

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	3 MPa
Pressure rating	10 bar	145 psi	1 MPa
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 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 [% of the span]	< ± 0,1; (Turn down 1:1; per 6 months)
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)



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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
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]	565.2
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	23.22 psi
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: gold-plated



Connection



OUT1
OUT2

switching output
analogue output