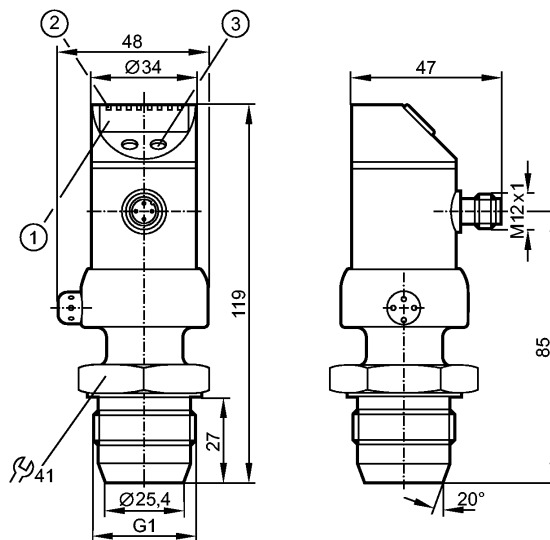


**PI2698**

PI-,25BREA01-MFRKG/US/ /P

Pressure sensors

**New generation available: PI2898 or PI2798**  
**When selecting an alternative article and accessories please note that technical data may differ!**



- 1: 4-digit alphanumeric display
- 2: LEDs
- 3: Programming button



Made in Germany

**Product characteristics**

Combined pressure sensor
Connector
no dead space
Freely rotatable housing 350°
Zero and span adjustable
Function programmable
Sealing cone G1 male
Process connection: Sealing cone G1 male
2 outputs OUT1 = switching output OUT2 = analogue output
4-digit alphanumeric display
Measuring range: -12.4...250.0 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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**Pressure sensors**

Reverse polarity protection	yes
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**Outputs**

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

**Measuring / setting range**

Display unit	mbar, kPa, inH2O, mmWS, % der Spanne
Measuring range [mbar]	-12.4...250.0
Setting range	
Set point, SP [mbar]	-12.0...250.0
Reset point, rP [mbar]	-12.4...249.6
Analogue start point, ASP [mbar]	-12.4...187.4
Analogue end point, AEP [mbar]	50.0...250.0
in steps of [mbar]	0.2
Factory setting	SP1 = 62.4 mbar; rP1 = 57.40 mbar ASP = 0.0 mbar; AEP = 250.0 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 analogue 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]	173

Mechanical data	
Process connection	Sealing cone G1 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; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.448

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**

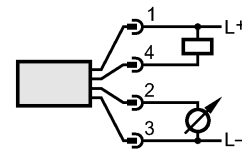
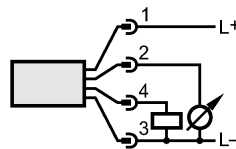
Programming of the output function

-----OUT1-----

- Switching output
- Hno = hysteresis / normally open
- Hnc = hysteresis / normally closed
- Fno = window function / normally open
- Fnc = window function / normally closed

-----OUT2-----

- Analogue 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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**Pressure sensors**

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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