



## Pressure sensor with display

PN-001BRBR14-QFRKG/US/ IV

phase-out article

Alternative articles: PN7097

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...1 bar                                 | 0...1000 mbar | 0...14.5 psi |
| Process connection           | threaded connection G 1/4 internal thread |               |              |

### Application

|                         |                             |         |  |
|-------------------------|-----------------------------|---------|--|
| Special feature         | Gold-plated contacts        |         |  |
| Application             | for industrial applications |         |  |
| Media                   | liquids and gases           |         |  |
| Medium temperature [°C] | -25...80                    |         |  |
| Min. bursting pressure  | 30000 mbar                  | 450 psi |  |
| Pressure rating         | 10000 mbar                  | 145 psi |  |
| Type of pressure        | relative pressure           |         |  |

### Electrical data

|                                 |                            |  |  |
|---------------------------------|----------------------------|--|--|
| Operating voltage [V]           | 18...36 DC; (to SELV/PELV) |  |  |
| Current consumption [mA]        | < 35                       |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC)            |  |  |
| Protection class                | III                        |  |  |



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|                             |               |
|-----------------------------|---------------|
| 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...1 bar      | 0...1000 mbar  | 0...14.5 psi   |
| Set point SP    | 10...1000 mbar | 0.2...14.5 psi |                |
| Reset point rP  | 5...995 mbar   | 0.1...14.4 psi |                |
| In steps of     | 5 mbar         | 0.1 psi        |                |
| Factory setting |                | SP1 = 250 mbar | rP1 = 230 mbar |
|                 |                | SP2 = 750 mbar | rP2 = 730 mbar |

### 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           |
| Transmission type       | COM2 (38,4 kBaud) |
| IO-Link revision        | 1.1               |



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|                              |                          |                 |
|------------------------------|--------------------------|-----------------|
| SDCI standard                | IEC 61131-9 CDV          |                 |
| 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                  | 313             |

| Operating conditions     |           |  |
|--------------------------|-----------|--|
| Ambient temperature [°C] | -20...80  |  |
| Storage temperature [°C] | -40...100 |  |
| Protection               | IP 65     |  |

| 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 [ANN]                   | 219                                                                                   |                     |
| Pressure Equipment Directive | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request |                     |

| Mechanical data               |                                                                                          |  |
|-------------------------------|------------------------------------------------------------------------------------------|--|
| Weight [g]                    | 261                                                                                      |  |
| Materials                     | stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; PTFE |  |
| Materials (wetted parts)      | stainless steel (1.4305 / 303); ceramics; FKM                                            |  |
| Min. pressure cycles          | 100 million                                                                              |  |
| Process connection            | threaded connection G 1/4 internal thread                                                |  |
| Restrictor element integrated | no (can be retrofitted)                                                                  |  |

| Displays / operating elements |                  |                               |
|-------------------------------|------------------|-------------------------------|
| Display                       | Display unit     | 4 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. |

# PN7007

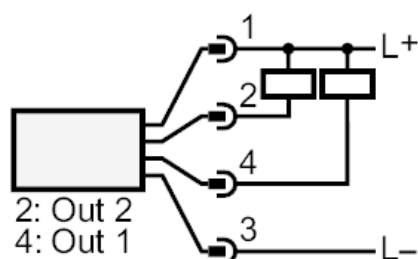


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### Electrical connection

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



|      |                                       |
|------|---------------------------------------|
| OUT1 | switching output<br>IO-Link           |
| OUT2 | switching output<br>Diagnostic output |