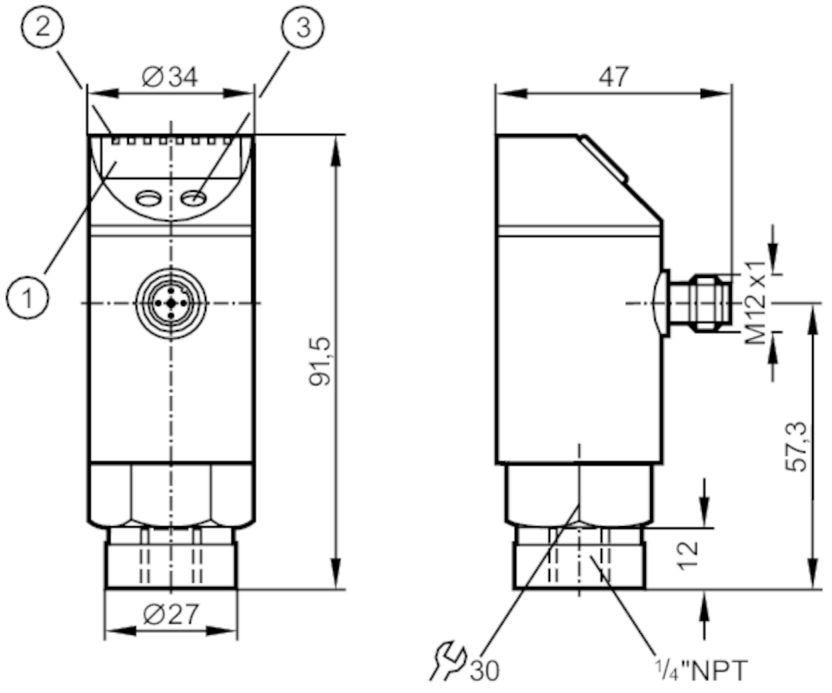
# PN2226

## Pressure sensor with display

PN-2,5-RBN14-MFRKG/US/ /V

phase-out article

Alternative articles: PN2296
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; Number of analogue outputs: 1 | | | |
| Measuring range | -0.13...2.5 bar | -130...2500 mbar | -1.45...36.25 psi | -12.5...250 kPa |
| Process connection | threaded connection 1/4" NPT internal thread | | | |
| **Application** | | | | |
| Special feature | Gold-plated contacts | | | |
| Application | for industrial applications | | | |
| Media | liquids and gases | | | |
| Medium temperature [°C] | -25...80 | | | |
| Min. bursting pressure | 50 bar | 725 psi | 5000 kPa | |
| Pressure rating | 20 bar | 290 psi | 2000 kPa | |
| Type of pressure | relative pressure | | | |
| **Electrical data** | | | | |
| Operating voltage [V] | 18...32 DC; (to SELV/PELV) | | | |
| Current consumption [mA] | < 35 | | | |
| Min. insulation resistance [MΩ] | 100; (500 V DC) | | | |
| Protection class | III | | | |

# PN2226

## Pressure sensor with display

PN-2,5-RBN14-MFRKG/US/ /V

| | | |
|---|---|---|
| Reverse polarity protection | | yes |
| Power-on delay time | [s] | 0.3 |
| Integrated watchdog | | yes |
| **Inputs / outputs** | | |
| Number of inputs and outputs | | Number of digital outputs: 2; Number of analogue outputs: 1 |
| **Outputs** | | |
| Total number of outputs | | 2 |
| Output signal | | switching signal; analogue 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] | < 500 |
| Number of analogue outputs | | 1 |
| Analogue current output | [mA] | 4...20; (scalable 1:4) |
| Max. load | [Ω] | (Ub - 10 V) / 20 mA |
| Analogue voltage output | [V] | 0...10; (scalable 1:4) |
| Min. load resistance | [Ω] | 2000 |
| Short-circuit protection | | yes |
| Type of short-circuit protection | | pulsed |
| Overload protection | | yes |

| **Measuring/setting range** | | | | |
|---|---|---|---|---|
| Measuring range | -0.13...2.5 bar | -130...2500 mbar | -1.45...36.25 psi | -12.5...250 kPa |
| Set point SP | -0.11...2.5 bar | -1.5...36.25 psi | | -10.5...250 kPa |
| Reset point rP | -0.12...2.49 bar | -1.65...36.1 psi | | -11.5...249 kPa |
| Analogue start point | -0.13...1.88 bar | -1.8...27.2 psi | | -12.5...187.5 kPa |
| Analogue end point | 0.5...2.5 bar | 7.25...36.25 psi | | 50...250 kPa |
| In steps of | 0.01 bar | 0.05 psi | | 0.5 kPa |
| Factory setting | | SP1 = 9.05 psi | | rP1 = 8.35 psi |
| | | SP2 = 27.20 psi | | rP2 = 26.45 psi |
| | | ASP = 0.00 psi | | AEP = 36.25 psi |

| **Accuracy / deviations** | | |
|---|---|---|
| Switch point accuracy | [% of the span] | < ± 0,4; (Turn down 1:1) |
| Repeatability | [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1) |
| Characteristics deviation | [% of the span] | < ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting) |
| Hysteresis deviation | [% of the span] | < ± 0,1; (Turn down 1:1) |
| Long-term stability | [% of the span] | < ± 0,1; (Turn down 1:1; per year) |

# PN2226

## Pressure sensor with display

PN-2,5-RBN14-MFRKG/US/ /V

| | | | |
|---|---|---|---|
| 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** | | | |
| Response time | [ms] | < 1.5 | |
| Damping process value dAP | [s] | 0.01...4 | |
| Damping for the analogue output dAA | [s] | 0.01...4 | |
| Max. response time analogue output | [ms] | 3 | |
| **Software / programming** | | | |
| Parameter setting options | | hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span | |
| **Interfaces** | | | |
| Communication interface | | IO-Link | |
| Transmission type | | COM2 (38,4 kBaud) | |
| IO-Link revision | | 1.0 | |
| **Operating conditions** | | | |
| Ambient temperature | [°C] | -25...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 | [years] | 131 | |
| Pressure Equipment Directive | | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request | |
| **Mechanical data** | | | |
| Weight | [g] | 265.5 | |
| Materials | | stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM; PTFE | |
| Materials (wetted parts) | | stainless steel (303/1.4305); ceramics; FKM | |
| Min. pressure cycles | | 100 million | |
| Process connection | | threaded connection 1/4" NPT 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 |

# PN2226

## Pressure sensor with display

PN-2,5-RBN14-MFRKG/US/ /V

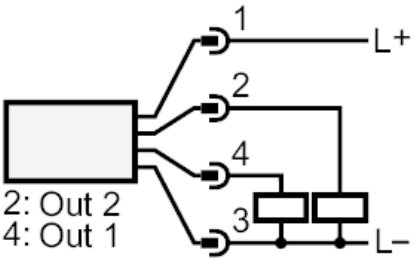
## Remarks

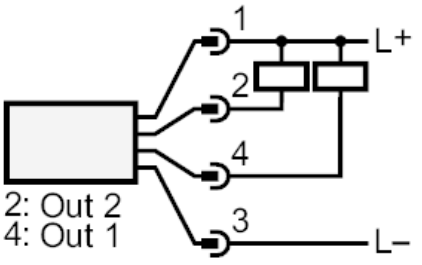
| | |
|---|---|
| Pack quantity | 1 pcs. |

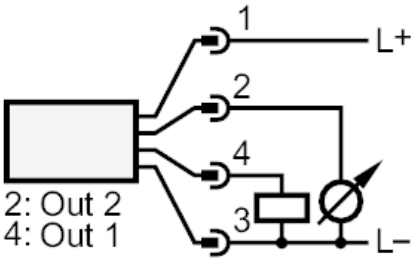
## Electrical connection

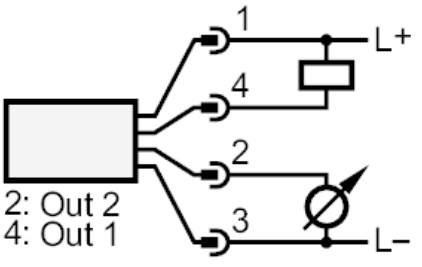
Connector: 1 x M12; coding: A; Contacts: gold-plated

### Connection




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