

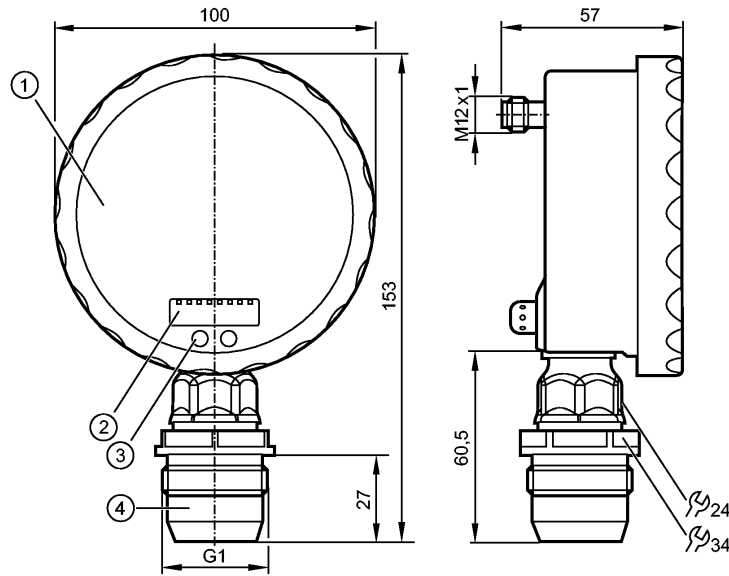


# PG2894

PG-010-REA01-MFRKG/US/ /P



Pressure sensors



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

Attention: The unit must only be installed in a process connection for G1 sealing cone! The G1A sealing cone of the unit is only suited for adapters with metal end stop!

ACS CE cUL<sub>US</sub> LISTED EC 1935/2004 EHEDG Certified FDA

### 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

Sealing cone G 1 male

Process connection: Sealing cone G 1 male

2 Output

OUT1 = Switching output

OUT2 = Analog output

analog display, 4-digit alphanumeric display

Measuring range: -1.00...10.00 bar / -14.5...145.0 psi

### Application

Application

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

Pressure rating

50 bar

725 psi

Bursting pressure min.

150 bar

2175 psi

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)



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Insulation resistance	[MΩ]	> 100 (500 V DC)
Protection class		III
Reverse polarity protection		yes

## 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 <sub>b</sub> - 10 V) x 50

## Measuring / setting range

Measuring range	-1.00...10.00 bar	-14.5...145.0 psi
Setting range		
Set point, SP	-0.98...16.00 bar	-14.2...232.0 psi
Reset point, rP	-1.00...15.98 bar	-14.5...231.8 psi
Analog start point, ASP	-1.00...13.50 bar	-14.5...195.7 psi
Analog end point, AEP	1.50...16.00 bar	21.8...232.0 psi
in steps of	0.01 bar	0.1 psi

## 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]	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



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Pressure sensors

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]	100

### Mechanical data

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; PA; FPM (Viton); PTFE; viewing glass: laminated safety glass 4 mm
Switching cycles min.		100 million
Weight	[kg]	0.564

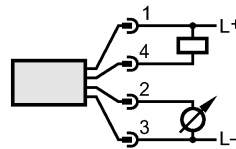
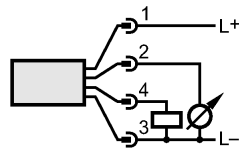
### Displays / operating elements

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.)		16 bar   232 psi

### Electrical connection

Connection		M12 connector; gold-plated contacts
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#### Wiring



### Remarks

Remarks		Attention: The unit must only be installed in a process connection for G1 sealing cone! The G1A sealing cone of the unit is only suited for adapters with metal end stop! *) 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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