
Connection	M12 connector; gold-plated contacts

**Wiring**

Programming of the output function (OUT1 / OUT2):

- Hno = hysteresis / normally open
- Hnc = hysteresis / normally closed
- Fno = window function / normally open
- Fnc = window function / normally closed
- Complementary outputs:  
output 1: = Hno, output 2: = Hnc  
(with the same SP / rP)



Programming of the analog output (OUT2):

- I = current output (4...20 mA)
- U = voltage output (0...10 V)



Remarks

- \*) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086)
- \*\*) with temperature fluctuations < 10 K
- \*\*\*) in % of the span per year
- The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.

Pack quantity [piece]	1
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