

# PG2451



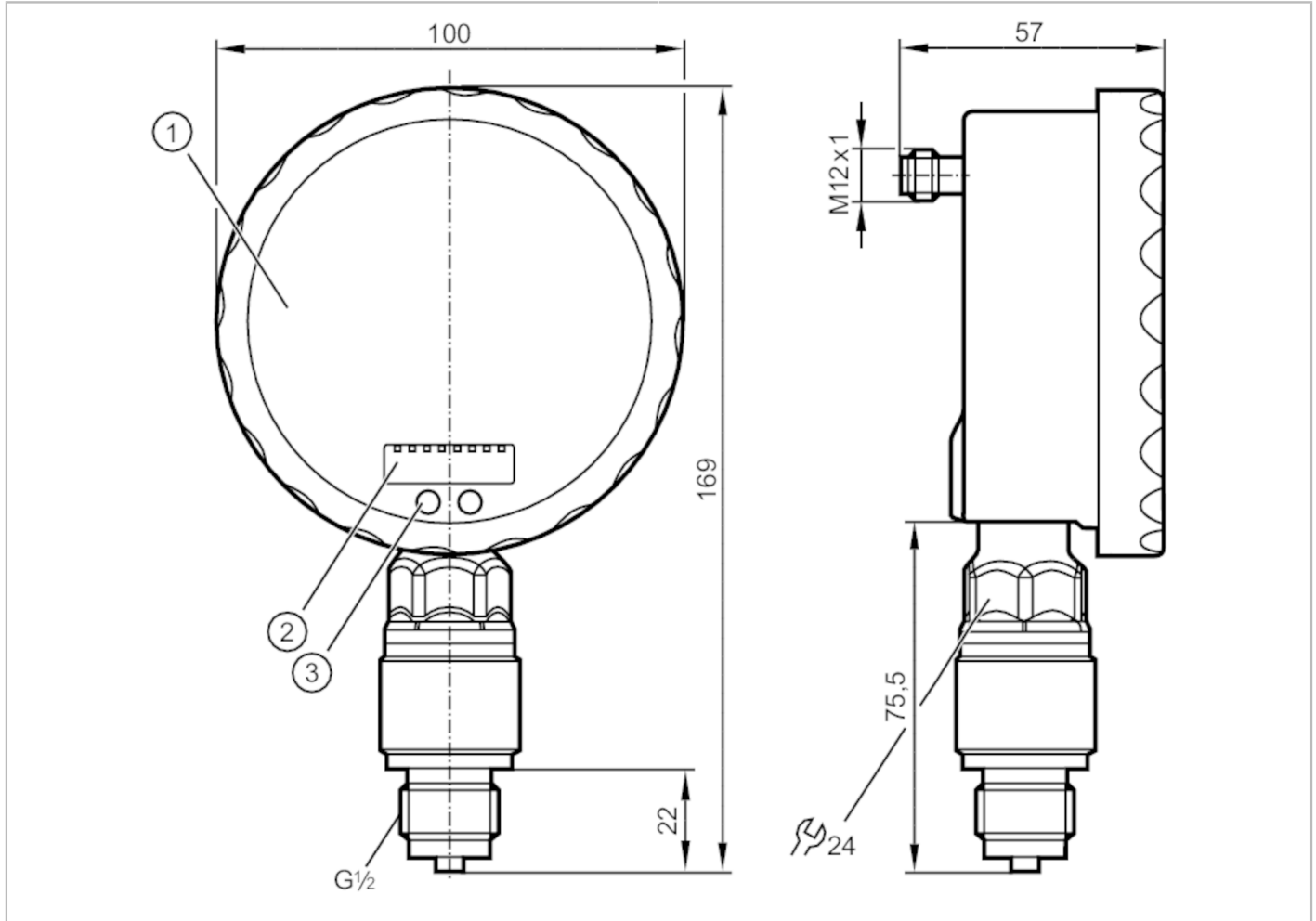
## Pressure sensor with analogue display

PG-250-REB12-MFRKG/US/ /P

phase-out article

Alternative articles: PG1401

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



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1		
Measuring range	0...250 bar	0...3625 psi	
Process connection	threaded connection G 1/2 external thread		

### Application

Special feature	Gold-plated contacts		
Application	for industrial applications		
Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...80		
Min. burst pressure	1000 bar	14500 psi	100 MPa
Pressure rating	600 bar	8700 psi	60 MPa
Type of pressure	relative pressure		



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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]	(U <sub>b</sub> - 10 V) / 20 mA
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
Measuring/setting range		
Measuring range	0...250 bar	0...3625 psi
Set point SP	1...400 bar	15...5800 psi
Reset point rP	0...399 bar	0...5785 psi
Analogue start point	0...350 bar	0...5075 psi
Analogue end point	50...400 bar	725...5800 psi
In steps of	0.5 bar	5 psi
Accuracy / deviations		
Switch point accuracy		< ± 0,6; (Turn down 1:1)
	[% of the span]	
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
	[% of the span]	
Characteristics deviation		< ± 0,35 (BFSL) / < ± 0,6 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line)
	[% of the span]	
Hysteresis deviation		< ± 0,5; (Turn down 1:1)
	[% of the span]	
Long-term stability		< ± 0,1; (Turn down 1:1; per 6 months)
	[% of the span]	

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Temperature coefficient zero point [% of the span / 10 K]	< ± 0,3; (0...70 °C)
Temperature coefficient span [% of the span / 10 K]	< ± 0,3; (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 EN 60068-2-27
Vibration resistance	DIN EN 60068-2-6	10 g (10...2000 Hz)
MTTF [years]		100
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

### Mechanical data

Weight [g]	563
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	yes

### 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.)	400 bar	5800 psi

### Remarks

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

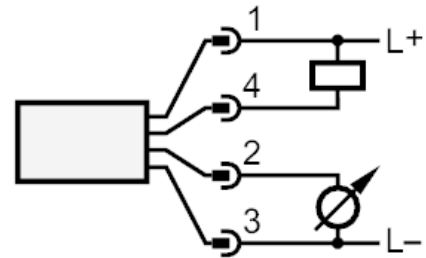
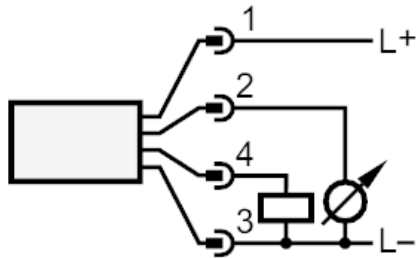
1 pcs.

### Electrical connection

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



### Connection



OUT1  
OUT2

switching output  
analogue output