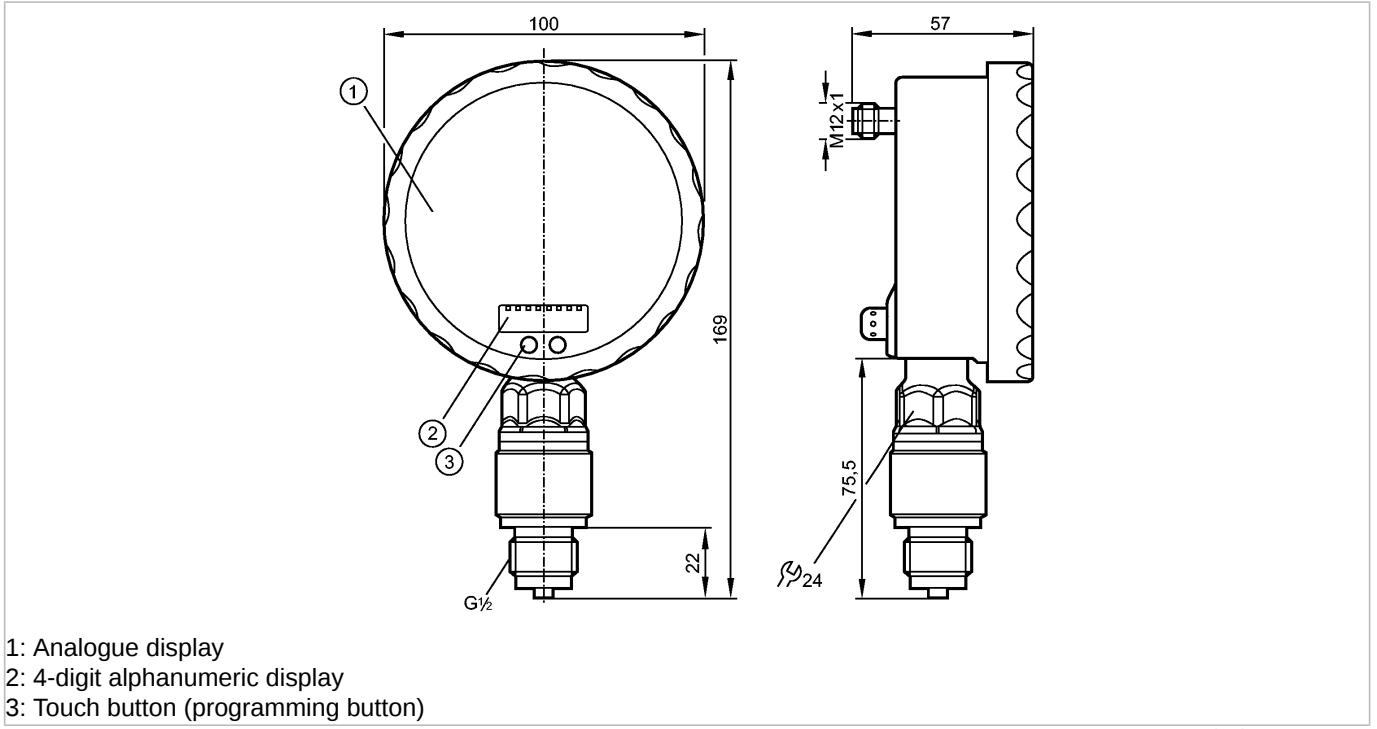


PG2451

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

Pressure sensors



- 1: Analogue display
- 2: 4-digit alphanumeric display
- 3: Touch button (programming button)

Made in Germany



Product characteristics

Electronic pressure sensor with analogue display

Connector

Analogue display 0...350° rotatable

Resolution 0.25%

Pointer not visible when unit disconnected

Process connection: G $\frac{1}{2}$

2 outputs

OUT1 = switching output

OUT2 = analogue output

analogue display, 4-digit alphanumeric display

Measuring range: 0...250 bar / 0...3625 psi

Application

Application	Type of pressure: relative pressure Liquids and gases Use in gases at pressures > 25 bar only after contacting the manufacturer ifm	
Pressure rating	600 bar	8700 psi
Bursting pressure min.	1000 bar	14500 psi
Medium temperature [°C]	-25...80	

Electrical data

Electrical design	DC PNP/NPN	
Operating voltage [V]	18...32 DC	
Current consumption [mA]	70; (24 V)	
Insulation resistance [MΩ]	> 100 (500 V DC)	
Protection class	III	
Reverse polarity protection	yes	

Outputs

PG2451

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

Pressure sensors

Output	2 outputs OUT1 = switching output OUT2 = analogue output	
Output function	1 x normally open / closed programmable + 1 x analogue (4...20 / 20...4 mA, scalable)	
Current rating [mA]	250	
Voltage drop [V]	< 2	
Short-circuit protection	pulsed	
Overload protection	yes	
Switching frequency [Hz]	75	
Analogue output	I: 4...20 mA (Ineg: 20...4 mA)	
Max. load [Ω]	I / Ineg: max. (U _b - 10 V) x 50	

Measuring / setting range

Measuring range	0...250 bar	0...3625 psi
Setting range		
Set point, SP	1.0...400.0 bar	15...5800 psi
Reset point, rP	0.0...399.0 bar	0...5785 psi
Analogue start point, ASP	0.0...350.0 bar	0...5075 psi
Analogue end point, AEP	50.0...400.0 bar	725...5800 psi
in steps of	0.5 bar	5 psi

Accuracy / deviations

Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.6
Characteristics deviation *)	< ± 0.35 (BFSL) / < ± 0.6 (LS)
Hysteresis	< ± 0.5
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	< ± 0.3
Greatest TEMPCO of the span	< ± 0.3

Reaction times

Power-on delay time [s]	6
Min. response time switching output [ms]	9
Damping for the switching output (dAP) [s]	0.01...30
Damping for the analogue output (dAA) [s]	0.01...30
Step response time analogue output [ms]	28
Integrated watchdog	yes

Environment

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
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PG2451

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

Pressure sensors

Shock resistance	EN 61000-4-4 Burst:	2 kV
	EN 61000-4-5 Surge:	0.5/1 kV
	EN 61000-4-6 HF conducted:	10 V
Vibration resistance	DIN IEC 68-2-27:	50 g (11 ms)
MTTF [Years]	DIN IEC 68-2-6:	20 g (10...2000 Hz)
		100

Mechanical data

Process connection	G ½
Materials (wetted parts)	ceramics (Al ₂ O ₃); FPM; stainless steel 316L / 1.4404
Housing materials	stainless steel 316L / 1.4404; PA; FPM (Viton); PTFE; viewing glass: laminated safety glass 4 mm
Switching cycles min.	100 million
Weight [kg]	0.613

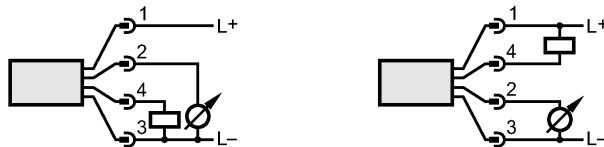
Displays / operating elements

Display	Display unit 2 x LED green Switching status LED yellow Switch points LED ring Function display 4-digit alphanumeric display Measured values analogue display, 4-digit alphanumeric display
Extended display range (max.)	400 bar 5800 psi

Electrical connection

Connection	M12 connector; Gold-plated contacts
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Wiring



Remarks

Remarks	<p>*) BFSL = Best Fit Straight Line switch point accuracy in the extended display range: 1.5 % of the span **) with temperature fluctuations < 10 K ***) in% of the span / 6 months</p>
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Pack quantity [piece]	1
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