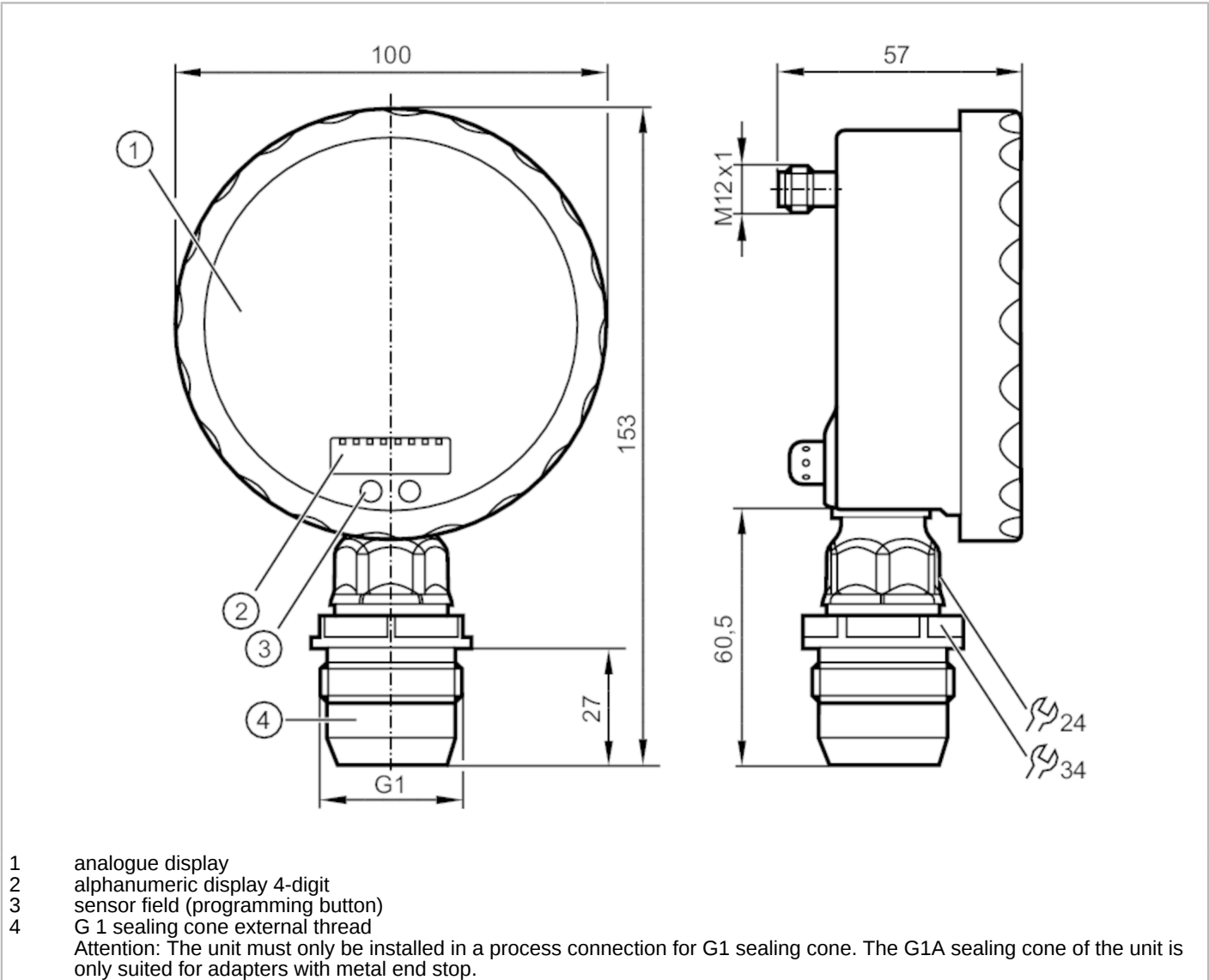




Flush pressure sensor with analogue display

PG-004-REA01-MFRKG/US/ /P



ACS CRN EC 1935/2004 EHEDG Tested FCM UK CA

| Product characteristics      |                                                                                                                                                                                                                                 |          |                |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1                                                                                                                                                                     |          |                |
| Measuring range              | -1...4 bar                                                                                                                                                                                                                      |          | -14.5...58 psi |
| Process connection           | threaded connection G 1 external thread sealing cone 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. bursting pressure       | 100 bar                                                                                                                                                                                                                         | 1450 psi | 10 MPa         |
| Pressure rating              | 30 bar                                                                                                                                                                                                                          | 435 psi  | 3 MPa          |
| Type of pressure             | relative pressure; vacuum                                                                                                                                                                                                       |          |                |



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|                                          |       |    |
|------------------------------------------|-------|----|
| MAWP (for applications according to CRN) | [bar] | 30 |
|------------------------------------------|-------|----|

| 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...4 bar      | -14.5...58 psi    |
| Set point SP            | -0.99...6.4 bar | -14.35...92.8 psi |
| Reset point rP          | -1...6.39 bar   | -14.5...92.65 psi |
| Analogue start point    | -1...5.4 bar    | -14.5...78.3 psi  |
| Analogue end point      | 0...6.4 bar     | 0...92.8 psi      |
| In steps of             | 0.005 bar       | 0.05 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                |                        | < ± 0,1; (Turn down 1:1; per year) |
|                                    | [% 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]                                                                                                                                                                                                                             | 533.45         |
| 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 % Al <sub>2</sub> O <sub>3</sub> ); 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 sealing cone 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.) | 6.4 bar | 92.8 psi |
|-------------------------------|---------|----------|

Remarks

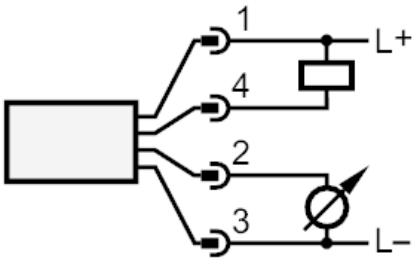
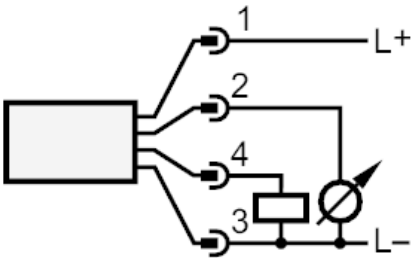
|               |                                                                            |
|---------------|----------------------------------------------------------------------------|
| Remarks       | characteristics deviation in the extended display range: 1.5 % of the span |
|              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



Connection



OUT1                      switching output  
OUT2                      analogue output