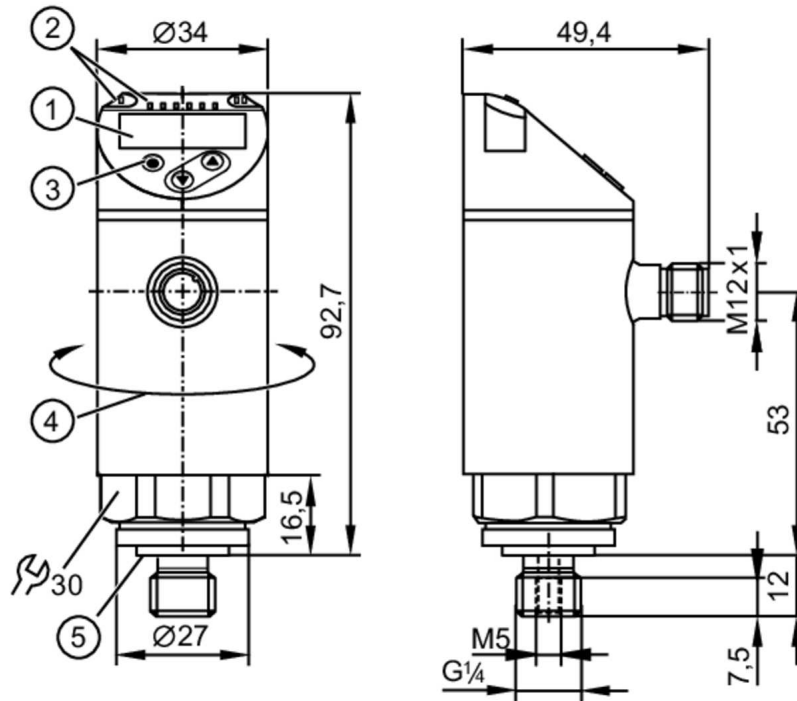


PE2594



Pressure sensor with display

PE-010-REG14-MFRKG/US/IE



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / Switching status
- 3 Programming button
- 4 upper part of the housing can be rotated 345°
- 5 sealing



Product characteristics

| | | | | |
|------------------------------|---|-----------------|-----------------|--------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analog outputs: 1 | | | |
| Measuring range | -1...10 bar | -14.6...145 psi | -100...1000 kPa | -0.1...1 MPa |
| Process connection | threaded connection G 1/4 external thread Internal thread:M5; DIN EN ISO 1179-2 | | | |

Application

| | | | |
|--------------------------|--|----------|---------|
| System | gold-plated contacts | | |
| Measuring element | ceramic-capacitive pressure measuring cell | | |
| Application | for industrial applications | | |
| Media | liquids and gases | | |
| Medium temperature [°C] | -25...80 | | |
| Min. bursting pressure | 150 bar | 2175 psi | 15 MPa |
| Pressure rating | 75 bar | 1087 psi | 7.5 MPa |
| Vacuum resistance [mbar] | -1000 | | |
| Type of pressure | relative pressure | | |

Electrical data

| | | | |
|---------------------------------|----------------------------|--|--|
| Operating voltage [V] | 18...30 DC; (to SELV/PELV) | | |
| Current consumption [mA] | < 35 | | |
| Min. insulation resistance [MΩ] | 100; (500 V DC) | | |
| Protection class | III | | |
| Reverse polarity protection | yes | | |

PE2594



Pressure sensor with display

PE-010-REG14-MFRKG/US/ E

| | | |
|---------------------|-----|-----|
| Power-on delay time | [s] | 0.3 |
| Integrated watchdog | | yes |

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) |
| Max. voltage drop switching output DC | [V] 2 |
| Permanent current rating of switching output DC | [mA] 250 |
| Switching frequency DC | [Hz] < 500 |
| Number of analog outputs | 1 |
| Analog current output | [mA] 4...20; (scalable 1:5) |
| Max. load | [Ω] 500 |
| Analog voltage output | [V] 0...10; (scalable 1:5) |
| Min. load resistance | [Ω] 2000 |
| Short-circuit protection | yes |
| Type of short-circuit protection | yes (non-latching) |
| Overload protection | yes |

Measuring/setting range

| | | | | |
|--------------------|------------------|-------------------|-----------------|--------------------|
| Measuring range | -1...10 bar | -14.6...145 psi | -100...1000 kPa | -0.1...1 MPa |
| Set point SP | -0.94...10 bar | -13.6...145 psi | | -0.094...1 MPa |
| Reset point rP | -0.98...9.96 bar | -14.2...144.4 psi | | -0.098...0.996 MPa |
| Analog start point | -1...8 bar | -14.6...116 psi | | -0.1...0.8 MPa |
| Analog end point | 1...10 bar | 14.6...145 psi | | 0.1...1 MPa |
| In steps of | 0.02 bar | 0.2 psi | | 0.002 MPa |

Accuracy / deviations

| | | |
|------------------------------------|------------------------|--|
| Switch point accuracy | [% of the span] | < ± 0,4; (Turn down 1:1) |
| Repeatability | [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1) |
| Characteristics deviation | [% of the span] | < ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting) |
| Hysteresis deviation | [% of the span] | < ± 0,1; (Turn down 1:1) |
| Long-term stability | [% of the span] | < ± 0,05; (Turn down 1:1; per 6 months) |
| Temperature coefficient zero point | [% of the span / 10 K] | 0,2; (-25...80 °C) |
| Temperature coefficient span | [% of the span / 10 K] | 0,2; (-25...80 °C) |

PE2594



Pressure sensor with display

PE-010-REG14-MFRKG/US/ /E

| | |
|-----------------------------------|--|
| Notes on the accuracy / deviation | switch point accuracy, linearity error under DNV GL: $< \pm 1\%$: $< \pm 1\%$ |
|-----------------------------------|--|

Reaction times

| | |
|---------------------------------------|--------|
| Response time [ms] | < 1.5 |
| Delay time programmable dS, dr [s] | 0...50 |
| Damping process value dAP [s] | 0...4 |
| Damping for the analog output dAA [s] | 0...4 |
| Max. response time analog output [ms] | 3 |

Software / programming

| | |
|---------------------------|---|
| Parameter setting options | hysteresis / window; normally open / closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output |
|---------------------------|---|

Interfaces

| Communication interface | IO-Link | | | | |
|------------------------------|--|-------------------|----------|---------|-----|
| Transmission type | COM2 (38,4 kBaud) | | | | |
| IO-Link revision | 1.1 | | | | |
| SDCI standard | IEC 61131-9 | | | | |
| Profiles | Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis | | | | |
| 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 | <table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>463</td> </tr> </tbody> </table> | Type of operation | DeviceID | default | 463 |
| Type of operation | DeviceID | | | | |
| default | 463 | | | | |

Operating conditions

| | |
|--------------------------|--------------|
| Ambient temperature [°C] | -25...80 |
| Storage temperature [°C] | -40...100 |
| Protection | IP 65; IP 67 |

Tests / approvals

| | | |
|------------------------------|---|---------------------|
| EMC | DIN EN 61000-6-2 | |
| | DIN EN 61000-6-3 | |
| Shock resistance | DIN EN 60068-2-27 | 50 g (11 ms) |
| Vibration resistance | DIN EN 60068-2-6 | 20 g (10...2000 Hz) |
| MTTF [years] | | 161 |
| UL approval | UL approval number | J012 |
| Pressure equipment directive | sound engineering practice; can be used for group 2 fluids; group 1 fluids on request | |

Mechanical data

| | |
|--------------------------|--|
| Weight [g] | 260.5 |
| Material | stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC; EPDM |
| Materials (wetted parts) | stainless steel (1.4404 / 316L); Al2O3 (99.9 %; ceramics); EPDM |
| Min. pressure cycles | 100 million |
| Tightening torque [Nm] | 25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating) |

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PE-010-REG14-MFRKG/US/ /E

| | |
|-------------------------------|---|
| Process connection | threaded connection G 1/4 external thread Internal thread:M5; DIN EN ISO 1179-2 |
| Process connection sealing | EPDM |
| Restrictor element integrated | no (can be retrofitted) |

Displays / operating elements

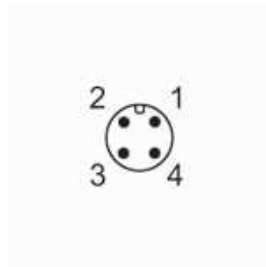
| | | |
|---------|------------------|---|
| Display | Display unit | 3 x LED, green (bar, psi, MPa) |
| | Switching status | 2 x LED, yellow |
| | Measured values | alphanumeric display, red/green 4-digit |

Remarks

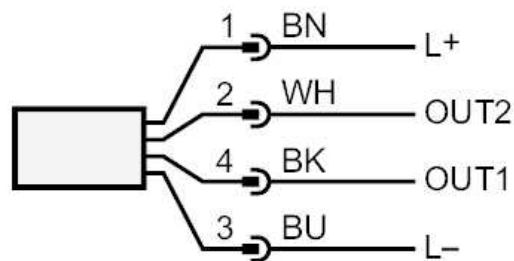
| | |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

Electrical connection

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



Connection



OUT1 switching output or IO-Link
 OUT2 switching output or analog output
 Colors to DIN EN 60947-5-2
 Core colors :

BK = black
 BN = brown
 BU = blue
 WH = white