

PG2458



Pressure sensor with analog display

PG-,25BREB12-MFRKG/US/ /P



- 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                 | -0.0125...0.25 bar                                        | -12.5...250 mbar | -5...100.4 inH2O |
| 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. bursting pressure          | 30000 mbar                                                | 12044 inH2O      | 3 MPa            |
| Pressure rating                 | 6000 mbar                                                 | 2400 inH2O       | 1 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 <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                                           | -0.0125...0.25 bar                                                             | -12.5...250 mbar   | -5...100.4 inH2O |
| Set point SP                                              | -11.5...400 mbar                                                               | -4.6...160.6 inH2O |                  |
| Reset point rP                                            | -12.5...399 mbar                                                               | -5...160.2 inH2O   |                  |
| Analog start point                                        | -12.5...337.5 mbar                                                             | -5...135.6 inH2O   |                  |
| Analog end point                                          | 50...400 mbar                                                                  | 20...160.6 inH2O   |                  |
| In steps of                                               | 0.5 mbar                                                                       | 0.2 inH2O          |                  |
| 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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| 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 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]                                                                                        | 563.4                                                                          |
| 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.)     | 400 mbar                                                                                   | 160.6 inH2O                                                                    |
| 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  
analog output