

PN7001



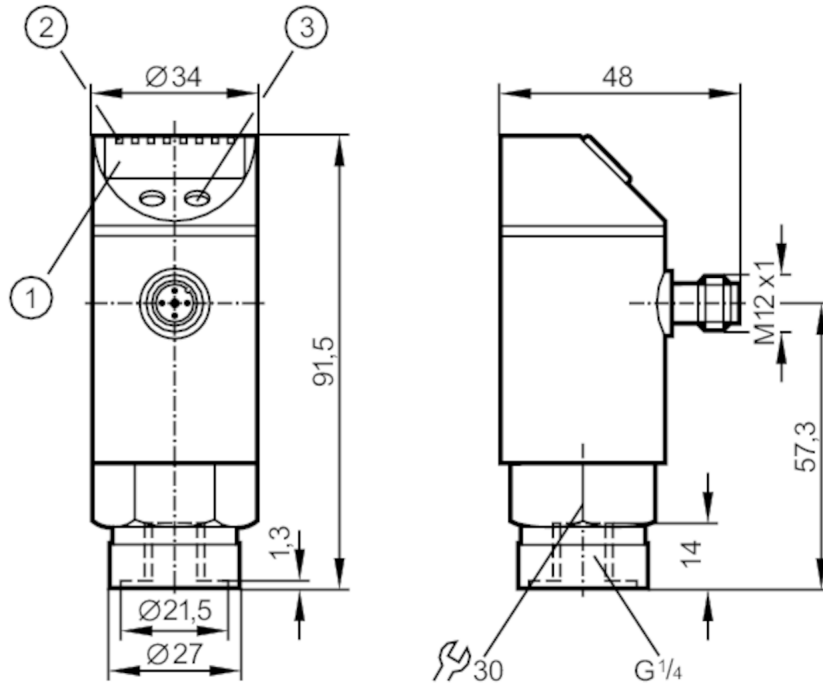
Pressure sensor with display

PN-250-SBR14-QFRKG/US/ IV

phase-out article

Alternative articles: PN7071

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...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 | | |
| 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] | < 35 | | |
| Min. insulation resistance [MΩ] | 100; (500 V DC) | | |

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| | |
|-----------------------------|---------------|
| 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...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 |
| | | SP2 = 188 bar | rP2 = 183 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) |
| Temperature coefficient span [% of the span / 10 K] | 0,2; (0...80 °C) |

Response times

| | |
|------------------------------------|-------------|
| 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 | |
| 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 | Type of operation default | DeviceID 308 |
| 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] | 219 | |
| Pressure Equipment Directive | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request | |
| Mechanical data | | |
| Weight [g] | 263.4 | |
| Housing | cylindrical | |
| Dimensions [mm] | Ø 34 / L = 91.5 | |
| Materials | stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM | |
| Materials (wetted parts) | stainless steel (303/1.4305); 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 | 3 x LED, green |
| | switching status | 2 x LED, yellow |
| | function display | alphanumeric display, 4-digit |
| | measured values | alphanumeric display, 4-digit |

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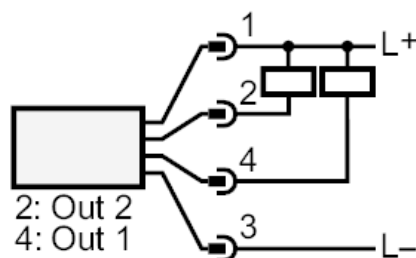
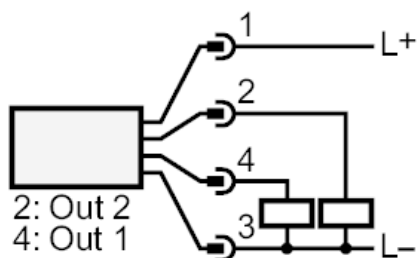
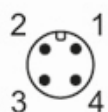
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Remarks

Pack quantity: 1 pcs.

Electrical connection

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



- OUT1: switching output
IO-Link
- OUT2: switching output
Diagnostic output