

PI2715

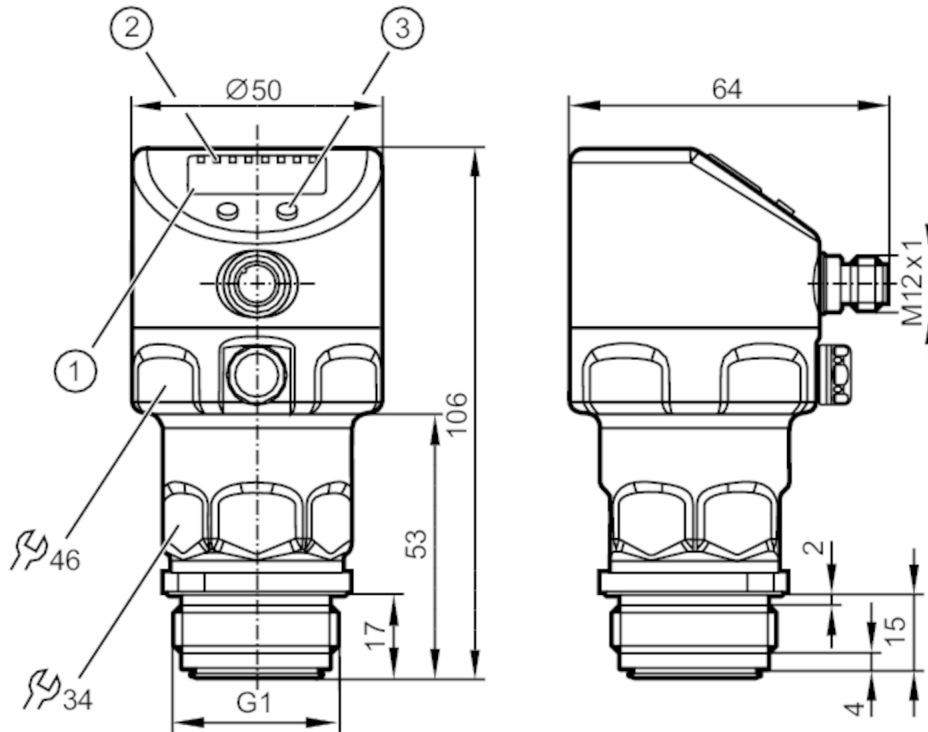


Flush pressure sensor with display

PI-006-REA01-MFRKG/US/ IP

Alternative articles: PI1715

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 analog outputs: 1 | | |
| Measuring range | -1...6 bar | -14.5...87 psi | -100...600 kPa |
| Process connection | threaded connection G 1 external thread Aseptoflex Vario | | |

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 | | |
| No dead space | yes | | |
| MAWP (for applications according to CRN) [bar] | 30 | | |

Electrical data

| | | | |
|---------------------------------|-----------------|--|--|
| Min. insulation resistance [MΩ] | 100; (500 V DC) | | |
| Protection class | III | | |

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| | | | |
|---|---------------|---|-----------------|
| 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 _b - 10 V) / 20 mA | |
| Measuring/setting range | | | |
| Measuring range | -1...6 bar | -14.5...87 psi | -100...600 kPa |
| Set point SP | -0.99...6 bar | -14.4...87 psi | -99...600 kPa |
| Reset point rP | -1...5.99 bar | -14.5...86.9 psi | -100...599 kPa |
| Analog start point | -1...4.5 bar | -14.5...65.3 psi | -100...450 kPa |
| Analog end point | 0.5...6 bar | 7.3...87 psi | 50...600 kPa |
| In steps of | 0.005 bar | 0.1 psi | 0.5 kPa |
| Factory setting | | SP1 = 1.5 bar | rP1 = 1.38 bar |
| | | SP2 = 4.5 bar | rP2 = 4.380 bar |
| | | ASP = 0.0 bar | AEP = 6.0 bar |
| Accuracy / deviations | | | |
| Switch point accuracy | | < ± 0,2; (Turn down 1:1) | |

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| | | |
|------------------------------------|------------------------|---|
| | [% of the span] | |
| Repeatability | [% of the span] | $< \pm 0,1$; (with temperature fluctuations < 10 K; Turn down 1:1) |
| Characteristics deviation | [% of the span] | $< \pm 0,2$; (Turn down 1:1 , linearity, incl. hysteresis and repeatability , limit value setting to DIN EN IEC 62828-1) |
| Linearity deviation | [% of the span] | $< \pm 0,15$; (Turn down 1:1) |
| Hysteresis deviation | [% of the span] | $< \pm 0,15$; (Turn down 1:1) |
| Long-term stability | [% of the span] | $< \pm 0,1$; (Turn down 1:1; per year) |
| Temperature coefficient zero point | [% of the span / 10 K] | $< \pm 0,05$; (0...70 °C) |
| Temperature coefficient span | [% of the span / 10 K] | $< \pm 0,15$; (0...70 °C) |

Reaction times

| | | |
|--|------|--------------|
| Damping process value dAP | [s] | 0...30 |
| Damping for the analog output dAA | [s] | 0.01...99.99 |
| 2-wire | | |
| Step response time analog output | [ms] | 45 |
| 3-wire | | |
| 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 | Type of operation | DeviceID |
| | default | 728 |

Operating conditions

| | | |
|---------------------|------|----------------------|
| Ambient temperature | [°C] | -25...80 |
| Storage temperature | [°C] | -40...100 |
| Protection | | IP 67; IP 68; IP 69K |

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| 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] | | 154 |
| Note on approval | Factory certificate available as download at www.factory-certificate.ifm | |
| UL approval | UL approval number | J018 |
| | File number UL | E174189 |

| Mechanical data | | |
|--------------------------|--|-------------|
| Weight [g] | | 359.5 |
| Material | 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; kPa; psi; % of the span | |

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

Electrical connection

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



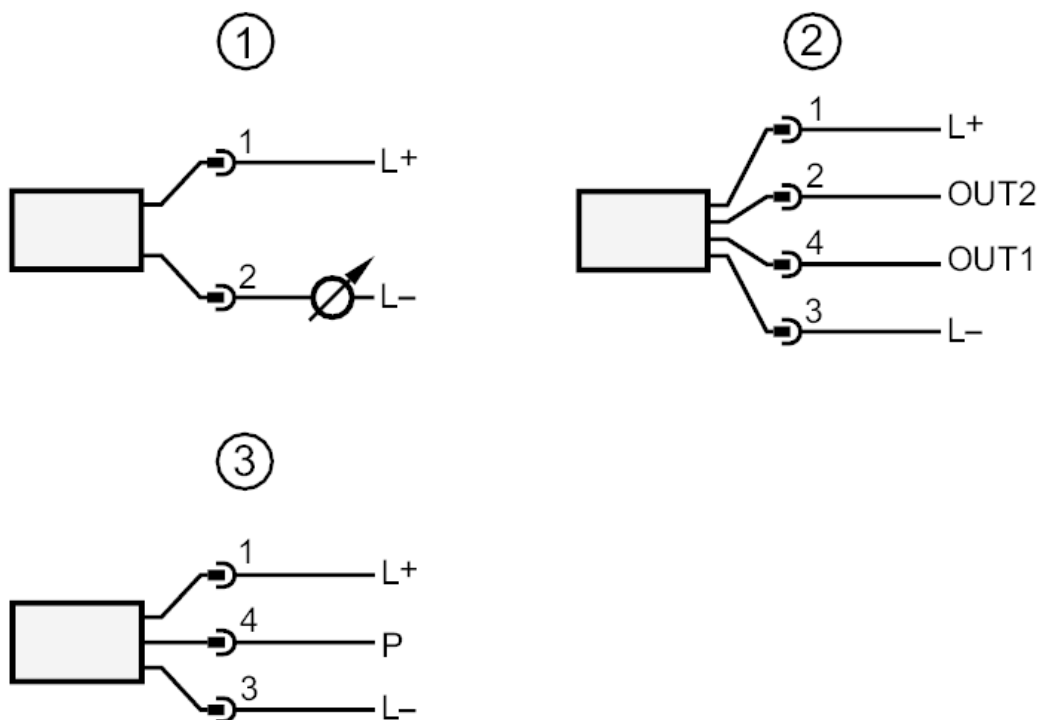
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Connection



- 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)