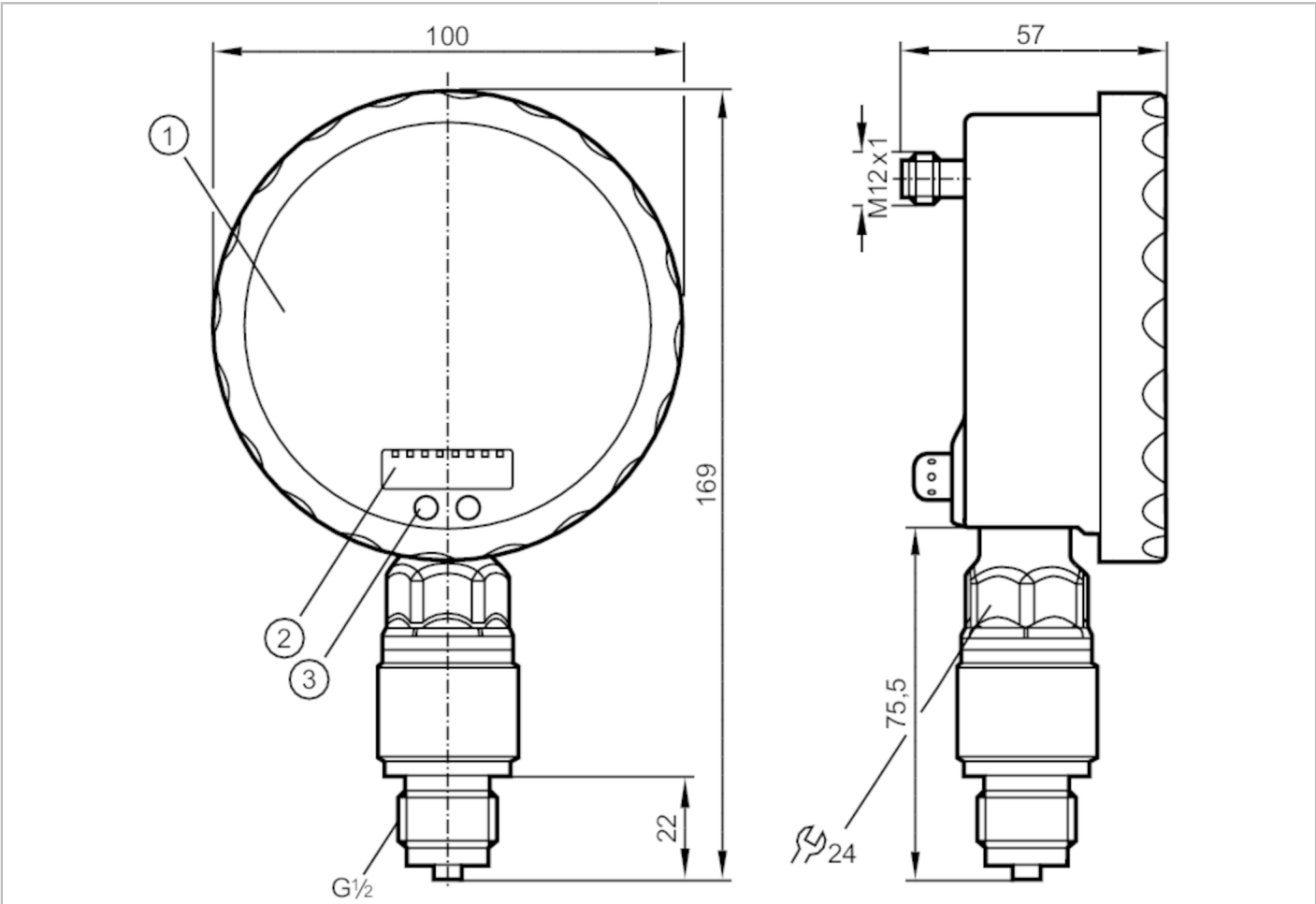


PG2409



Pressure sensor with analog display

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



- 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	3 MPa
Pressure rating	10 bar	145 psi	1 MPa
Type of pressure	relative pressure; vacuum		

Electrical data

Operating voltage [V]	18...32 DC		
Current consumption [mA]	< 70; (24 V)		
Min. insulation resistance [MΩ]	100; (500 V DC)		



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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		
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 _b - 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)		
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
Dimensions	[mm]	169 x 100 x 57
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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Electrical connection

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



Connection



OUT1
OUT2

Switching output
analog output