

PI2793

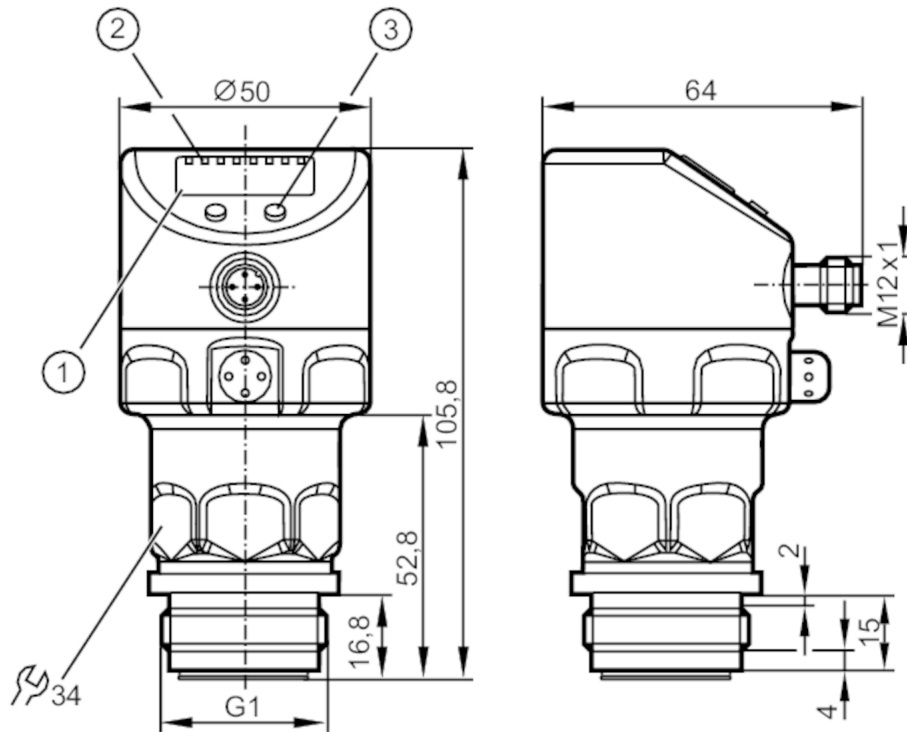


Flush pressure sensor with display

PI-025-REA01-MFRKG/US/ IP

Alternative articles: PI1703

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



Product characteristics

| | | | |
|------------------------------|---|-------------------|----------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analogue outputs: 1 | | |
| Measuring range | -1...25 bar | -14.4...362.7 psi | -0.1...2.5 MPa |
| 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 | 350 bar | 5075 psi | 35 MPa |
| Pressure rating | 100 bar | 1450 psi | 10 Mpa |
| Vacuum resistance [mbar] | -1000 | | |
| Type of pressure | relative pressure; vacuum | | |
| No dead space | yes | | |
| MAWP (for applications according to CRN) [bar] | 60 | | |



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| 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 analogue outputs: 1 | | |
| Outputs | | | | |
| Total number of outputs | | 2 | | |
| Output signal | | switching signal; analogue signal; IO-Link; (configurable) | | |
| Electrical design | | PNP/NPN | | |
| Number of digital outputs | | 2 | | |
| Output function | | normally open / normally closed; (parameterisable) | | |
| Number of analogue outputs | | 1 | | |
| Analogue current output | [mA] | 4...20, invertible; (scalable) | | |
| Short-circuit protection | | yes | | |
| Type of short-circuit protection | | pulsed | | |
| 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 _b - 10 V) / 20 mA | | |
| Measuring/setting range | | | | |
| Measuring range | | -1...25 bar | -14.4...362.7 psi | -0.1...2.5 MPa |
| Set point SP | | -0.96...25 bar | -13.8...362.7 psi | -0.096...2.5 MPa |
| Reset point rP | | -1...24.96 bar | -14.4...362.1 psi | -0.1...2.496 MPa |
| Analogue start point | | -1...18.74 bar | -14.4...271.8 psi | -0.1...1.874 MPa |
| Analogue end point | | 5.24...25 bar | 76.2...362.7 psi | 0.524...2.5 MPa |
| In steps of | | 0.02 bar | 0.3 psi | 0.002 MPa |



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| | | |
|-----------------|-----------------|-----------------|
| Factory setting | SP1 = 6.24 bar | rP1 = 5.74 bar |
| | SP2 = 18.74 bar | rP2 = 18.24 bar |
| | ASP = 0.00 bar | AEP = 25.00 bar |

Accuracy / deviations

| | |
|--|--|
| Switch point accuracy [% 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 [% 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 [% of the span] | < ± 0,15; (Turn down 1:1) |
| Hysteresis deviation [% of the span] | < ± 0,15; (Turn down 1:1) |
| 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

| | |
|---|--------------|
| Damping process value dAP [s] | 0...30 |
| Damping for the analogue output dAA [s] | 0.01...99.99 |
| 2-wire | |
| Step response time analogue output [ms] | 45 |
| 3-wire | |
| Min. response time of switching output (dAP) [ms] | 3 |
| Step response time analogue 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 type | A | |
| Process data analogue | 1 | |
| Process data binary | 2 | |
| Min. process cycle time [ms] | 2.3 | |
| Supported DeviceIDs | Type of operation | DeviceID |
| | Default | 156 |

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 | 50 g (11 ms) |
| Vibration resistance | DIN IEC 68-2-6 | 20 g (10...2000 Hz) |
| MTTF [years] | | 160 |
| Note on approval | factory certificate available as download at www.factory-certificate.ifm | |

Mechanical data

| | |
|--------------------------|--|
| Weight [g] | 357.5 |
| Materials | stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA |
| Materials (wetted parts) | ceramics (99.9 % Al ₂ O ₃); 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 Aseptoflex Vario |

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; MPa; % of the span | |

Remarks

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

Electrical connection

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



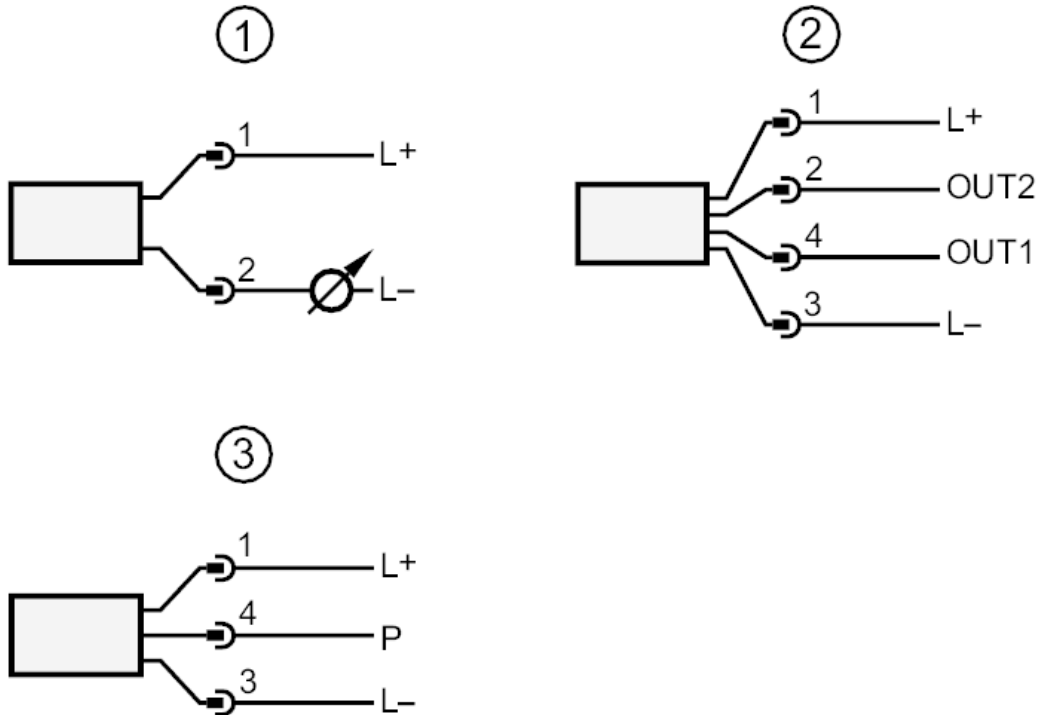
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Connection



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