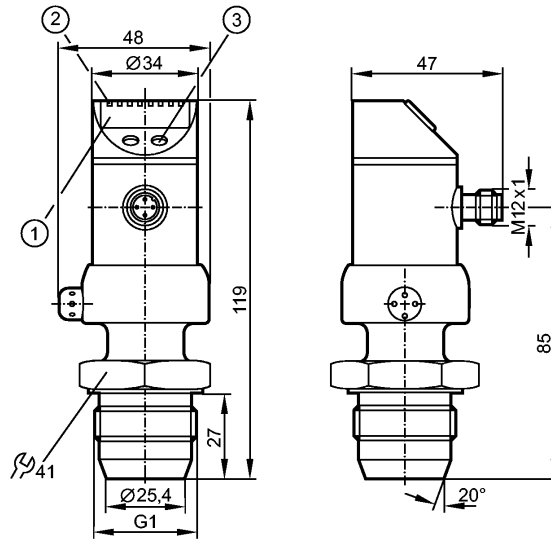


PI2697

PI-001BREA01-MFRKG/US/ /P

Pressure sensors

New generation available: PI2897 or PI2797
When selecting an alternative article and accessories please note that technical data may differ!



- 1: 4-digit alphanumeric display
- 2: status LEDs
- 3: 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 Output
OUT1 = Switching output
OUT2 = Analog output
4-digit alphanumeric display
Measuring range: -50...1000 mbar

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases
Pressure rating [mbar]	10000
Bursting pressure min. [mbar]	30000
Medium temperature [°C]	-25...125 (145 max. 1h)

Electrical data

Electrical design	DC PNP/NPN
Operating voltage [V]	18...32 DC
Current consumption [mA]	< 50
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III

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Reverse polarity protection	yes
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Outputs

Output	2 Output OUT1 = Switching output OUT2 = Analog output
Output function	1 x normally open / closed programmable + 1 x analog (I / U, scaleable 1:4)
Current rating [mA]	250
Voltage drop [V]	< 2
Short-circuit protection	yes (non-latching)
Overload protection	yes
Switching frequency [Hz]	6
Analog output	I: 4...20 mA (Ineg: 20...4 mA) / U: 0...10 V (Uneg: 10...0 V)
Max. load [Ω]	I / Ineg: max. (U _b - 10 V) x 50; U / Uneg: min. 2000

Measuring / setting range

Display unit	mbar, kPa, psi, inH2O, mWS, % der Spanne
Measuring range [mbar]	-50...1000
Setting range	
Set point, SP [mbar]	-48...1000
Reset point, rP [mbar]	-50...998
Analog start point, ASP [mbar]	-50...750
Analog end point, AEP [mbar]	200...1000
in steps of [mbar]	1
Factory setting	SP1 = 250 mbar; rP1 = 230 mbar ASP = 0 mbar; AEP = 1000 mbar

Accuracy / deviations

Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.2
Characteristics deviation *)	< ± 0.2
Linearity	< ± 0.15
Hysteresis	< ± 0.15
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	< ± 0.05
Greatest TEMPCO of the span	< ± 0.15

Reaction times

Power-on delay time [s]	0.5
Min. response time switching output [ms]	100
Damping for the switching output (dAP) [s]	0.1...100.0
Damping for the analog output (dAA) [s]	0.1...100.0
Step response time analogue output [ms]	25
Integrated watchdog	yes

Software / programming

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Pressure sensors

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
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Environment	
Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 67 / IP 69K

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 61000-4-5 Surge: 0.5/1 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]	163


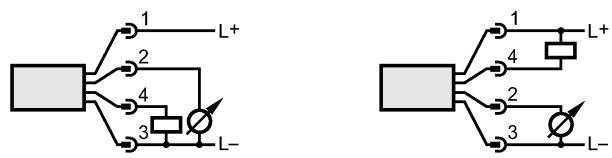
Mechanical data	
Process connection	Sealing cone G 1 male
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
Housing materials	stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.444

Displays / operating elements	
Display	Display unit 6 x green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; gold-plated contacts

Wiring

Programming of the output function
 -----OUT1-----
 - Switching output
 Hno = hysteresis / normally open
 Hnc = hysteresis / normally closed
 Fno = window function / normally open
 Fnc = window function / normally closed
 -----OUT2-----
 - Analog output
 I = current output (4...20 mA)
 U = voltage output (0...10 V)

Remarks	
Remarks	*) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) **) with temperature fluctuations < 10 K ***) in % of the span per year



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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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