

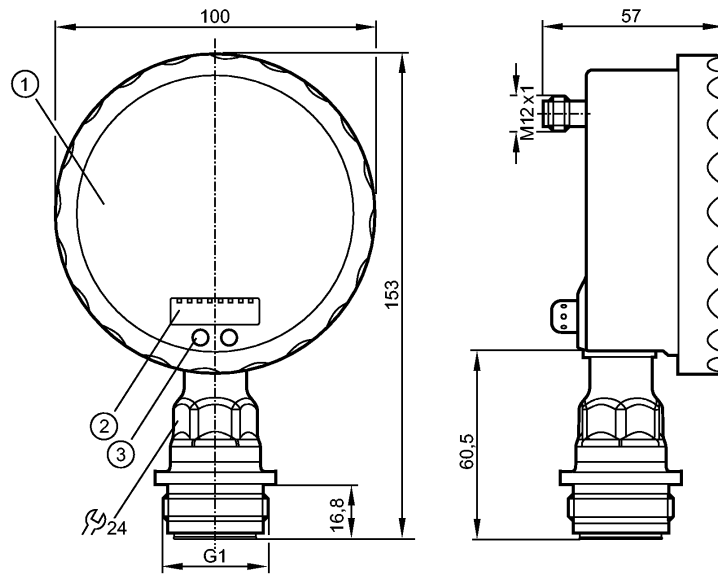


PG2789

PG-,10BREA01-MFRKG/US/ /P



Pressure sensors



- 1: Analogue display
- 2: 4-digit alphanumeric display
- 3: Touch pad (programming button)



Product characteristics

Electronic pressure sensor with analog display
Quick disconnect
Suitable for all standard CIP and SIP processes
Analog display 0...350° rotatable
Resolution 0.25%
Pointer not visible when unit disconnected
no dead space
Process connection: G 1 A / Aseptoflex Vario
2 Output OUT1 = Switching output OUT2 = Analog output
analog display, 4-digit alphanumeric display
Measuring range: -5.0...100.0 mbar / -2.0...40.15 inH2O

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases	
Pressure rating	4000 mbar	1605 inH2O
Bursting pressure min.	30000 mbar	12043 inH2O
Medium temperature [°C]	-25...125 (145 max. 1h)	

Electrical data

Electrical design	DC PNP/NPN
Operating voltage [V]	18...32 DC
Current consumption [mA]	< 70 (24 V)
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 analogue (4...20 / 20...4 mA, scalable)	
Current rating [mA]	250	
Voltage drop [V]	< 2	
Short-circuit protection	yes (non-latching)	
Overload protection	yes	
Switching frequency [Hz]	50	
Analog output	I: 4...20 mA (Ineg: 20...4 mA)	
Max. load [Ω]	I / Ineg: max. (U _b - 10 V) x 50	

Measuring / setting range

Measuring range	-5.0...100.0 mbar	-2.0...40.15 inH2O
Setting range		
Set point, SP	-4.8...160.0 mbar	-1.95...64.25 inH2O
Reset point, rP	-5.0...159.8 mbar	-2.05...64.15 inH2O
Analog start point, ASP	-5.0...135.0 mbar	-2.00...54.20 inH2O
Analog end point, AEP	20.0...160.0 mbar	8.05...64.25 inH2O
in steps of	0.1 mbar	0.05 inH2O

Accuracy / deviations

Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.5
Characteristics deviation *)	< ± 0.5
Linearity	< ± 0.25
Hysteresis	< ± 0.2
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	< ± 0.1
Greatest TEMPCO of the span	< ± 0.2

Reaction times

Power-on delay time [s]	6
Min. response time switching output [ms]	10
Damping for the switching output (dAP) [s]	0.01...30
Damping for the analog output (dAA) [s]	0.01...30
Step response time analogue output [ms]	25
Integrated watchdog	yes

Environment

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100



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Protection	IP 67 / IP 69K
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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]	100

Mechanical data

Process connection	G 1 A / Aseptoflex Vario
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; PA; FPM (Viton); PTFE; viewing glass: laminated safety glass 4 mm
Switching cycles min.	100 million
Weight	[kg] 0.557

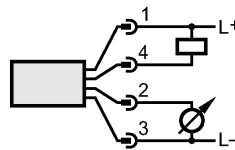
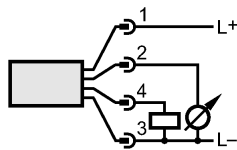
Displays / operating elements

Display	Display unit 2 x LED green Switching status LED yellow Switch points LED ring Function display 4-digit alphanumeric display Measured values analog display, 4-digit alphanumeric display
Extended display range (max.)	160 mbar 64.25 inH ₂ O

Electrical connection

Connection	M12 connector; gold-plated contacts
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Wiring



Remarks

Remarks	*) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) characteristics deviation in the extended display range: 1.5 % of the span switch point accuracy in the extended display range: 1.5 % of the span **) with temperature fluctuations < 10 K ***) in % of the span per year
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Pack quantity	[piece] 1
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