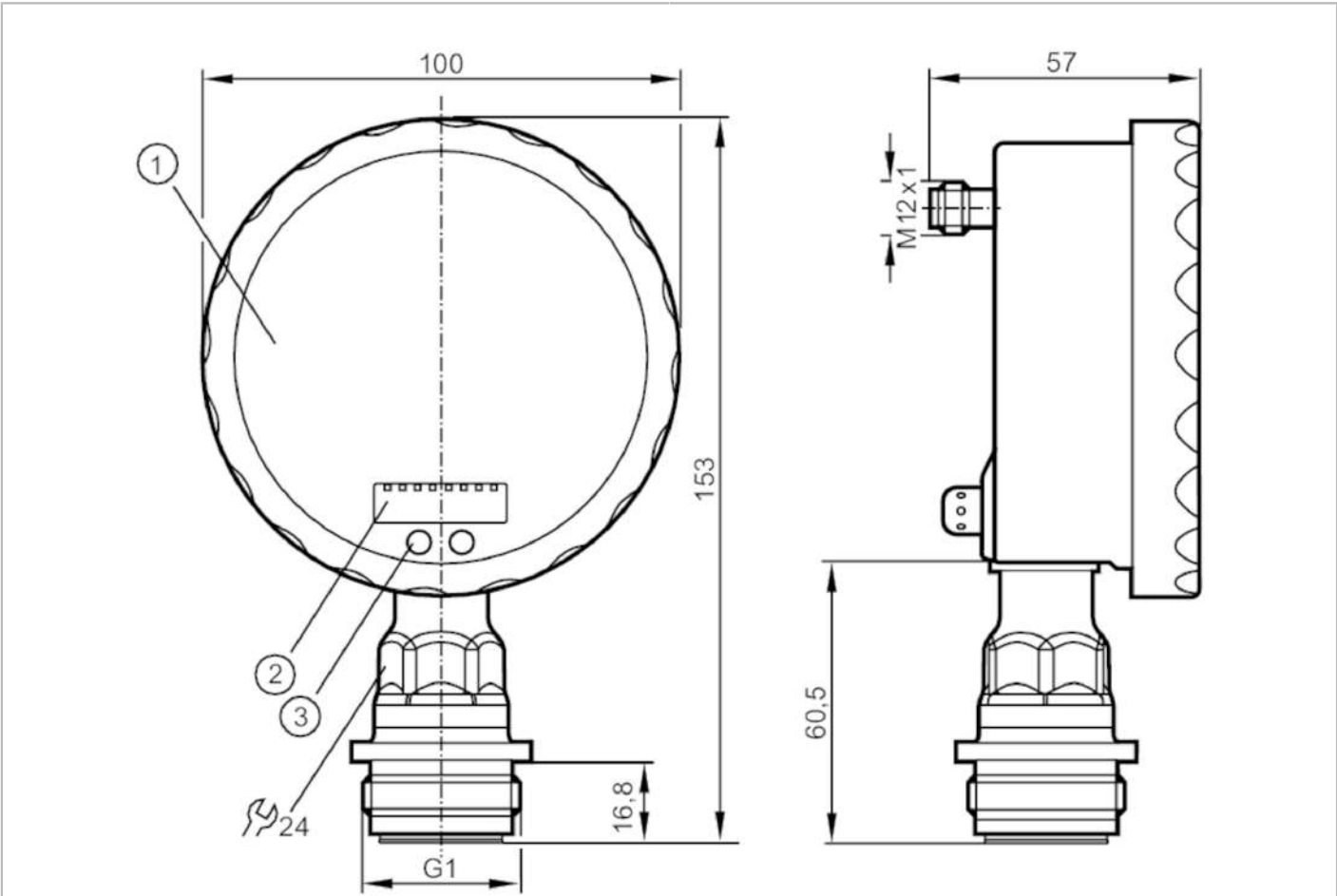


# PG2797



## Flush pressure sensor with analogue display

PG-001-REA01-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              | -0.05...1 bar                                               | -50...1000 mbar | -0.73...14.5 psi |
| Process connection           | threaded connection G 1 external thread Aseptoflex Vario    |                 |                  |

### Application

|                                              |                                                                       |         |       |
|----------------------------------------------|-----------------------------------------------------------------------|---------|-------|
| Special feature                              | Gold-plated contacts                                                  |         |       |
| Application                                  | flush mountable for the food and beverage industry                    |         |       |
| Media                                        | viscous media and liquids with suspended particles; liquids and gases |         |       |
| Medium temperature [°C]                      | -25...125; (145 max. 1h)                                              |         |       |
| Min. burst pressure                          | 30 bar                                                                | 435 psi | 3 MPa |
| Pressure rating                              | 10 bar                                                                | 145 psi | 1 MPa |
| Type of pressure                             | relative pressure                                                     |         |       |
| No dead space                                | yes                                                                   |         |       |
| MAWP for applications according to CRN [bar] | 10                                                                    |         |       |



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| Electrical data                                 |                 |                                                                                                                      |                                  |
|-------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Operating voltage                               | [V]             | 18...32 DC                                                                                                           |                                  |
| Current consumption                             | [mA]            | < 70; (24 V)                                                                                                         |                                  |
| Min. insulation resistance                      | [MΩ]            | 100; (500 V DC)                                                                                                      |                                  |
| 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]            | 50                                                                                                                   |                                  |
| 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                                 |                 | -0.05...1 bar                                                                                                        | -50...1000 mbar -0.73...14.5 psi |
| Set point SP                                    |                 | -0.048...1.6 bar                                                                                                     | -0.7...23.21 psi                 |
| Reset point rP                                  |                 | -0.05...1.598 bar                                                                                                    | -0.73...23.18 psi                |
| Analogue start point                            |                 | -0.05...1.35 bar                                                                                                     | -0.73...19.58 psi                |
| Analogue end point                              |                 | 0.2...1.6 bar                                                                                                        | 2.9...23.21 psi                  |
| In steps of                                     |                 | 0.001 bar                                                                                                            | 0.01 psi                         |
| Accuracy / deviations                           |                 |                                                                                                                      |                                  |
| Switch point accuracy                           |                 | < ± 0,5; (Turn down 1:1)                                                                                             |                                  |
|                                                 | [% of the span] |                                                                                                                      |                                  |
| Repeatability                                   | [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)                                                       |                                  |
| Characteristics deviation                       | [% of the span] | < ± 0,5; (Turn down 1:1 , linearity, incl. hysteresis and repeatability , limit value setting to DIN EN IEC 62828-1) |                                  |
| Linearity deviation                             | [% of the span] | < ± 0,15; (Turn down 1:1)                                                                                            |                                  |
| Hysteresis deviation                            | [% of the span] | < ± 0,15; (Turn down 1:1)                                                                                            |                                  |
| Long-term stability                             |                 | < ± 0.1; (Turn down 1:1; per year)                                                                                   |                                  |



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|                                     |                                                                                                                           |                                                                                  |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| [% of the span]                     |                                                                                                                           |                                                                                  |
| Temperature coefficient zero point  |                                                                                                                           | < ± 0,05; (0...70 °C)                                                            |
| [% of the span / 10 K]              |                                                                                                                           |                                                                                  |
| Temperature coefficient span        |                                                                                                                           | < ± 0,15; (0...70 °C)                                                            |
| [% of the span / 10 K]              |                                                                                                                           |                                                                                  |
| Response times                      |                                                                                                                           |                                                                                  |
| Response time                       | [ms]                                                                                                                      | < 10                                                                             |
| Damping process value dAP           | [s]                                                                                                                       | 0.01...30                                                                        |
| Damping for the analogue output dAA | [s]                                                                                                                       | 0.01...30                                                                        |
| Step response time analogue output  | [ms]                                                                                                                      | 25                                                                               |
| Operating conditions                |                                                                                                                           |                                                                                  |
| Ambient temperature                 | [°C]                                                                                                                      | -25...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]                                                                                                                   | 100                                                                              |
| Note on approval                    | factory certificate available as download at <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a> |                                                                                  |
| Mechanical data                     |                                                                                                                           |                                                                                  |
| Weight                              | [g]                                                                                                                       | 521.2                                                                            |
| Dimensions                          | [mm]                                                                                                                      | 153 x 100 x 57                                                                   |
| Materials                           | stainless steel (316L/1.4404); PA; FKM; PTFE; viewing glass: laminated safety glass 4 mm                                  |                                                                                  |
| Materials (wetted parts)            | stainless steel (316L/1.4435) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; ceramics (99.9 % Al2O3); PTFE             |                                                                                  |
| Min. pressure cycles                | 100 million                                                                                                               |                                                                                  |
| Process connection                  | threaded connection G 1 external thread Aseptoflex Vario                                                                  |                                                                                  |
| 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                                                                                                                   | 23.21 psi                                                                        |

PG2797



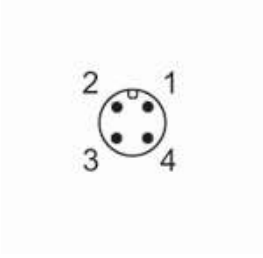
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| Remarks       |                                                                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remarks       | characteristics deviation in the extended display range: 1.5 % of the span<br>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



Connection



OUT1                    switching output  
OUT2                    analogue output