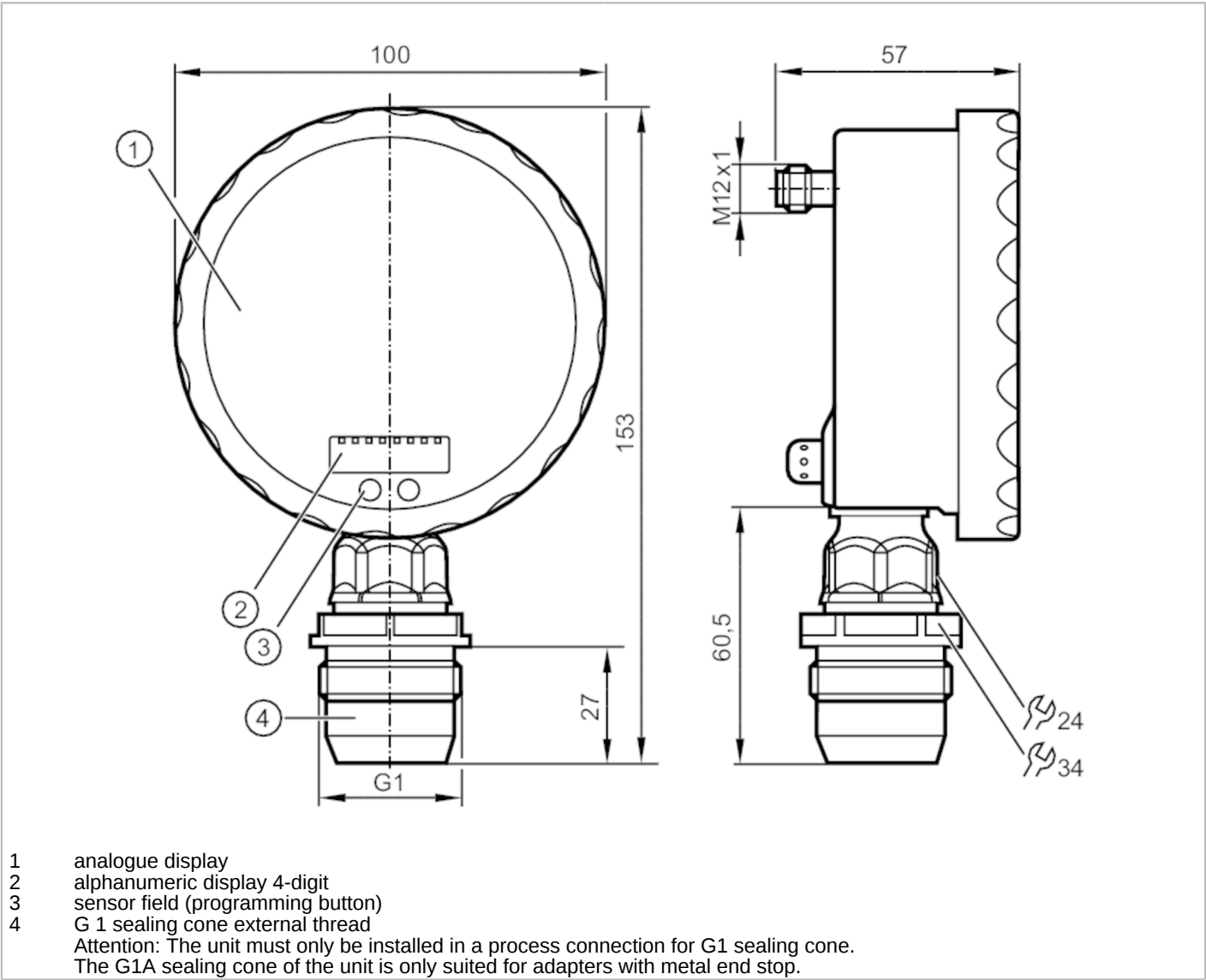




Flush pressure sensor with analogue display

PG-025-REA01-MFRKG/US/ /P



ACS CE CRN cUL US LISTED EC 1935/2004 FCM CN FCM JP FDA Hygienic Cleanable S UK CA

| Product characteristics      |                                                                                                                                                                                                                                          |          |                   |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1                                                                                                                                                                              |          |                   |
| Measuring range              | -1...25 bar                                                                                                                                                                                                                              |          | -14.4...362.7 psi |
| Process connection           | threaded connection G 1 external thread sealing cone - 27 mm; Attention: The unit must only be installed in a process connection for G1 sealing cone.; The G1A sealing cone of the unit is only suited for adapters with metal end stop. |          |                   |
| 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           | -25...125; (145 max. 1h)                                                                                                                                                                                                                 |          |                   |
| Min. burst pressure          | 350 bar                                                                                                                                                                                                                                  | 5070 psi | 35 MPa            |
| Pressure rating              | 100 bar                                                                                                                                                                                                                                  | 1450 psi | 10 MPa            |
| Type of pressure             | relative pressure; vacuum                                                                                                                                                                                                                |          |                   |



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|                                        |       |    |
|----------------------------------------|-------|----|
| MAWP for applications according to CRN | [bar] | 60 |
|----------------------------------------|-------|----|

| 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...25 bar    | -14.4...362.7 psi |
| Set point SP            | -0.96...40 bar | -13.8...580.2 psi |
| Reset point rP          | -1...39.96 bar | -14.4...579.6 psi |
| Analogue start point    | -1...33.76 bar | -14.4...489.6 psi |
| Analogue end point      | 5.24...40 bar  | 75.9...580.2 psi  |
| In steps of             | 0.02 bar       | 0.3 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)                                                                                          |



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|                                     |                                                                                                                                                                                                                                          |                                                                                  |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| [% of the span]                     |                                                                                                                                                                                                                                          |                                                                                  |
| Long-term stability                 | [% of the span]                                                                                                                                                                                                                          | < ± 0,1; (Turn down 1:1; per year)                                               |
| Temperature coefficient zero point  | [% of the span / 10 K]                                                                                                                                                                                                                   | < ± 0,05; (0...70 °C)                                                            |
| Temperature coefficient span        | [% of the span / 10 K]                                                                                                                                                                                                                   | < ± 0,15; (0...70 °C)                                                            |
| 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]                                                                                                                                                                                                                                      | 531.8                                                                            |
| 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 sealing cone - 27 mm; Attention: The unit must only be installed in a process connection for G1 sealing cone.; The G1A sealing cone of the unit is only suited for adapters with metal end stop. |                                                                                  |
| 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                                                                                                                                                                                                                                      |                                                                                  |



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|                               |       |       |
|-------------------------------|-------|-------|
| Extended display range (max.) | [psi] | 580.2 |
|-------------------------------|-------|-------|

Remarks

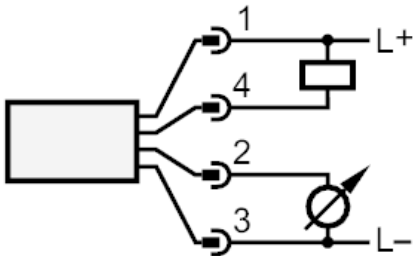
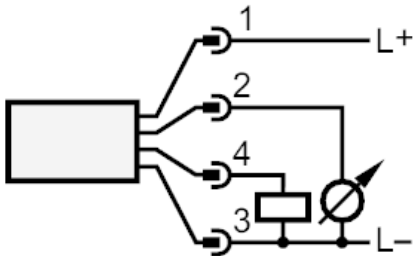
|               |                                                                            |
|---------------|----------------------------------------------------------------------------|
| Remarks       | characteristics deviation in the extended display range: 1.5 % of the span |
|               | 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: 4, gold-plated



Connection



|      |                  |
|------|------------------|
| OUT1 | switching output |
| OUT2 | analogue output  |