

PE3001

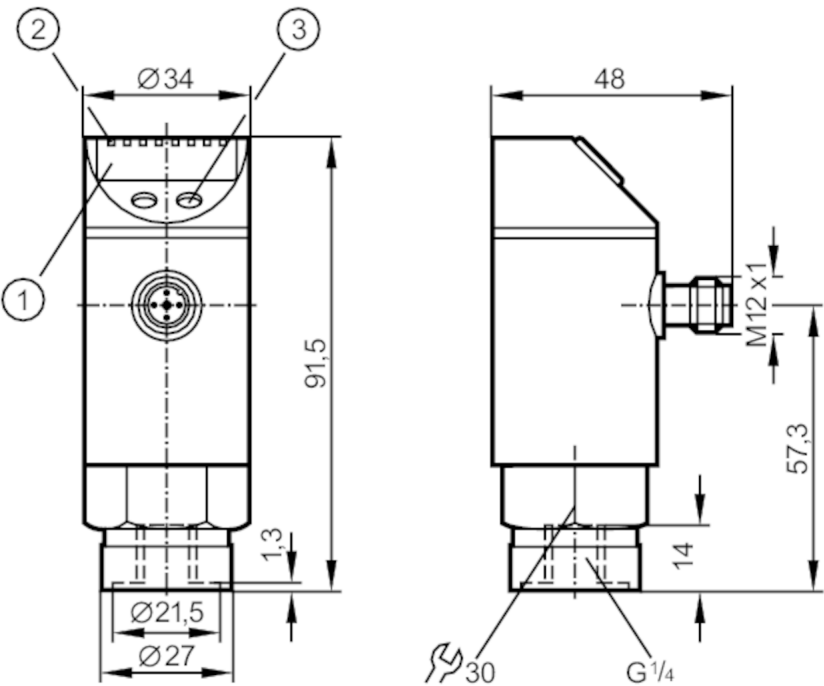


Pressure sensor with display

PE-250-SDR14-MFPKG/US/ /E

phase-out article

Alternative articles: PE2091 or PE2591  
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: 1; Number of analogue outputs: 1 |              |            |
| Measuring range              | 0...250 bar                                                 | 0...3625 psi | 0...25 MPa |
| Process connection           | threaded connection G 1/4 internal thread                   |              |            |
| Application                  |                                                             |              |            |
| Special feature              | Gold-plated contacts                                        |              |            |
| Application                  | for industrial applications                                 |              |            |
| Media                        | liquids and gases                                           |              |            |
| Conditionally suitable for   | use in gases at pressures > 25 bar only on request          |              |            |
| Cannot be used for           | oils                                                        |              |            |
| Medium temperature [°C]      | -25...80                                                    |              |            |
| Min. bursting pressure       | 850 bar                                                     | 12300 psi    | 85 MPa     |
| Pressure rating              | 400 bar                                                     | 5800 psi     | 40 MPa     |
| Type of pressure             | relative pressure                                           |              |            |
| Electrical data              |                                                             |              |            |
| Operating voltage [V]        | 18...36 DC; (to SELV/PELV)                                  |              |            |
| Current consumption [mA]     | < 50                                                        |              |            |



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|                             |      |                 |
|-----------------------------|------|-----------------|
| Min. insulation resistance  | [MΩ] | 100; (500 V DC) |
| Protection class            |      | III             |
| Reverse polarity protection |      | yes             |
| Overvoltage protection      |      | yes; (< 40 V)   |
| Power-on delay time         | [s]  | 0.3             |
| Integrated watchdog         |      | yes             |

### Inputs / outputs

|                              |                                                             |
|------------------------------|-------------------------------------------------------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |
|------------------------------|-------------------------------------------------------------|

### Outputs

|                                                 |      |                                                    |
|-------------------------------------------------|------|----------------------------------------------------|
| Total number of outputs                         |      | 2                                                  |
| Output signal                                   |      | switching signal; analogue signal; (configurable)  |
| Electrical design                               |      | PNP                                                |
| Number of digital outputs                       |      | 1                                                  |
| 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                                             |
| Max. load                                       | [Ω]  | 500                                                |
| Analogue voltage output                         | [V]  | 0...10                                             |
| Min. load resistance                            | [Ω]  | 2000                                               |
| Short-circuit protection                        |      | yes                                                |
| Type of short-circuit protection                |      | pulsed                                             |

### Measuring/setting range

|                 |             |               |                |
|-----------------|-------------|---------------|----------------|
| Measuring range | 0...250 bar | 0...3625 psi  | 0...25 MPa     |
| Set point SP    | 2...250 bar | 40...3620 psi | 0.2...25 MPa   |
| Reset point rP  | 1...249 bar | 20...3600 psi | 0.1...24.9 MPa |
| In steps of     | 1 bar       | 20 psi        | 0.1 MPa        |
| Factory setting |             | SP1 = 63 bar  | rP1 = 58 bar   |

### Accuracy / deviations

|                                    |                        |                                                                                           |
|------------------------------------|------------------------|-------------------------------------------------------------------------------------------|
| 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; (0...80 °C)                                                                          |

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|                                                        |  |                                                                                                                                 |                               |
|--------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Temperature coefficient span<br>[% of the span / 10 K] |  | 0,2; (0...80 °C)                                                                                                                |                               |
| Response times                                         |  |                                                                                                                                 |                               |
| Delay time programmable dS, dr [s]                     |  | 0; 0,2...50                                                                                                                     |                               |
| Max. response time analogue output [ms]                |  | 3                                                                                                                               |                               |
| Software / programming                                 |  |                                                                                                                                 |                               |
| Parameter setting options                              |  | hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping; Display unit; current/voltage output |                               |
| Operating conditions                                   |  |                                                                                                                                 |                               |
| Ambient temperature [°C]                               |  | -20...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 61000-4-5 Surge                                                                                                              | 0,5/1 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]                                           |  | 213                                                                                                                             |                               |
| Pressure Equipment Directive                           |  | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request                                           |                               |
| Mechanical data                                        |  |                                                                                                                                 |                               |
| Weight [g]                                             |  | 262.5                                                                                                                           |                               |
| Materials                                              |  | stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM                                                  |                               |
| Materials (wetted parts)                               |  | stainless steel (316L/1.4404); ceramics; 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                                                                                                                | 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



### Connection

