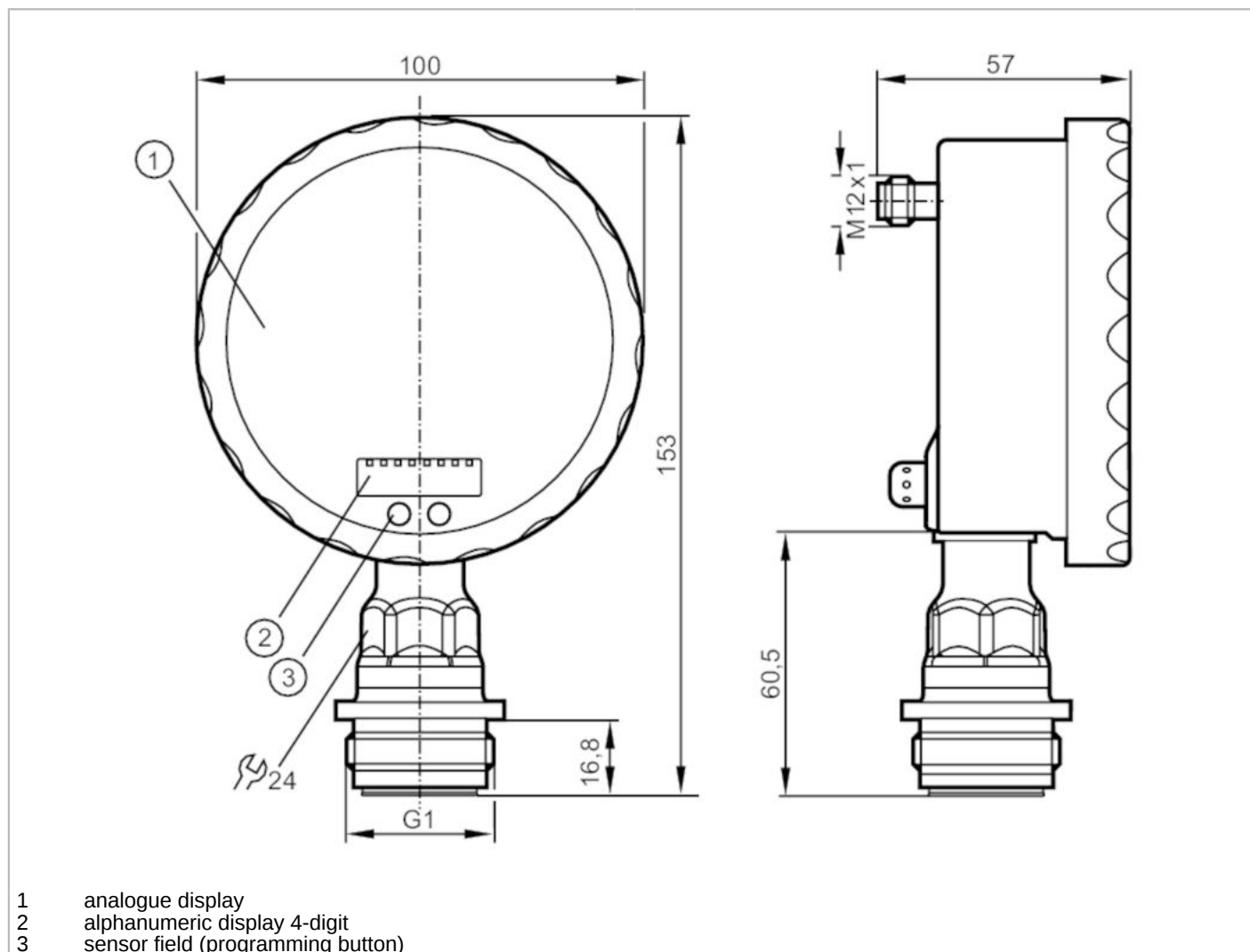


# PG2794



## Flush pressure sensor with analogue display

PG-010-REA01-MFRKG/US/ /P



ACS



CRN



EC 1935/2004

EHEDG

Certified

FCM

FDA

Reg31



UK

CA

### Product characteristics

|                              |                                                             |                 |
|------------------------------|-------------------------------------------------------------|-----------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |                 |
| Measuring range              | -1...10 bar                                                 | -14.5...145 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. bursting pressure                         | 150 bar                                                               | 2175 psi | 15 MPa |
| Pressure rating                                | 50 bar                                                                | 725 psi  | 5 MPa  |
| Type of pressure                               | relative pressure; vacuum                                             |          |        |
| No dead space                                  | yes                                                                   |          |        |
| MAWP (for applications according to CRN) [bar] | 50                                                                    |          |        |



## Flush pressure sensor with analogue display

PG-010-REA01-MFRKG/US/ /P

| 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]             | (U <sub>b</sub> - 10 V) / 20 mA                                                                                    |
| Short-circuit protection                        |                 | yes                                                                                                                |
| Type of short-circuit protection                |                 | pulsed                                                                                                             |
| Overload protection                             |                 | yes                                                                                                                |
| Measuring/setting range                         |                 |                                                                                                                    |
| Measuring range                                 | -1...10 bar     | -14.5...145 psi                                                                                                    |
| Set point SP                                    | -0.98...16 bar  | -14.2...232 psi                                                                                                    |
| Reset point rP                                  | -1...15.98 bar  | -14.5...231.8 psi                                                                                                  |
| Analogue start point                            | -1...13.5 bar   | -14.5...195.7 psi                                                                                                  |
| Analogue end point                              | [bar]           | 1.5...16                                                                                                           |
| In steps of                                     | 0.01 bar        | 0.1 psi                                                                                                            |
| Accuracy / deviations                           |                 |                                                                                                                    |
| Switch point accuracy                           |                 | < ± 0,2; (Turn down 1:1)                                                                                           |
|                                                 | [% of the span] |                                                                                                                    |
| Repeatability                                   |                 | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)                                                     |
|                                                 | [% of the span] |                                                                                                                    |
| Characteristics deviation                       |                 | < ± 0,2; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1) |
|                                                 | [% of the span] |                                                                                                                    |
| Linearity deviation                             |                 | < ± 0,15; (Turn down 1:1)                                                                                          |
|                                                 | [% of the span] |                                                                                                                    |
| Hysteresis deviation                            |                 | < ± 0,15; (Turn down 1:1)                                                                                          |
|                                                 | [% of the span] |                                                                                                                    |
| Long-term stability                             |                 | < ± 0,1; (Turn down 1:1; per year)                                                                                 |



## Flush pressure sensor with analogue display

PG-010-REA01-MFRKG/US/ /P

|                                     |                                                                                                                           |                                                                                  |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| [% 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 IEC 68-2-27                                                                                                           | 50 g (11 ms)                                                                     |
| Vibration resistance                | DIN IEC 68-2-6                                                                                                            | 20 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]                                                                                                                       | 520.1                                                                            |
| 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)            | ceramics (99.9 % Al2O3); stainless steel (316L/1.4435); surface characteristics: Ra < 0,4 / Rz 4; 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.)       | 16 bar                                                                                                                    | 232 psi                                                                          |

PG2794



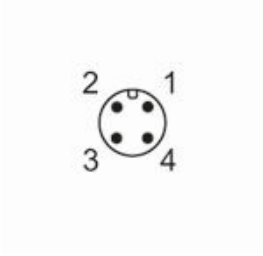
Flush pressure sensor with analogue display

PG-010-REA01-MFRKG/US/ /P

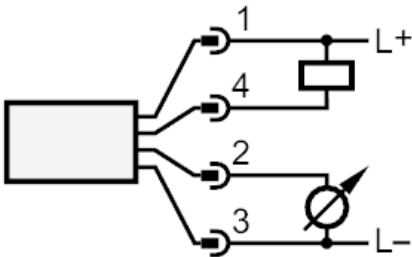
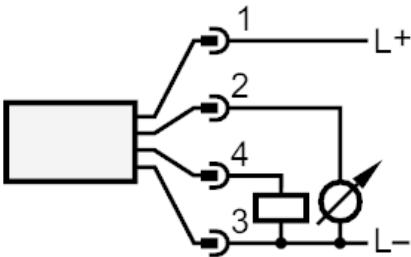
| Remarks       |                                                                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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