

# PG2453



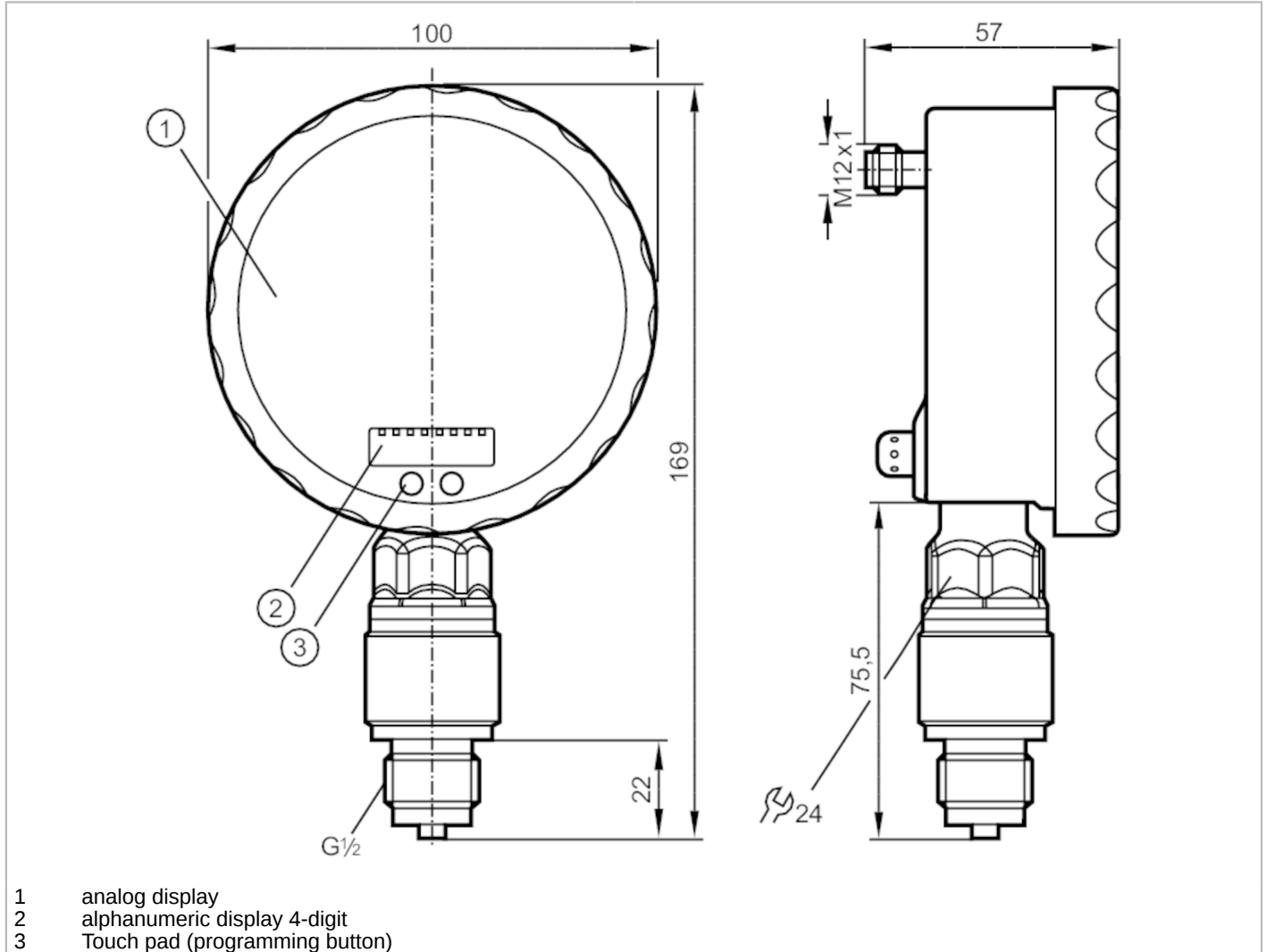
## Pressure sensor with analog display

PG-025-REB12-MFRKG/US/ /P

Article to be discontinued

Alternative articles: PG1403

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 analog outputs: 1		
Measuring range	-1...25 bar	-14.5...362.5 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. burst pressure	350 bar	5070 psi	30 MPa
Pressure rating	100 bar	1450 psi	10 MPa
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 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 <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...25 bar	-14.5...362.5 psi
Set point SP	-0.9...40 bar	-13...580 psi
Reset point rP	-1...39.9 bar	-14.5...578.5 psi
Analog start point	-1...33.75 bar	-14.5...489.5 psi
Analog end point	5.25...40 bar	76...580 psi
In steps of	0.05 bar	0.5 psi
Accuracy / deviations		
Switch point accuracy		< ± 0,5; (Turn down 1:1)
	[% of the span]	
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
	[% of the span]	
Characteristics deviation		< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line)
	[% of the span]	
Hysteresis deviation		< ± 0,25; (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]	< ± 0,2; (0...70 °C)
Temperature coefficient span [% of the span / 10 K]	< ± 0,2; (0...70 °C)

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 EN 60068-2-27
Vibration resistance	DIN EN 60068-2-6	10 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]	563.9
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.)	40 bar	580 psi

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

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Pack quantity

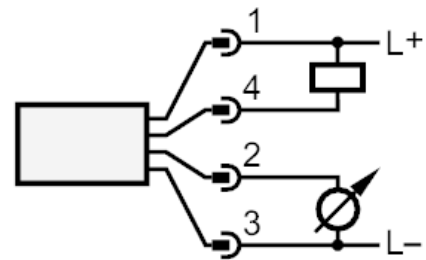
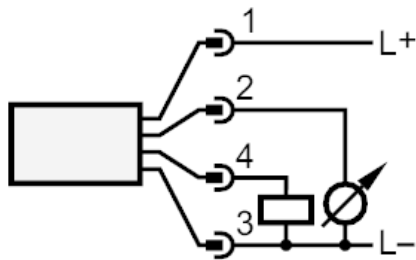
1 pcs.

### Electrical connection

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



### Connection



OUT1  
OUT2

Switching output  
analog output