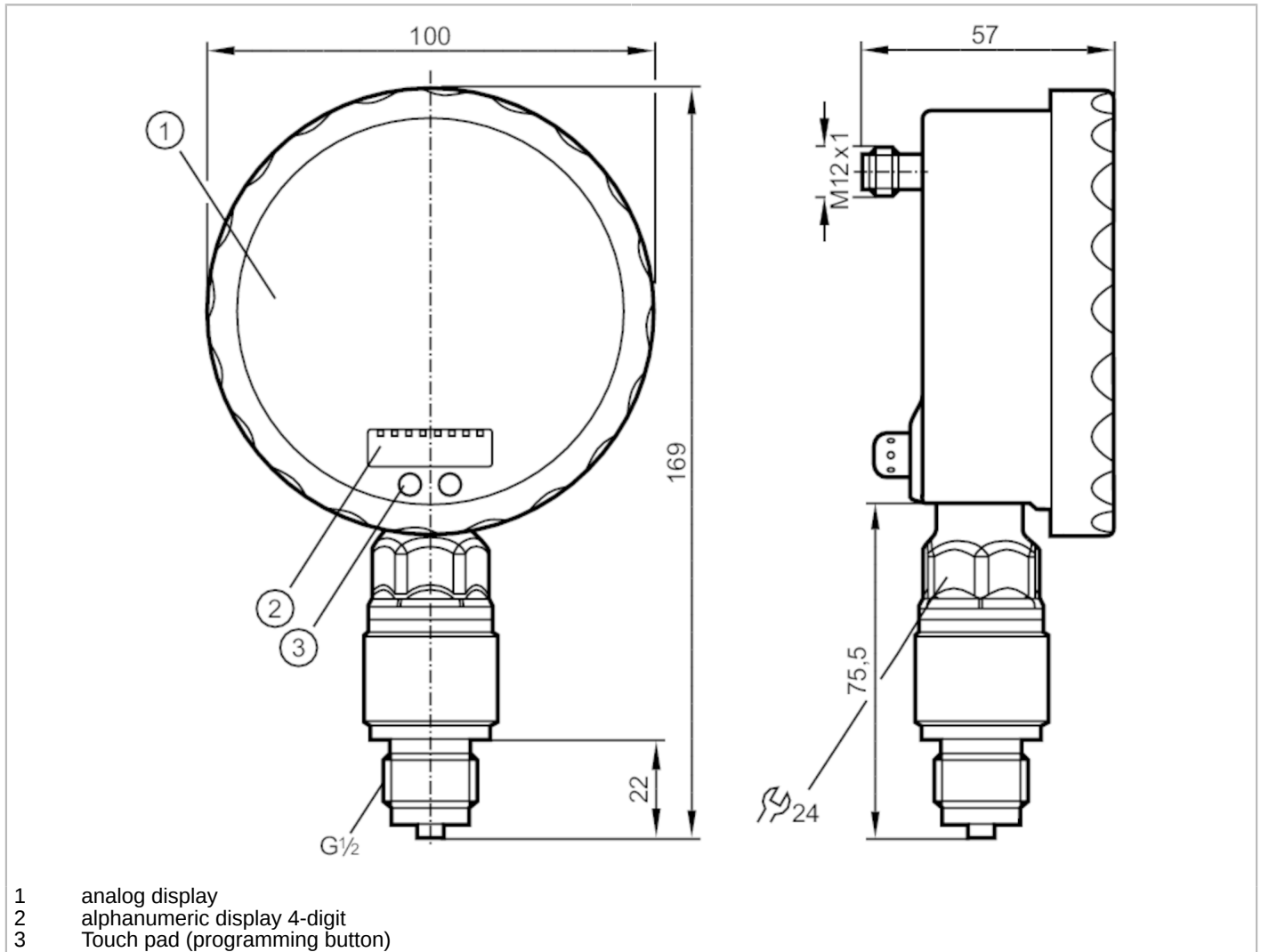


PG2489



Pressure sensor with analog display

PG-,10BREB12-MFRKG/US/ IP



- 1 analog display
- 2 alphanumeric display 4-digit
- 3 Touch pad (programming button)



| Product characteristics | | | |
|---------------------------------|---|---------------|------------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analog 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. burst pressure | 30000 mbar | 12044 inH2O | 3 MPa |
| Pressure rating | 4000 mbar | 1606 inH2O | 0.4 MPa |
| 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 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 _b - 10 V) / 20 mA |
| Short-circuit protection | yes |
| Type of short-circuit protection | yes (non-latching) |
| 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 |
| Analog start point | -5...135 mbar | | -2...54.24 inH2O |
| Analog end point | 20...160 mbar | | 8...64.24 inH2O |
| In steps of | 0.2 mbar | | 0.08 inH2O |

Accuracy / deviations

| | |
|---|--|
| Switch point accuracy [% of the span] | < ± 0,6; (Turn down 1:1) |
| Repeatability [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1) |
| Characteristics deviation [% of the span] | < ± 0,35 (BFSL) / < ± 0,6 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line) |
| Hysteresis deviation [% of the span] | < ± 0,5; (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] | < ± 0,3; (0...70 °C) |
| Temperature coefficient span [% of the span / 10 K] | < ± 0,3; (0...70 °C) |

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| 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 | 50 g (11 ms) |
| 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] | 564.8 |
| 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.) | 160 mbar | 64.24 inH2O |
| Remarks | | |
| Remarks | | switch point accuracy in the extended display range: 1.5 % of the span |
| Pack quantity | | 1 pcs. |

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Pressure sensor with analog display

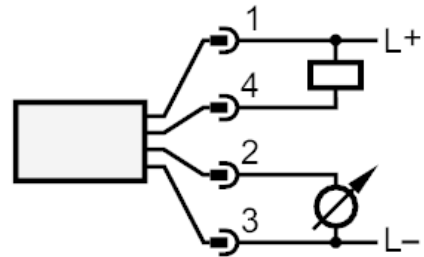
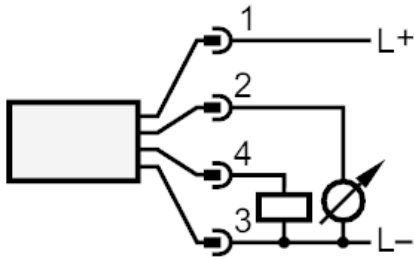
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Electrical connection

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



Connection



OUT1
OUT2

Switching output
analog output