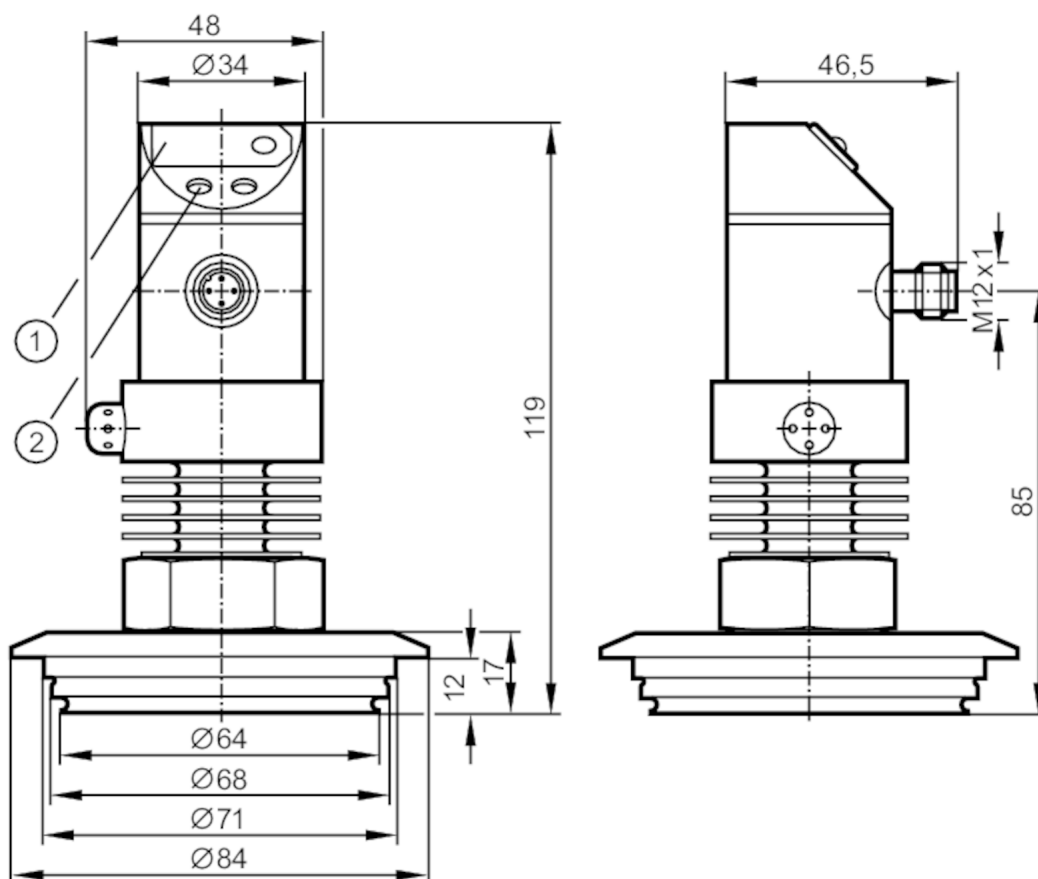


## Flush pressure sensor

PH-010-RES30-KFPKG/US/ /P

Article no longer available - archive entry



- 1 7-segment LED display  
2 programming button



## Product characteristics

|                              |                                                             |              |                |
|------------------------------|-------------------------------------------------------------|--------------|----------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analogue outputs: 1 |              |                |
| Measuring range              | -0.5...10 bar                                               | -7...145 psi | -50...1000 kPa |
| Process connection           | Varivent Form N                                             |              |                |

## 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...125; (145 max. 1h)                                              |          |           |
| Min. bursting pressure  | 150 bar                                                               | 2175 psi | 15000 kPa |
| Pressure rating         | 50 bar                                                                | 725 psi  | 5000 kPa  |
| Type of pressure        | relative pressure                                                     |          |           |
| No dead space           | yes                                                                   |          |           |

## Electrical data

|                       |            |
|-----------------------|------------|
| Operating voltage [V] | 20...30 DC |
|-----------------------|------------|



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|                             |      |                 |
|-----------------------------|------|-----------------|
| 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      | -0.5...10 bar    | -7...145 psi | -50...1000 kPa |
| Set point SP         | -0.45...9.99 bar | -7...145 psi | -45...999 kPa  |
| Reset point rP       | -0.5...9.94 bar  | -7...144 psi | -50...994 kPa  |
| Analogue start point | -0.5...7.49 bar  | -7...109 psi | -50...749 kPa  |
| Analogue end point   | 2...9.99 bar     | 29...145 psi | 200...999 kPa  |
| In steps of          | 0.01 bar         | 1 psi        | 1 kPa          |

### Accuracy / deviations

|                                    |       |                                                                                                                    |
|------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------|
| Repeatability                      | [X21] | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)                                                     |
| Characteristics deviation          | [X21] | < ± 0,6; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1) |
| Linearity deviation                | [X21] | < ± 0,5; (Turn down 1:1)                                                                                           |
| Hysteresis deviation               | [X21] | < ± 0,1; (Turn down 1:1)                                                                                           |
| Long-term stability                | [X21] | < ± 0,1; (Turn down 1:1; per year)                                                                                 |
| Temperature coefficient zero point | [X22] | < ± 0,1; (0...80 °C)                                                                                               |
| Temperature coefficient span       | [X22] | < ± 0,2; (0...80 °C)                                                                                               |



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| 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) |

| Mechanical data          |                                                                                          |
|--------------------------|------------------------------------------------------------------------------------------|
| Materials                | stainless steel (1.4404 / 316L); PBT; PC; PEI; EPDM/X; FKM                               |
| Materials (wetted parts) | stainless steel (1.4404 / 316L); ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); PTFE |
| Min. pressure cycles     | 100 million                                                                              |
| Process connection       | Varivent Form N                                                                          |

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

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

## Electrical connection

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

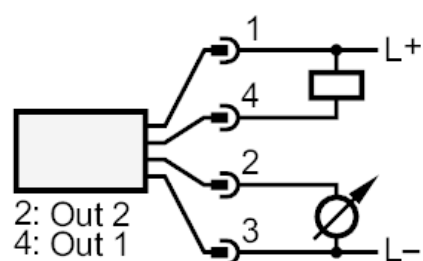
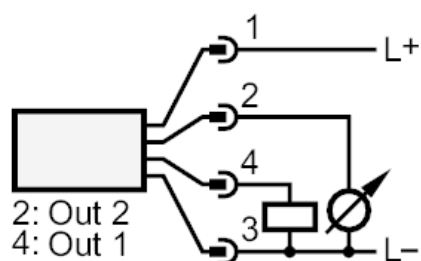
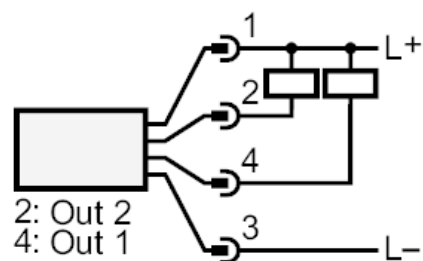
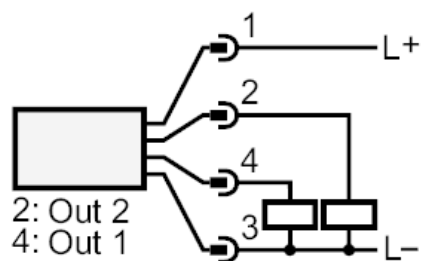




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### Connection



OUT1  
OUT2

switching output  
switching output  
analogue output