



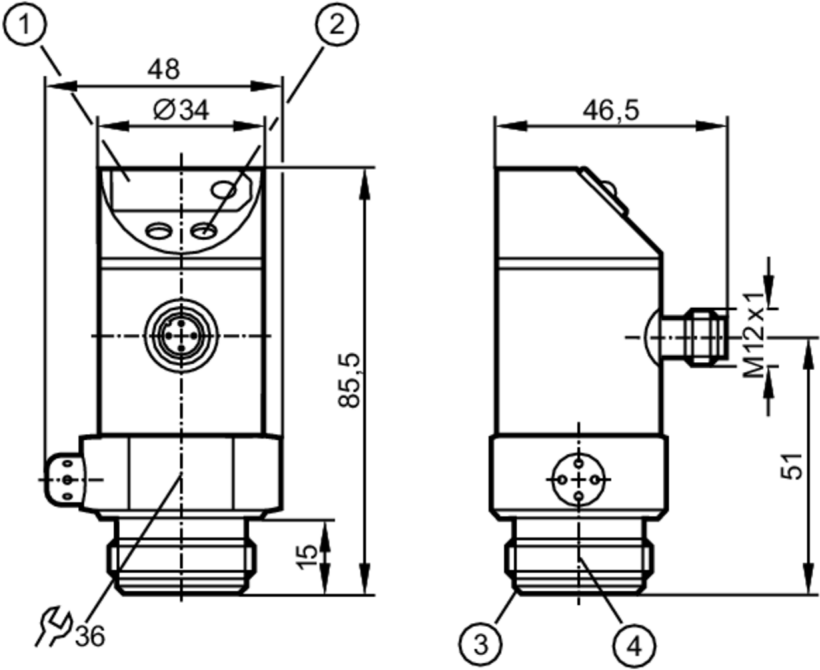
Flush pressure sensor

PF-001BRES30-MFRKG/US/ /P

phase-out article  
Discontinuation date: 03/31/2024

Alternative articles: PI1009 or PI1707  
When selecting an alternative article and accessories please note that technical data may differ!

Please do not use for new projects.  
no more adapters available as accessories



- 1 7-segment LED display
- 2 programming button
- 3 Aseptoflex sealing edge
- 4 Aseptoflex thread



| Product characteristics      |                                                             |                 |                 |              |
|------------------------------|-------------------------------------------------------------|-----------------|-----------------|--------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analogue outputs: 1 |                 |                 |              |
| Measuring range              | -0.05...1 bar                                               | -50...1000 mbar | -0.7...14.5 psi | -5...100 kPa |
| Process connection           | threaded connection Aseptoflex external thread Aseptoflex   |                 |                 |              |

| Application             |                                                                       |         |          |
|-------------------------|-----------------------------------------------------------------------|---------|----------|
| Special feature         | Gold-plated contacts                                                  |         |          |
| Application             | flush mountable for the food and beverage industry                    |         |          |
| Installation            | freely rotatable housing 350°                                         |         |          |
| Media                   | viscous media and liquids with suspended particles; liquids and gases |         |          |
| Medium temperature [°C] | -25...80                                                              |         |          |
| Min. bursting pressure  | 30000 mbar                                                            | 450 psi | 3000 kPa |
| Pressure rating         | 10000 mbar                                                            | 145 psi | 1000 kPa |
| Type of pressure        | relative pressure                                                     |         |          |



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|               |     |
|---------------|-----|
| No dead space | yes |
|---------------|-----|

### Electrical data

|                                 |                 |
|---------------------------------|-----------------|
| Operating voltage [V]           | 20...30 DC      |
| Current consumption [mA]        | < 60            |
| Min. insulation resistance [MΩ] | 100; (500 V DC) |
| Protection class                | III             |
| Reverse polarity protection     | yes             |
| Power-on delay time [s]         | 0.2             |
| Integrated watchdog             | yes             |

### 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; (configurable)  |
| Electrical design                                    | PNP/NPN                                            |
| Number of digital outputs                            | 2                                                  |
| 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]                          | < 170                                              |
| Number of analogue outputs                           | 1                                                  |
| Analogue current output [mA]                         | 4...20; (scalable 1:4)                             |
| Max. load [Ω]                                        | (U <sub>b</sub> - 10 V) / 20 mA                    |
| Analogue voltage output [V]                          | 0...10; (scalable 1:4)                             |
| Min. load resistance [Ω]                             | 2000                                               |
| Short-circuit protection                             | yes                                                |
| Type of short-circuit protection                     | pulsed                                             |
| Overload protection                                  | yes                                                |

### Measuring/setting range

|                      |                |                 |                 |              |
|----------------------|----------------|-----------------|-----------------|--------------|
| Measuring range      | -0.05...1 bar  | -50...1000 mbar | -0.7...14.5 psi | -5...100 kPa |
| Set point SP         | -45...999 mbar | -0.7...14.5 psi | -4.5...99.9 kPa |              |
| Reset point rP       | -50...994 mbar | -0.7...14.4 psi | -5...99.4 kPa   |              |
| Analogue start point | -50...749 mbar | -0.7...10.9 psi | -5...74.9 kPa   |              |
| Analogue end point   | 200...999 mbar | 2.9...14.5 psi  | 20...99.9 kPa   |              |
| In steps of          | 1 mbar         | 0.1 psi         | 0.1 kPa         |              |
| Factory setting      |                | SP1 = 250 mbar  | rP1 = 230 mbar  |              |
|                      |                | ASP = 0 mbar    | AEP = 999 mbar  |              |

### Accuracy / deviations

|                                           |                                                                                                                    |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Repeatability [% of the span]             | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)                                                     |
| Characteristics deviation [% of the span] | < ± 0,6; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1) |
| Linearity deviation [% of the span]       | < ± 0,5; (Turn down 1:1)                                                                                           |



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|                                                              |                                    |
|--------------------------------------------------------------|------------------------------------|
| Hysteresis deviation<br>[% of the span]                      | < ± 0,1; (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] | < ± 0,1; (0...80 °C)               |
| Temperature coefficient span<br>[% of the span / 10 K]       | < ± 0,2; (0...80 °C)               |

| Response times                                   |                   |
|--------------------------------------------------|-------------------|
| Response time [ms]                               | < 3               |
| Damping process value dAP [s]                    | 0...4             |
| Damping for the analogue output dAA in steps [s] | 0 - 0,1 - 0,5 - 2 |
| Max. response time analogue output [ms]          | 3                 |

| Software / programming    |                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parameter setting options | hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span |

| Operating conditions     |           |
|--------------------------|-----------|
| Ambient temperature [°C] | -25...80  |
| Storage temperature [°C] | -40...100 |
| Protection               | IP 67     |

| 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 61000-4-6 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]         |                           | 181                 |

| Mechanical data          |                                                                                                                                  |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Weight [g]               | 279.75                                                                                                                           |
| Materials                | stainless steel (316L/1.4404); PBT; PC; PEI; EPDM/X; FKM                                                                         |
| 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 Aseptoflex external thread Aseptoflex                                                                        |

| Displays / operating elements |                  |                       |
|-------------------------------|------------------|-----------------------|
| Display                       | switching status | 2 x LED, red          |
|                               | function display | 7-segment LED display |
|                               | measured values  | 7-segment LED display |
| Display unit                  |                  | mbar; psi; kPa        |

| Remarks |                                                                                                   |
|---------|---------------------------------------------------------------------------------------------------|
| Remarks | The 3-A qualification is only valid if adapters with 3-A qualification are used for installation. |
| Notes   | Please do not use for new projects.; no more adapters available as accessories                    |

PF2057



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Pack quantity

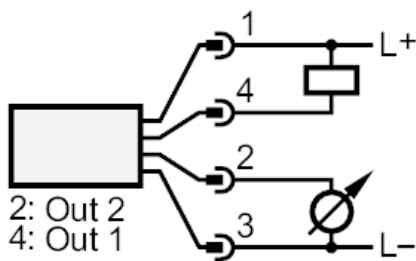
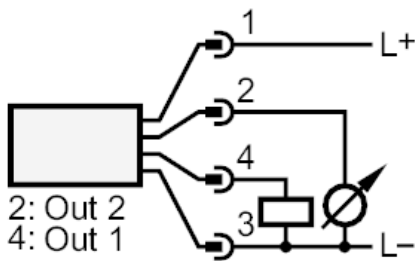
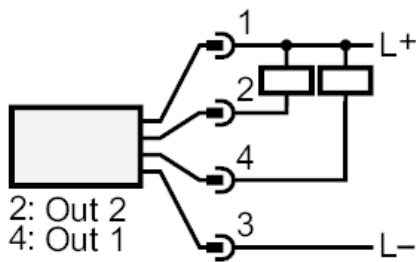
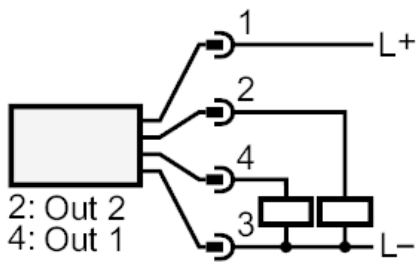
1 pcs.

Electrical connection

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



Connection



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