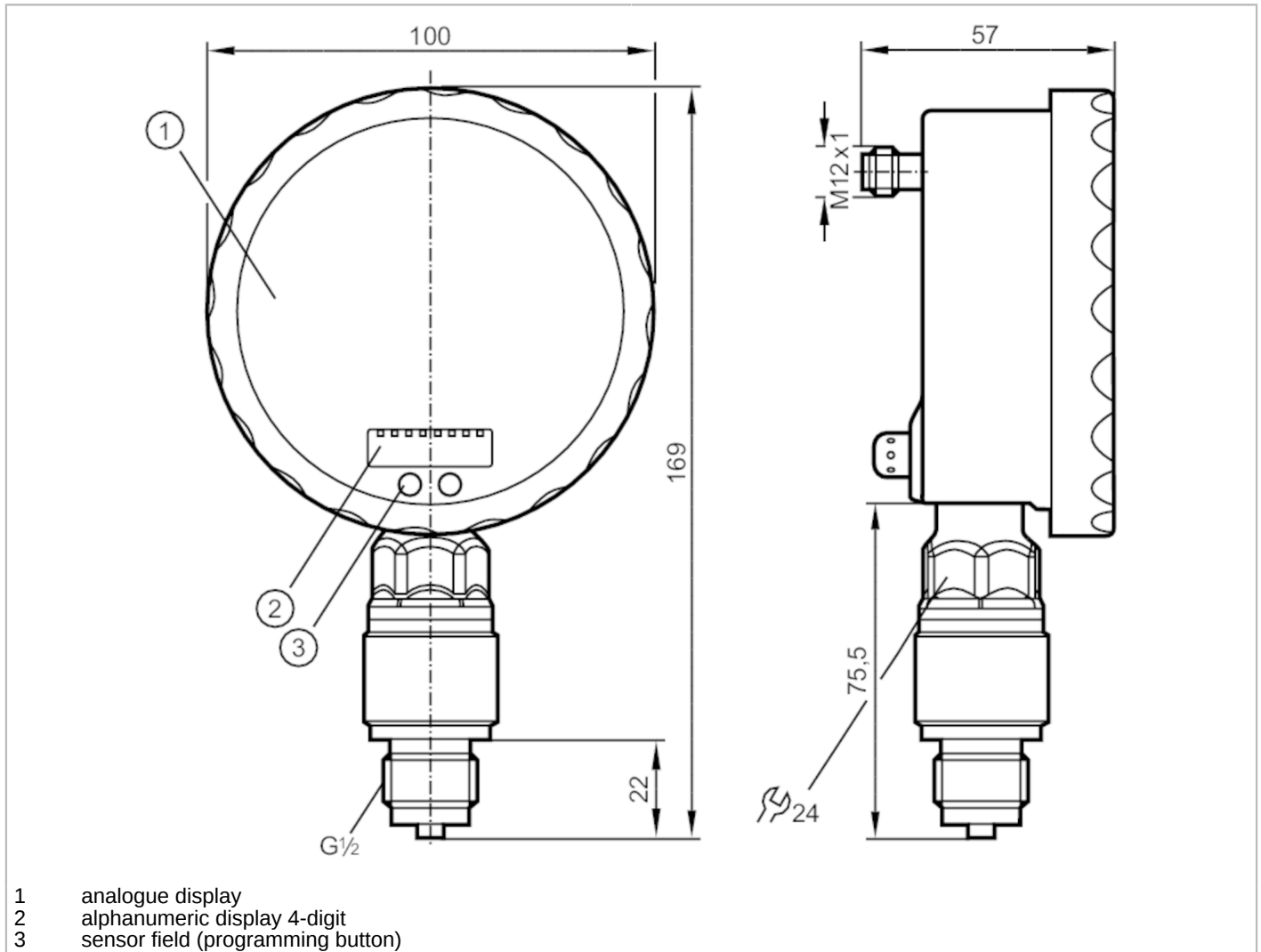


PG2439



Pressure sensor with analogue display

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



- 1 analogue display
- 2 alphanumeric display 4-digit
- 3 sensor field (programming button)



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1
Measuring range	-1...1 bar -1000...1000 mbar -100...100 kPa
Process connection	threaded connection G 1/2 external thread
Application	
Special feature	Gold-plated contacts
Application	for industrial applications
Media	liquids and gases
Medium temperature [°C]	-25...80
Min. burst pressure	30 bar 3000 kPa
Pressure rating	10 bar 1000 kPa
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 analogue outputs: 1
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Outputs

Total number of outputs	2
Output signal	switching signal; analogue signal; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	250
Switching frequency DC [Hz]	75
Number of analogue outputs	1
Analogue current output [mA]	4...20, invertible; (scalable)
Max. load [Ω]	($U_b - 10\text{ V}$) / 20 mA
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes

Measuring/setting range

Measuring range	-1...1 bar	-1000...1000 mbar	-100...100 kPa
Set point SP	-0.992...1.6 bar		-99.2...160 kPa
Reset point rP	-1...1.592 bar		-100...159.2 kPa
Analogue start point	-1...1.1 bar		-100...110 kPa
Analogue end point	-0.5...1.6 bar		-50...160 kPa
In steps of	0.004 bar		0.4 kPa

Accuracy / deviations

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



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Response times		
Response time	[ms]	< 9
Damping process value dAP	[s]	0.01...30
Damping for the analogue output dAA	[s]	0.01...30
Step response time analogue 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
CPA approval	accuracy class	Class 1.0
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	10 g (10...2000 Hz)
MTTF	[years]	97
UL approval	File number UL	E174189
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	567.4
Dimensions	[mm]	169 x 100 x 57
Materials	stainless steel (316L/1.4404); PA; FKM; PTFE; viewing glass: laminated safety glass 4 mm	
Materials (wetted parts)	Al2O3 (ceramics); FKM; stainless steel (316L/1.4404)	
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	analogue 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	160 kPa
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: 4, gold-plated



Connection

