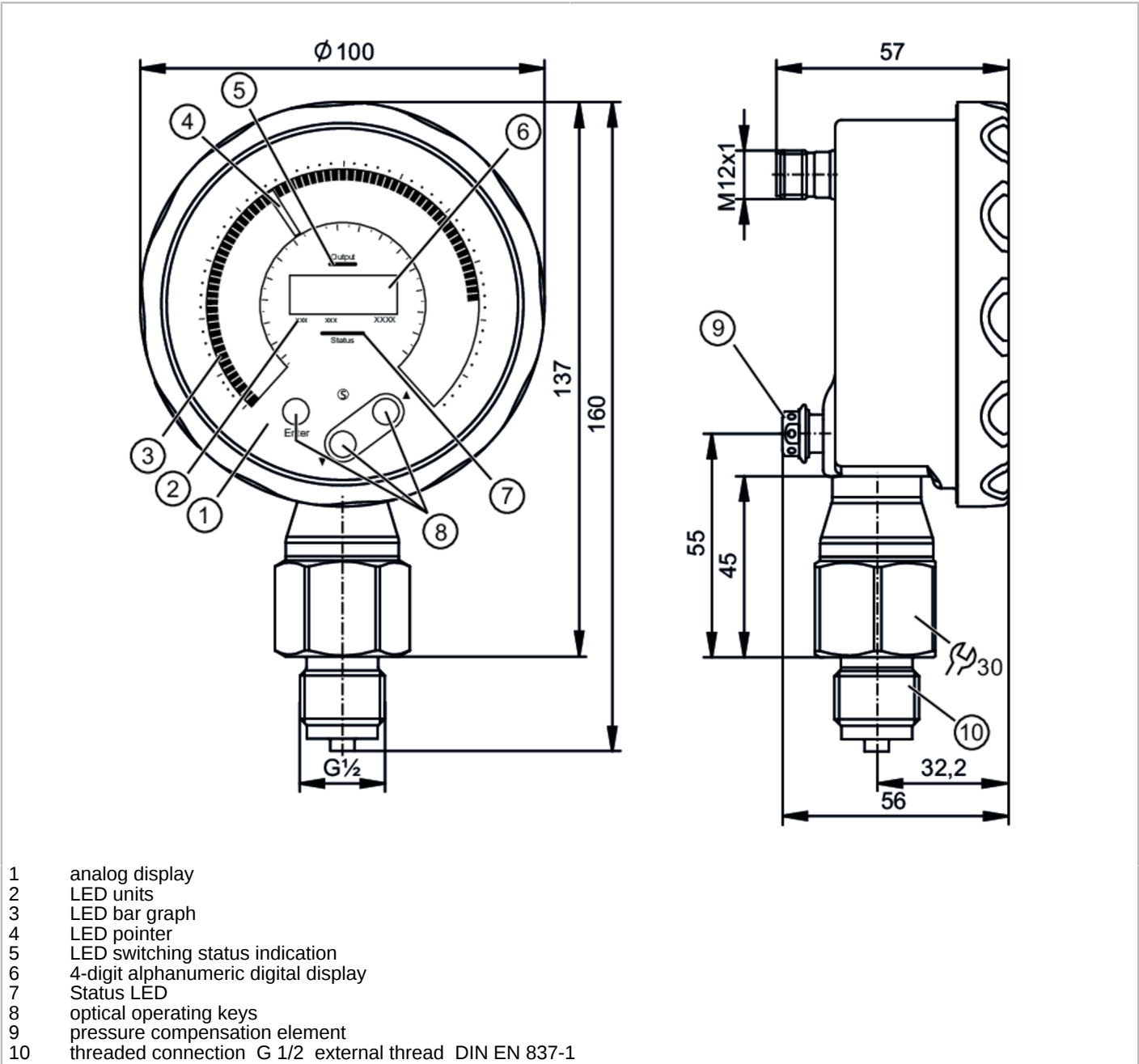


PG1423



Pressure sensor with analog display

PG-060-REB12-MFRKG/US/ /P



Product characteristics

|                              |                                                           |             |
|------------------------------|-----------------------------------------------------------|-------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analog outputs: 1 |             |
| Measuring range              | 0...60 bar                                                | 0...870 psi |
| Process connection           | threaded connection G 1/2 external thread DIN EN 837-1    |             |

Application

|                         |                                             |          |
|-------------------------|---------------------------------------------|----------|
| System                  | gold-plated contacts                        |          |
| Application             | for industrial applications                 |          |
| Media                   | liquids and gases                           |          |
| Medium temperature [°C] | -25...80; (higher temperature upon request) |          |
| Min. burst pressure     | 500 bar                                     | 7252 psi |

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|                   |                           |          |
|-------------------|---------------------------|----------|
| Pressure rating   | 150 bar                   | 2175 psi |
| Vacuum resistance | -1000 mbar                | 14.5 psi |
| Type of pressure  | relative pressure; vacuum |          |

| Electrical data             |      |                 |
|-----------------------------|------|-----------------|
| Operating voltage           | [V]  | 18...30 DC      |
| Current consumption         | [mA] | 25...260        |
| Min. insulation resistance  | [MΩ] | 100; (500 V DC) |
| Protection class            |      | III             |
| Reverse polarity protection |      | yes             |
| Power-on delay time         | [s]  | < 0.5           |
| 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; IO-Link |
| 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] | 100                                      |
| Switching frequency DC                          | [Hz] | 125                                      |
| Number of analog outputs                        |      | 1                                        |
| Analog current output                           | [mA] | 4...20, invertible; (scalable)           |
| Max. load                                       | [Ω]  | 500                                      |
| Short-circuit protection                        |      | yes                                      |
| Type of short-circuit protection                |      | yes (non-latching)                       |
| Overload protection                             |      | yes                                      |

| Measuring/setting range |             |               |
|-------------------------|-------------|---------------|
| Measuring range         | 0...60 bar  | 0...870 psi   |
| Set point SP            | 0...60 bar  | 0...870 psi   |
| Analog start point      | 0...48 bar  | 0...696 psi   |
| Analog end point        | 12...60 bar | 174...870 psi |
| In steps of             | 0.01 bar    | 1 psi         |

| Measuring range (bar) |                |  |              |
|-----------------------|----------------|--|--------------|
| Factory setting       | SP1 = 15 bar   |  |              |
|                       | SP2 = 13.8 bar |  |              |
|                       | ASP = 0.00 bar |  | AEP = 60 bar |
|                       | dAP = 0.06 s   |  | dAA = 0.06 s |

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| Measuring range (psi)                                        |                                                                                                         |                                                              |               |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------------|
| Factory setting                                              | SP1 = 218 psi                                                                                           |                                                              |               |
|                                                              | SP2 = 200 psi                                                                                           |                                                              |               |
|                                                              | ASP = 0.00 psi                                                                                          |                                                              | AEP = 870 psi |
|                                                              | dAP = 0.06 s                                                                                            |                                                              | dAA = 0.06 s  |
| Accuracy / deviations                                        |                                                                                                         |                                                              |               |
| Switch point accuracy<br>[% of the span]                     | < ± 0,5; (DIN EN IEC 62828-1; Turn down 1:1)                                                            |                                                              |               |
| Repeatability [% of the span]                                | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)                                          |                                                              |               |
| Characteristics deviation<br>[% of the span]                 | < ± 0,5; (DIN IEC EN 62828-1 incl. zero point and span error, non-linearity, hysteresis; Turn down 1:1) |                                                              |               |
| Zero-point stabilization<br>[% of the span]                  | IO-Link, analog output                                                                                  | 0,2; (see operating instructions zero-point behavior)        |               |
|                                                              | Display, Switching output                                                                               | 0,1                                                          |               |
| Hysteresis deviation<br>[% of the span]                      | < ± 0,15; (Turn down 1:1 -25...80°C)                                                                    |                                                              |               |
| Long-term stability<br>[% of the span]                       | < ± 0,1; (Turn down 1:1; per year)                                                                      |                                                              |               |
| Temperature coefficient zero point<br>[% of the span / 10 K] | < ± 0,25; (0...70 °C)                                                                                   |                                                              |               |
| Temperature coefficient span<br>[% of the span / 10 K]       | < ± 0,25; (0...70 °C)                                                                                   |                                                              |               |
| Reaction times                                               |                                                                                                         |                                                              |               |
| Min. response time of switching output (dAP) [ms]            | 3                                                                                                       |                                                              |               |
| Damping process value dAP [s]                                | 0...99.99                                                                                               |                                                              |               |
| Damping for the analog output dAA [s]                        | 0...99.99                                                                                               |                                                              |               |
| Step response time analog output [ms]                        | 7                                                                                                       |                                                              |               |
| Interfaces                                                   |                                                                                                         |                                                              |               |
| Communication interface                                      | IO-Link                                                                                                 |                                                              |               |
| Transmission type                                            | COM3 (230,4 kBaud)                                                                                      |                                                              |               |
| IO-Link revision                                             | 1.1                                                                                                     |                                                              |               |
| SDCI standard                                                | IEC 61131-9                                                                                             |                                                              |               |
| Profiles                                                     | Smart Sensor - SSP 4.2.1                                                                                | Measuring and Switching Sensor, high resolution, 1 channel   |               |
|                                                              | BLOB                                                                                                    | Binary Large Object transfer                                 |               |
|                                                              | Common - I&D                                                                                            | Identification and Diagnosis                                 |               |
|                                                              | Extension                                                                                               | Sensor Control Wide                                          |               |
|                                                              | Extension                                                                                               | Quantity detection, switches when value exceeds the setpoint |               |
|                                                              | Function                                                                                                | Locator                                                      |               |
|                                                              | Function                                                                                                | ProductURI                                                   |               |
| SIO mode                                                     | yes                                                                                                     |                                                              |               |
| Required master port class                                   | A                                                                                                       |                                                              |               |
| Min. process cycle time [ms]                                 | 1.3                                                                                                     |                                                              |               |

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## Pressure sensor with analog display

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|                                   |                                                                                                                          |                   |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------|
| IO-Link resolution pressure [bar] | 0.002                                                                                                                    |                   |
| IO-Link process data (cyclical)   | <b>Function</b>                                                                                                          | <b>bit length</b> |
|                                   | pressure                                                                                                                 | 32                |
|                                   | device status                                                                                                            | 4                 |
|                                   | binary switching information pressure                                                                                    | 2                 |
| IO-Link functions (acyclical)     | application specific tag; internal temperature; operating hours counter; switching cycles counter; Pressure peak counter |                   |
| Supported DeviceIDs               | <b>Type of operation</b>                                                                                                 | <b>DeviceID</b>   |
|                                   | default                                                                                                                  | 1872              |

| Operating conditions     |                                 |  |
|--------------------------|---------------------------------|--|
| Ambient temperature [°C] | -25...70                        |  |
| Storage temperature [°C] | -40...100                       |  |
| Protection               | IP 67; IP 69; (to DIN EN 60529) |  |

| Tests / approvals          |                    |                     |
|----------------------------|--------------------|---------------------|
| EMC                        | DIN EN 61326-1     |                     |
| 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]               | 115                |                     |
| Embedded software included | yes                |                     |
| UL approval                | UL approval number | J061                |
|                            | File number UL     | E174189             |

| Mechanical data               |                                                                                                                                                              |  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Weight [g]                    | 702.7                                                                                                                                                        |  |
| Housing                       | manometer housing                                                                                                                                            |  |
| Dimensions [mm]               | 160 x 100 x 57                                                                                                                                               |  |
| Material                      | Housing: stainless steel (1.4404 / 316L); M12 connector: PPSU; sealing: FKM; pressure compensation element: PTFE; viewing glass: laminated safety glass 4 mm |  |
| Materials (wetted parts)      | measuring cell: Al2O3 (ceramics); Process connection: stainless steel (1.4404 / 316L); sealing: FKM                                                          |  |
| Min. pressure cycles          | 100 million                                                                                                                                                  |  |
| Process connection            | threaded connection G 1/2 external thread DIN EN 837-1                                                                                                       |  |
| Restrictor element integrated | no (can be retrofitted)                                                                                                                                      |  |

| Displays / operating elements |                  |                                     |
|-------------------------------|------------------|-------------------------------------|
| Display                       | Pointer          | LED, white ; 72 steps               |
|                               | LED bar graph    | multi-color ; 72 steps              |
|                               | Measured values  | alphanumeric display, white 4-digit |
|                               | Switching status | LED, yellow                         |
|                               | device status    | LED, red/green                      |
|                               | Display unit     | LED, white                          |
|                               | Display          | display rotation: 320°              |
| Display unit                  | bar; psi         |                                     |
| Operating elements            | 3                | optical operating keys              |

| Remarks       |        |  |
|---------------|--------|--|
| Pack quantity | 1 pcs. |  |

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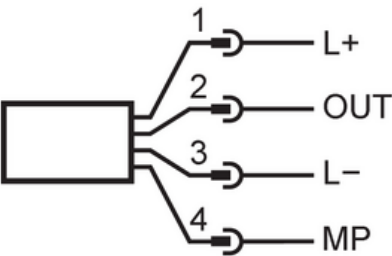
PG-060-REB12-MFRKG/US/ /P

### Electrical connection

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



### Connection



|   |     |                     |
|---|-----|---------------------|
| 1 | L+  |                     |
| 2 | OUT | AO                  |
| 3 | L-  |                     |
| 4 | MP  | DO (NO/NC), IO-Link |