

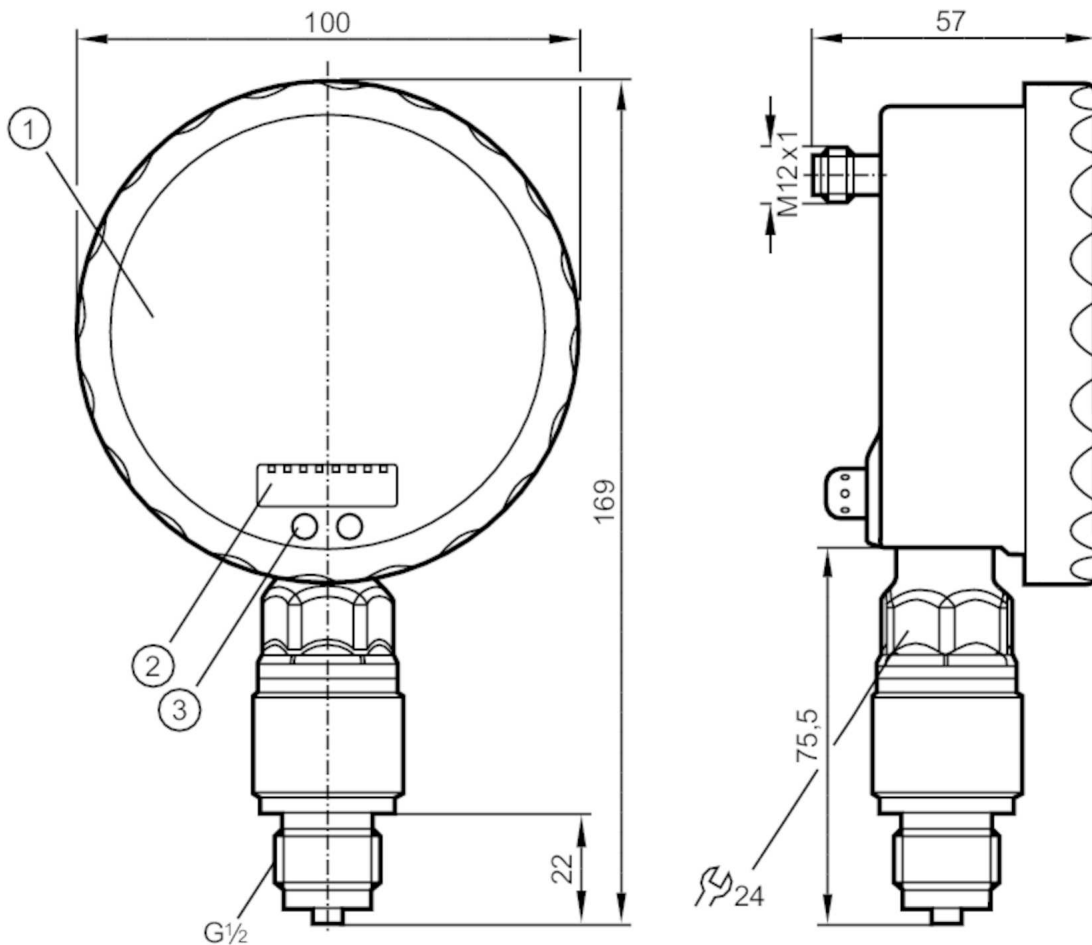
# PG2409



## Pressure sensor with analog display

PG-1-1-REB12-MFRKG/US/ /P

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



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



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range	-1...1 bar	-1000...1000 mbar	-14.52...14.52 psi
Process connection	threaded connection G 1/2 external thread		

### Application

System	gold-plated contacts		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-25...80		
Min. bursting pressure	30 bar	435 psi	
Pressure rating	10 bar	145 psi	
Type of pressure	relative pressure; vacuum		

### Electrical data

Operating voltage [V]	18...32 DC		
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Current consumption	[mA]	< 70; (24 V)
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	6
Integrated watchdog		yes

### Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
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### Outputs

Total number of outputs	2	
Output signal	switching signal; analog signal; (configurable)	
Electrical design	PNP/NPN	
Number of digital outputs	1	
Output function	normally open / closed; (configurable)	
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250
Switching frequency DC	[Hz]	75
Number of analog outputs	1	
Analog current output	[mA]	4...20, invertible; (scalable)
Max. load	[Ω]	(U <sub>b</sub> - 10 V) / 20 mA
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

### Measuring/setting range

Measuring range	-1...1 bar	-1000...1000 mbar	-14.52...14.52 psi
Set point SP	-0.992...1.6 bar		-14.4...23.22 psi
Reset point rP	-1...1.592 bar		-14.52...23.1 psi
Analog start point	-1...1.1 bar		-14.52...15.96 psi
Analog end point	-0.5...1.6 bar		-7.26...23.22 psi
In steps of	0.004 bar		0.06 psi

### Accuracy / deviations

Switch point accuracy	[% of the span]	< ± 0,5; (Turn down 1:1)
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line)
Hysteresis deviation	[% of the span]	< ± 0,25; (Turn down 1:1)
Long-term stability	[% of the span]	< ± 0,1; (Turn down 1:1; per 6 months)
Temperature coefficient zero point	[% of the span / 10 K]	< ± 0,2; (0...70 °C)

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Temperature coefficient span [% of the span / 10 K]	< ± 0,2; (0...70 °C)
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### Reaction times

Response time [ms]	< 9
Damping process value dAP [s]	0.01...30
Damping for the analog output dAA [s]	0.01...30
Step response time analog output [ms]	28

### Operating conditions

Ambient temperature [°C]	-20...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]		103
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

### Mechanical data

Weight [g]	565.2
Material	stainless steel (1.4404 / 316L); PA; FKM; PTFE; viewing glass: laminated safety glass 4 mm
Materials (wetted parts)	Al2O3 (ceramics); FKM; stainless steel (1.4404 / 316L)
Min. pressure cycles	100 million
Process connection	threaded connection G 1/2 external thread
Restrictor element integrated	no (can be retrofitted)

### Displays / operating elements

Display	Display unit	2 x LED, green
	Switching status	LED, yellow
	Switch points	LED ring, red
	Function display	alphanumeric display, red 4-digit
	Measured values	analog display, 0...350° rotatable, pointer not visible when unit disconnected
	Measured values	alphanumeric display, red 4-digit
With scale		yes
Extended display range (max.)	1.6 bar	23.22 psi

### Remarks

Remarks	switch point accuracy in the extended display range: 1.5 % of the span
Pack quantity	1 pcs.

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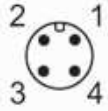


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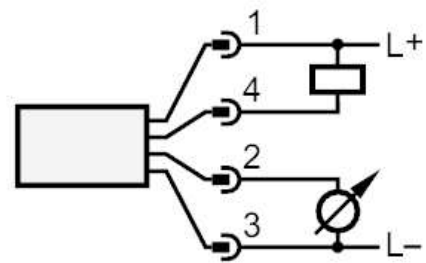
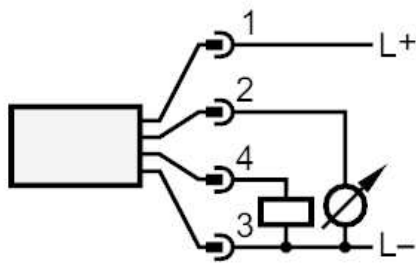
PG-1-1-REB12-MFRKG/US/ IP

### Electrical connection

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



### Connection



OUT1  
OUT2

Switching output  
analog output