

PE7002



Pressure sensor with display

PE-100-SDR14-QFRKG/US/ /E

phase-out article

Alternative articles: PE2092 or PE2592  
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...100 bar                                        | 0...1450 psi | 0...10 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       | 650 bar                                            | 9400 psi     | 65 MPa     |
| Pressure rating              | 300 bar                                            | 4350 psi     | 30 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: 2 |
|------------------------------|------------------------------|

### Outputs

|                                                      |                                                    |
|------------------------------------------------------|----------------------------------------------------|
| 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                                             |

### Measuring/setting range

|                 |                |                                  |                                  |
|-----------------|----------------|----------------------------------|----------------------------------|
| Measuring range | 0...100 bar    | 0...1450 psi                     | 0...10 MPa                       |
| Set point SP    | 1...100 bar    | 20...1450 psi                    | 0.1...10 MPa                     |
| Reset point rP  | 0.5...99.5 bar | 10...1440 psi                    | 0.05...9.95 MPa                  |
| In steps of     | 0.5 bar        | 10 psi                           | 0.05 MPa                         |
| Factory setting |                | SP1 = 25.0 bar<br>SP2 = 75.0 bar | rP1 = 23.0 bar<br>rP2 = 73.0 bar |

### Accuracy / deviations

|                                          |                                                                                           |
|------------------------------------------|-------------------------------------------------------------------------------------------|
| Switch point accuracy [X21]              | < ± 0,5                                                                                   |
| Repeatability [X21]                      | < ± 0,1; (with temperature fluctuations < 10 K)                                           |
| Characteristics deviation [X21]          | < ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting) |
| Hysteresis deviation [X21]               | < ± 0,25                                                                                  |
| Long-term stability [X21]                | < ± 0,05; (per 6 months)                                                                  |
| Temperature coefficient zero point [X22] | 0,2; (-20...80 °C)                                                                        |
| Temperature coefficient span [X22]       | 0,2; (-20...80 °C)                                                                        |

### Response times

|                                    |             |
|------------------------------------|-------------|
| Delay time programmable dS, dr [s] | 0; 0,2...50 |
|------------------------------------|-------------|

### 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 |
|-------------------------|---------|

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|                              |                          |                 |
|------------------------------|--------------------------|-----------------|
| 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          | <b>Type of operation</b> | <b>DeviceID</b> |
|                              | default                  | 309             |

| Operating conditions     |           |  |
|--------------------------|-----------|--|
| Ambient temperature [°C] | -20...80  |  |
| Storage temperature [°C] | -40...100 |  |
| Protection               | IP 67     |  |

| Tests / approvals            |                                                                                       |                     |
|------------------------------|---------------------------------------------------------------------------------------|---------------------|
| EMC                          | EN 61000-6-2                                                                          |                     |
|                              | 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 [ANN]                   | 219                                                                                   |                     |
| Pressure Equipment Directive | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request |                     |

| Mechanical data          |                                                                                            |  |
|--------------------------|--------------------------------------------------------------------------------------------|--|
| Weight [g]               | 264                                                                                        |  |
| Materials                | stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; EPDM/X |  |
| Materials (wetted parts) | stainless steel (1.4404 / 316L); 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 | 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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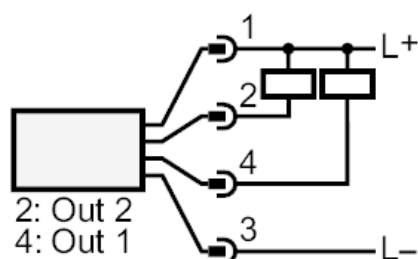


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### Electrical connection

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



OUT1  
OUT2

switching output  
switching output  
Diagnostic output