

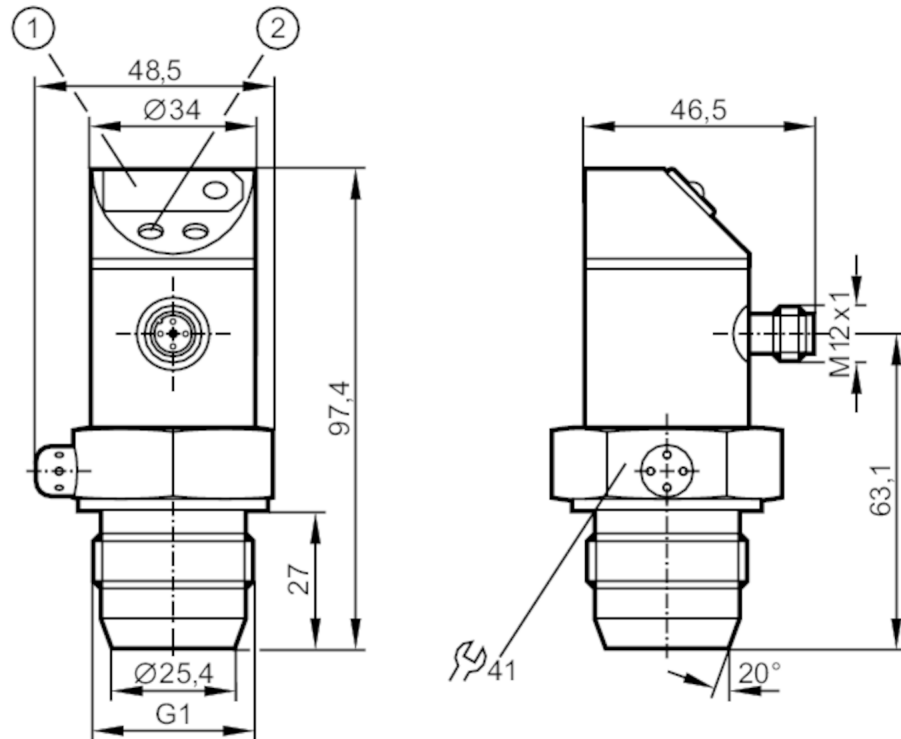
Flush pressure sensor

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

Article no longer available - archive entry

Alternative articles: PI2899 or PI2799

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



- 1 7-segment LED display
- 2 programming button



EC 1935/2004 EHEDG Certified FDA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1			
Measuring range	-0.99...1 bar	-990...1000 mbar	-30...30 inHg	-99...100 kPa
Process connection	threaded connection G 1 external thread sealing cone			

Application

Special feature	Gold-plated contacts		
Application	flush mountable for the food and beverage industry		
Installation	freely rotatable housing 350°		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-25...80		
Min. bursting pressure	50 bar	1475 inHg	5000 kPa
Pressure rating	20 bar	590 inHg	2000 kPa
Type of pressure	relative pressure		
No dead space	yes		

Electrical data

Operating voltage [V]	20...30 DC
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Current consumption	[mA]	< 60
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	0.2
Integrated watchdog		yes

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1
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Outputs

Total number of outputs	2
Output signal	switching signal; analogue signal; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	250
Switching frequency DC [Hz]	< 170
Number of analogue outputs	1
Analogue current output [mA]	4...20; (scalable 1:4)
Max. load [Ω]	(Ub - 10 V) / 20 mA
Analogue voltage output [V]	0...10; (scalable 1:4)
Min. load resistance [Ω]	2000
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes

Measuring/setting range

Measuring range	-0.99...1 bar	-990...1000 mbar	-30...30 inHg	-99...100 kPa
Set point SP	-0.97...1 bar	-29...30 inHg		-97...100 kPa
Reset point rP	-0.99...0.98 bar	-30...29 inHg		-99...98 kPa
Analogue start point	-0.99...-0.2 bar	-30...-6 inHg		-99...-20 kPa
Analogue end point	-0.5...1 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

Repeatability	[X21]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[X21]	< ± 0,6; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation	[X21]	< ± 0,5; (Turn down 1:1)
Hysteresis deviation	[X21]	< ± 0,1; (Turn down 1:1)
Long-term stability	[X21]	< ± 0,1; (Turn down 1:1; per year)
Temperature coefficient zero point	[X22]	< ± 0,1; (0...80 °C)

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Temperature coefficient span	[X22]	< ± 0,2; (0...80 °C)	
Response times			
Response time	[ms]	< 3	
Damping process value dAP	[s]	0...4	
Damping for the analogue output dAA in steps	[s]	0 - 0,1 - 0,5 - 2	
Max. response time analogue output	[ms]	3	
Software / programming			
Parameter setting options		hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span	
Operating conditions			
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)	
Mechanical data			
Weight	[g]	379.4	
Materials		stainless steel (1.4404 / 316L); PBT; PC; PEI; EPDM/X; FKM	
Materials (wetted parts)		ceramics (99.9 % Al2O3); stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4; PTFE	
Min. pressure cycles		100 million	
Process connection		threaded connection G 1 external thread sealing cone	
Displays / operating elements			
Display	switching status	2 x LED, red	
	function display	7-segment LED display	
	measured values	7-segment LED display	
Display unit		bar; inHg; kPa	
Remarks			
Remarks		The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.	
Pack quantity		1 pcs.	



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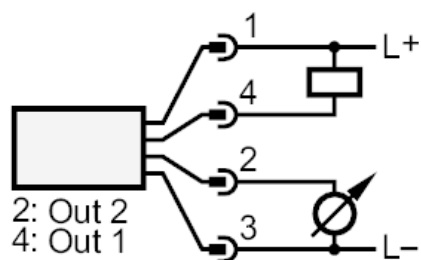
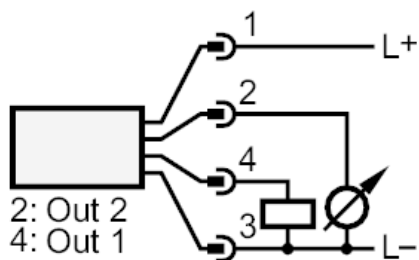
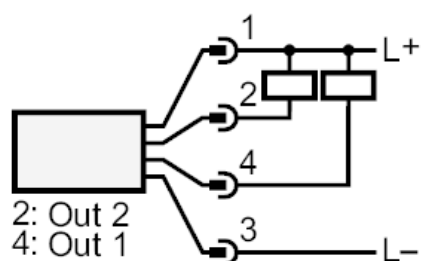
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



OUT1
OUT2

switching output
switching output
analogue output