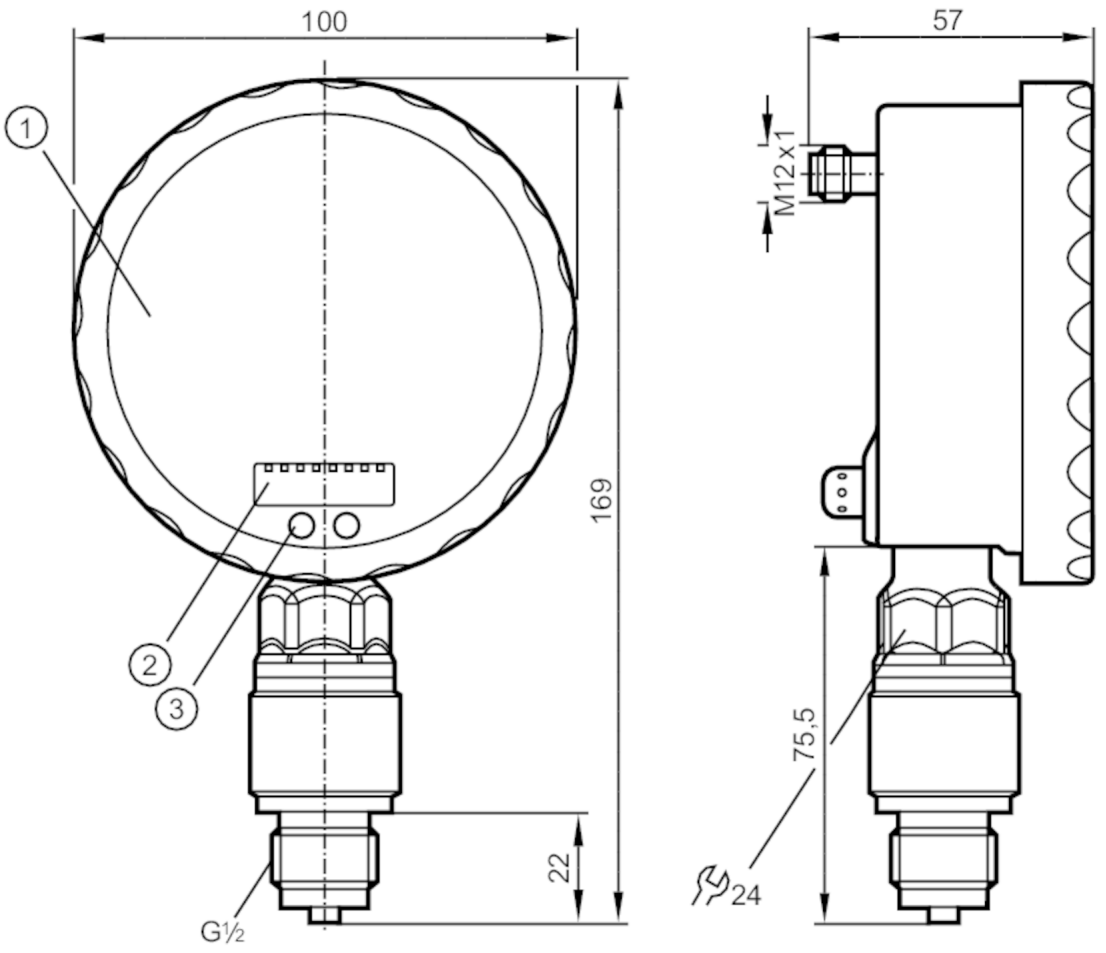
PG2409

Pressure sensor with analogue display

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



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	-14.52...14.52 psi
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. bursting pressure		30 bar	435 psi	
Pressure rating		10 bar	145 psi	
Type of pressure		relative pressure; vacuum		

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Electrical data				
Operating voltage	[V]	18...32 DC		
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 analogue outputs: 1		
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]	(Ub - 10 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	-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
Analogue start point		-1...1.1 bar		-14.52...15.96 psi
Analogue 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		< ± 0,1; (Turn down 1:1; per 6 months)		

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[% of the span]		
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)
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
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]		609.5
Materials		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	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	23.22 psi

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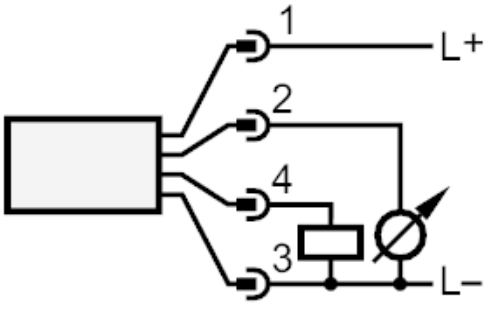
Remarks	
Remarks	switch point accuracy in the extended display range: 1.5 % of the span
Pack quantity	1 pcs.

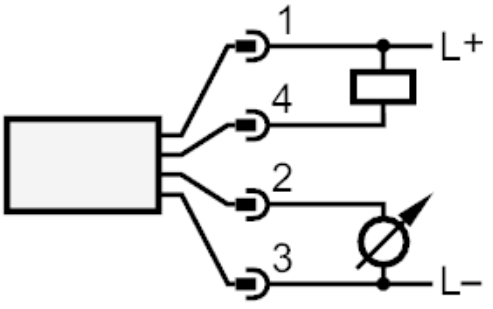
Electrical connection

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



Connection





OUT1	switching output
OUT2	analogue output