

PG2489



Pressure sensor with analogue display

PG-,10BREB12-MFRKG/US/ IP



- 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	-0.005...0.1 bar	-5...100 mbar	-2...40.16 inH2O
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	30000 mbar	12044 inH2O	
Pressure rating	4000 mbar	1606 inH2O	
Type of pressure	relative pressure		
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		
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	-0.005...0.1 bar	-5...100 mbar	-2...40.16 inH2O
Set point SP	-4.6...160 mbar	-1.84...64.24 inH2O	
Reset point rP	-5...159.6 mbar	-2...64.08 inH2O	
Analogue start point	-5...135 mbar	-2...54.24 inH2O	
Analogue end point	20...160 mbar	8...64.24 inH2O	
In steps of	0.2 mbar	0.08 inH2O	
Accuracy / deviations			
Switch point accuracy [X21]	< ± 0,6; (Turn down 1:1)		
Repeatability [X21]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)		
Characteristics deviation [X21]	< ± 0,35 (BFSL) / < ± 0,6 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line)		
Hysteresis deviation [X21]	< ± 0,5; (Turn down 1:1)		
Long-term stability [X21]	< ± 0,1; (Turn down 1:1; per 6 months)		
Temperature coefficient zero point [X22]	< ± 0,3; (0...70 °C)		
Temperature coefficient span [X22]	< ± 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		



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Step response time analogue output [ms]	28
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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 [ANN]	103	
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight [g]	564.8
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.)	160 mbar	64.24 inH2O

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



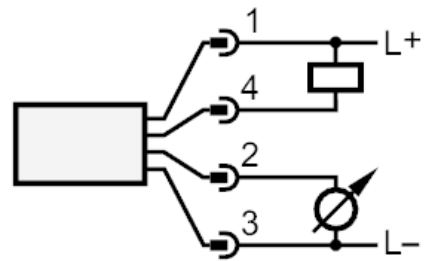
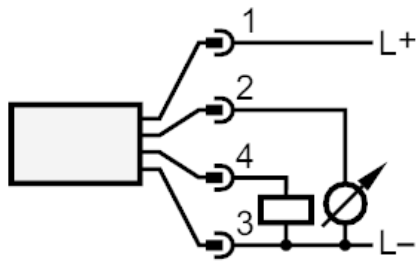
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Connection



OUT1
OUT2

switching output
analogue output