

# PI2895

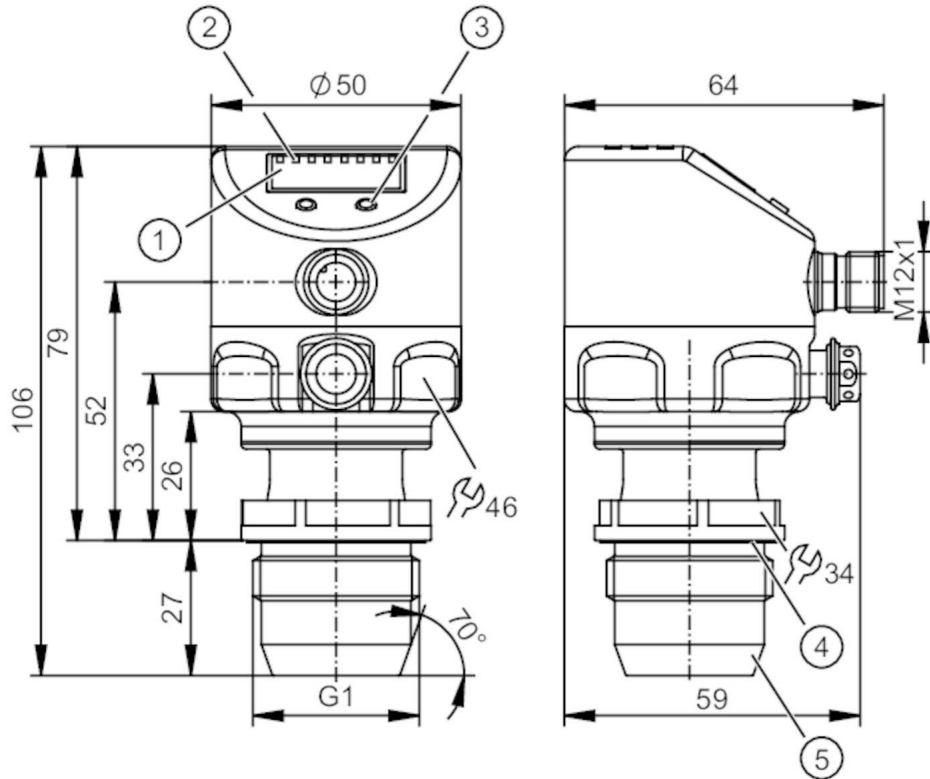


## Flush pressure sensor with display

PI-004-REA01-MFRKG/US/ IP

Alternative articles: PI1805

When selecting an alternative article and accessories please note that technical data may differ!



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 Programming button
- 4 groove with sealing ring
- 5 sealing contour external thread G1

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.



### Product characteristics

|                              |   |                |                |
|------------------------------|---|----------------|----------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analog outputs: 1   |                |                |
| Measuring range              | -1...4 bar  | -14.5...58 psi | -100...400 kPa |
| 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

|                          |   |          |           |
|--------------------------|---|----------|-----------|
| System                   | 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   | 100 bar   | 1450 psi | 10000 kPa |
| Pressure rating          | 30 bar  | 435 psi  | 3000 kPa  |
| Vacuum resistance [mbar] | -1000   |          |           |
| Type of pressure         | relative pressure; vacuum   |          |           |

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

### Electrical data

|                             |      |                 |
|-----------------------------|------|-----------------|
| Min. insulation resistance  | [MΩ] | 100; (500 V DC) |
| Protection class            |      | III             |
| Reverse polarity protection |      | yes             |
| Integrated watchdog         |      | yes             |

### 2-wire

|                     |      |            |
|---------------------|------|------------|
| Operating voltage   | [V]  | 20...32 DC |
| Current consumption | [mA] | 3.6...21   |
| Power-on delay time | [s]  | 1          |

### 3-wire

|                     |      |            |
|---------------------|------|------------|
| Operating voltage   | [V]  | 18...32 DC |
| Current consumption | [mA] | < 45       |
| Power-on delay time | [s]  | 0.5        |

### Inputs / outputs

|                              |   |  |  |
|------------------------------|---|--|--|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analog outputs: 1 |  |  |
|------------------------------|---|--|--|

### Outputs

|                                  |  |                                |  |
|----------------------------------|--|--------------------------------|--|
| Total number of outputs          | 2  |                                |  |
| Output signal                    | switching signal; analog signal; IO-Link; (configurable) |                                |  |
| Electrical design                | PNP/NPN  |                                |  |
| Number of digital outputs        | 2  |                                |  |
| Output function                  | normally open / closed; (configurable)                   |                                |  |
| Number of analog outputs         | 1  |                                |  |
| Analog current output            | [mA]   | 4...20, invertible; (scalable) |  |
| Short-circuit protection         | yes  |                                |  |
| Type of short-circuit protection | yes (non-latching)                                       |                                |  |
| Overload protection              | yes  |                                |  |

### 2-wire

|           |     |     |
|-----------|-----|-----|
| Max. load | [Ω] | 300 |
|-----------|-----|-----|

### 3-wire

|   |      |                                 |
|---|------|---------------------------------|
| Max. voltage drop switching output DC           | [V]  | 2                               |
| Permanent current rating of switching output DC | [mA] | 250                             |
| Switching frequency DC                          | [Hz] | 125                             |
| Max. load                                       | [Ω]  | (U <sub>b</sub> - 10 V) / 20 mA |

### Measuring/setting range

|                    |               |                   |                |
|--------------------|---------------|-------------------|----------------|
| Measuring range    | -1...4 bar    | -14.5...58 psi    | -100...400 kPa |
| Set point SP       | -0.99...4 bar | -14.35...58 psi   | -99...400 kPa  |
| Reset point rP     | -1...3.99 bar | -14.5...57.85 psi | -100...399 kPa |
| Analog start point | -1...3 bar    | -14.5...43.5 psi  | -100...300 kPa |
| Analog end point   | 0...4 bar     | 0...58 psi        | 0...400 kPa    |
| In steps of        | 0.005 bar     | 0.05 psi          | 0.5 kPa        |



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|                 |                 |                 |
|-----------------|-----------------|-----------------|
| Factory setting | SP1 = 1.000 bar | rP1 = 0.920 bar |
|                 | SP2 = 3.000 bar | rP2 = 2.920 bar |
|                 | ASP = 0.000 bar | AEP = 4.000 bar |

### Accuracy / deviations

|  |  |
|--|--|
| Switch point accuracy<br>[% of the span]                     | < ± 0,2; (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]                 | < ± 0,2; (Turn down 1:1 , linearity, incl. hysteresis and repeatability , limit value setting to DIN EN IEC 62828-1) |
| Linearity deviation<br>[% of the span]                       | < ± 0,15; (Turn down 1:1)  |
| Hysteresis deviation<br>[% of the span]                      | < ± 0,15; (Turn down 1:1)  |
| 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] | < ± 0,05; (0...70 °C)  |
| Temperature coefficient span<br>[% of the span / 10 K]       | < ± 0,15; (0...70 °C)  |

### Reaction times

|   |              |
|---|--------------|
| Damping process value dAP [s]                     | 0...30       |
| Damping for the analog output dAA [s]             | 0.01...99.99 |
| <b>2-wire</b>                                     |              |
| Step response time analog output [ms]             | 45           |
| <b>3-wire</b>                                     |              |
| Min. response time of switching output (dAP) [ms] | 3            |
| Step response time analog output [ms]             | 7            |

### Interfaces

|                              |                          |                 |
|------------------------------|--------------------------|-----------------|
| Communication interface      | IO-Link                  |                 |
| Transmission type            | COM2 (38,4 kBaud)        |                 |
| IO-Link revision             | 1.0                      |                 |
| Profiles                     | no profile               |                 |
| SIO mode                     | yes                      |                 |
| Required master port class   | A                        |                 |
| Process data analog          | 1                        |                 |
| Process data binary          | 2                        |                 |
| Min. process cycle time [ms] | 2.3                      |                 |
| Supported DeviceIDs          | <b>Type of operation</b> | <b>DeviceID</b> |
|                              | default                  | 158             |

### Operating conditions

|                          |           |
|--------------------------|-----------|
| Ambient temperature [°C] | -25...80  |
| Storage temperature [°C] | -40...100 |

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|            |                      |
|------------|----------------------|
| Protection | IP 67; IP 68; 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     |
| Vibration resistance | DIN IEC 68-2-6            | 20 g (10...2000 Hz) |
| MTTF [years]         |                           | 148.85              |

### Mechanical data

|                          |   |
|--------------------------|---|
| Weight [g]               | 379   |
| Material                 | stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA   |
| Materials (wetted parts) | ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); stainless steel (1.4435 / 316L); 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                 | LED, green                    |
|              | Switching status             | LED, yellow                   |
|              | Function display             | alphanumeric display, 4-digit |
|              | Measured values              | alphanumeric display, 4-digit |
| Display unit | bar; psi; kPa; % of the span |                               |

### Remarks

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

### Electrical connection

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

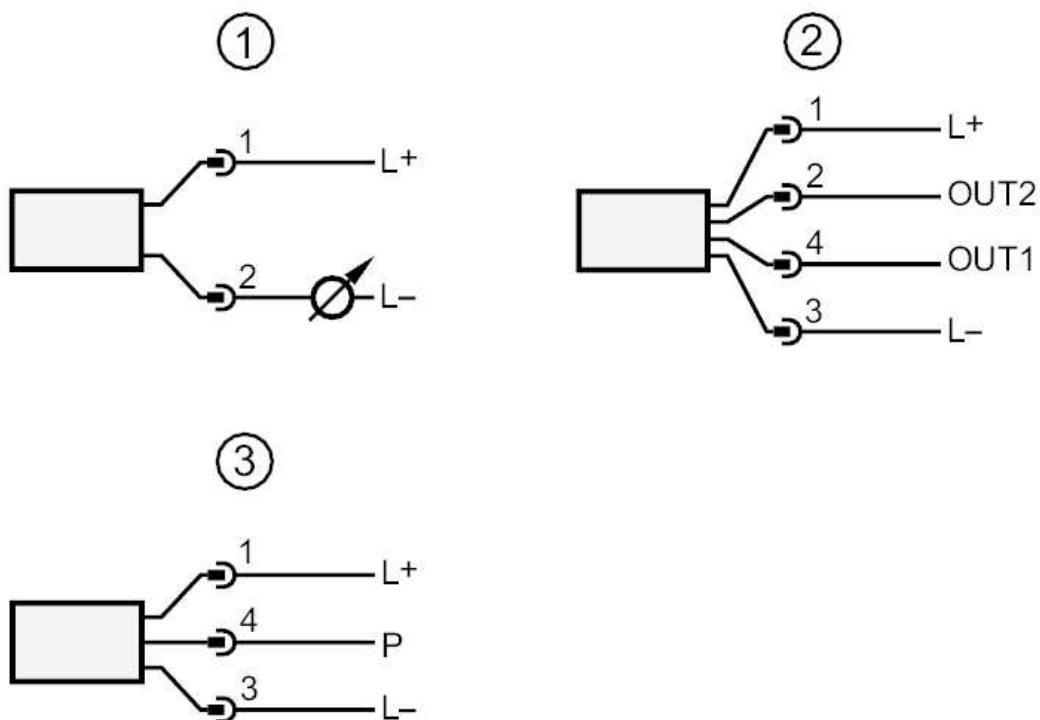




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### Connection



- 1 connection for 2-wire operation
- 2 connection for 3-wire operation :
- OUT1 Switching output
- OUT2 Switching output
- analog output
- 3 connection for IO-Link parameter setting (P = communication via IO-Link)