

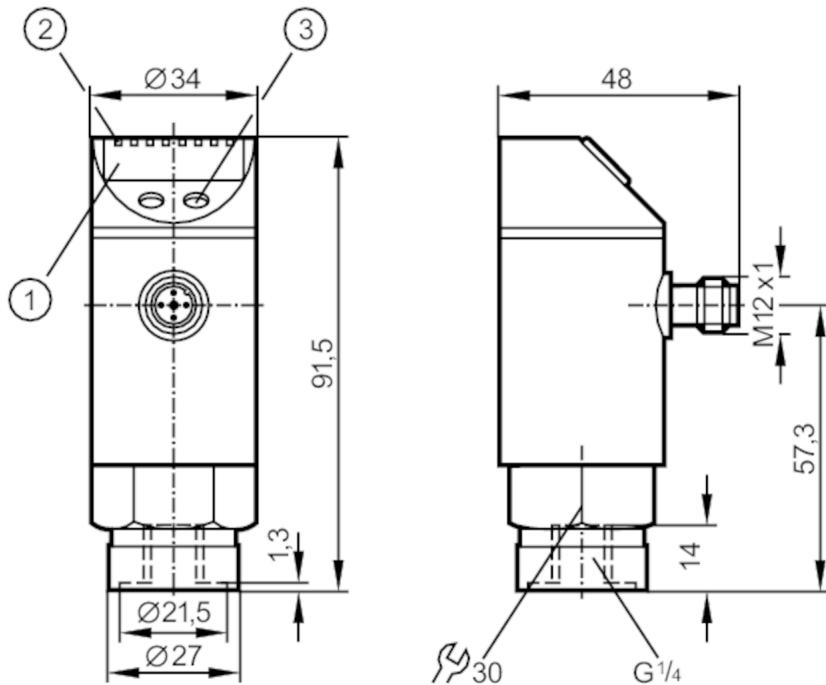
## Pressure sensor with display

PE-025-RDR14-QFRKG/US/ /E

phase-out article

Alternative articles: PE2093 or PE2593

When selecting an alternative article and accessories please note that technical data may differ!



- 1 alphanumeric display 4-digit  
 2 LEDs Display unit / switching status  
 3 programming button



## Product characteristics

|                              |   |             |             |
|------------------------------|---|-------------|-------------|
| Number of inputs and outputs | Number of digital outputs: 2              |             |             |
| Measuring range              | 0...25 bar                                | 0...363 psi | 0...2.5 MPa |
| Process connection           | threaded connection G 1/4 internal thread |             |             |

## Application

|                         |                             |          |        |
|-------------------------|-----------------------------|----------|--------|
| Special feature         | Gold-plated contacts        |          |        |
| Application             | for industrial applications |          |        |
| Media                   | liquids and gases           |          |        |
| Cannot be used for      | oils                        |          |        |
| Medium temperature [°C] |                             | -25...80 |        |
| Min. bursting pressure  | 350 bar                     | 5075 psi | 35 MPa |
| Pressure rating         | 150 bar                     | 2175 psi | 15 MPa |
| Type of pressure        | relative pressure           |          |        |

## Electrical data

|                                 |                            |  |  |
|---------------------------------|----------------------------|--|--|
| Operating voltage [V]           | 18...36 DC; (to SELV/PELV) |  |  |
| Current consumption [mA]        | < 50                       |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC)            |  |  |

# PE7003



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|   |                |   |                 |
|---|----------------|---|-----------------|
| Protection class  |                | III   |                 |
| Reverse polarity protection                               |                | yes   |                 |
| Oversupply protection                                     |                | yes; (< 40 V)   |                 |
| Power-on delay time [s]                                   |                | 0.3   |                 |
| Integrated watchdog                                       |                | yes   |                 |
| <b>Inputs / outputs</b>                                   |                |   |                 |
| Number of inputs and outputs                              |                | Number of digital outputs: 2  |                 |
| <b>Outputs</b>  |                |   |                 |
| Total number of outputs                                   |                | 2   |                 |
| Output signal   |                | switching signal; IO-Link; (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   |                 |
| Short-circuit protection                                  |                | yes   |                 |
| Type of short-circuit protection                          |                | pulsed  |                 |
| <b>Measuring/setting range</b>                            |                |   |                 |
| Measuring range   | 0...25 bar     | 0...363 psi   | 0...2.5 MPa     |
| Set point SP  | 0.2...25 bar   | 4...362 psi   | 0.02...2.5 MPa  |
| Reset point rP  | 0.1...24.9 bar | 2...360 psi   | 0.01...2.49 MPa |
| In steps of   | 0.1 bar        | 2 psi   | 0.01 MPa        |
| Factory setting   |                | SP1 = 6.3 bar   | rP1 = 5.8 bar   |
|   |                | SP2 = 18.8 bar  | rP2 = 18.3 bar  |
| <b>Accuracy / deviations</b>                              |                |   |                 |
| Switch point accuracy [% of the span]                     |                | < ± 0,5   |                 |
| Repeatability [% of the span]                             |                | < ± 0,1; (with temperature fluctuations < 10 K)   |                 |
| Characteristics deviation [% of the span]                 |                | < ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting) |                 |
| Hysteresis deviation [% of the span]                      |                | < ± 0,25  |                 |
| Long-term stability [% of the span]                       |                | < ± 0,05; (per 6 months)  |                 |
| Temperature coefficient zero point [% of the span / 10 K] |                | 0,2; (-20...80 °C)  |                 |
| Temperature coefficient span [% of the span / 10 K]       |                | 0,2; (-20...80 °C)  |                 |
| <b>Response times</b>                                     |                |   |                 |
| Delay time programmable dS, dr [s]                        |                | 0; 0,2...50   |                 |

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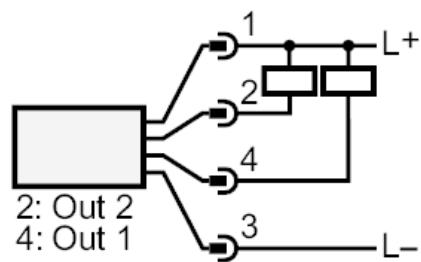
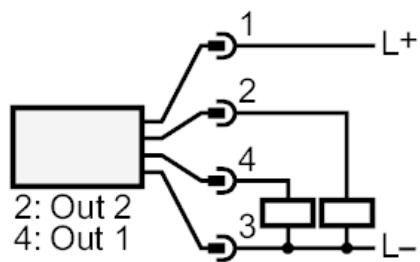
| Software / programming        |   |                               |
|-------------------------------|---|-------------------------------|
| Parameter setting options     | hysteresis / window; normally open / normally closed; diagnostic function; switching logic; switch-on/switch-off delay; Damping; Display unit |                               |
| Interfaces                    |   |                               |
| Communication interface       | IO-Link   |                               |
| Transmission type             | COM2 (38,4 kBaud)   |                               |
| IO-Link revision              | 1.1   |                               |
| 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   | 310                           |
| Operating conditions          |   |                               |
| Ambient temperature [°C]      | -20...80  |                               |
| Storage temperature [°C]      | -40...100   |                               |
| Protection                    | IP 67   |                               |
| Tests / approvals             |   |                               |
| EMC                           | EN 61000-6-2<br>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]                  | 237   |                               |
| Pressure Equipment Directive  | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request   |                               |
| Mechanical data               |   |                               |
| Weight [g]                    | 263   |                               |
| Materials                     | stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM; EPDM/X; PTFE  |                               |
| Materials (wetted parts)      | stainless steel (316L/1.4404); ceramics (99.9% Al <sub>2</sub> O <sub>3</sub> ); sealing of the measuring cell: EPDM                          |                               |
| Min. pressure cycles          | 100 million   |                               |
| Process connection            | threaded connection G 1/4 internal thread   |                               |
| Displays / operating elements |   |                               |
| Display                       | Display unit  | 3 x LED, green                |
|                               | switching status  | 2 x LED, yellow               |
|                               | function display  | alphanumeric display, 4-digit |
|                               | measured values   | alphanumeric display, 4-digit |
| Remarks                       |   |                               |
| Pack quantity                 | 1 pcs.  |                               |

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### Electrical connection

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



OUT1  
OUT2

switching output  
switching output  
Diagnostic output