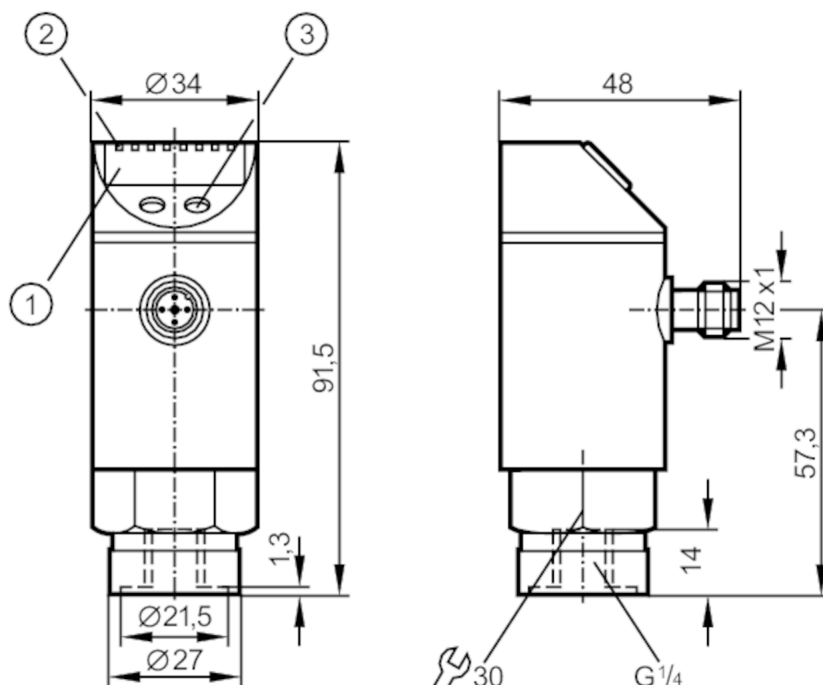


# PN3006



## Pressure sensor with display

PN-2,5-RBR14-MFPKG/US/ IV



- 1 alphanumeric display 4-digit
- 2 LEDs Display unit / switching status
- 3 programming button



### Application

|                         |                   |         |          |
|-------------------------|-------------------|---------|----------|
| Media                   | liquids and gases |         |          |
| Medium temperature [°C] | -25...80          |         |          |
| Pressure rating         | 20 bar            | 290 psi | 2000 kPa |
| Min. bursting pressure  | 50 bar            | 725 psi | 5000 kPa |
| Type of pressure        | relative pressure |         |          |

### Electrical data

|                                 |                                               |
|---------------------------------|-----------------------------------------------|
| Operating voltage [V]           | 18...36 DC; (according to EN 50178 SELV/PELV) |
| Current consumption [mA]        | < 50                                          |
| 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 |
|------------------------------|-------------------------------------------------------------|



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| 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...2.5 bar                                                                               | 0...36.3 psi   | 0...250 kPa    |
| Set point SP                                              | 0.02...2.5 bar                                                                            | 0.4...36.2 psi | 2...250 kPa    |
| Reset point rP                                            | 0.01...2.49 bar                                                                           | 0.2...36 psi   | 1...249 kPa    |
| In steps of                                               | 0.01 bar                                                                                  | 0.2 psi        | 1 kPa          |
| Factory setting                                           |                                                                                           | SP1 = 0.63 bar | rP1 = 0.58 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; (-20...80 °C)                                                                        |                |                |
| Temperature coefficient span [% of the span / 10 K]       | 0,2; (-20...80 °C)                                                                        |                |                |
| Response times                                            |                                                                                           |                |                |
| Delay time programmable dS, dr [s]                        | 0; 0,2...50                                                                               |                |                |
| Max. response time analogue output [ms]                   | 3                                                                                         |                |                |

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| 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 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]                                                                                                                         | 213                           |
| Mechanical data                                                                     |                                                                                                                                 |                               |
| Weight                                                                              | [g]                                                                                                                             | 261.2                         |
| 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                                                                                       |                               |
| 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                                                                             |                                                                                                                                 |                               |
| Notes                                                                               | discontinued article                                                                                                            |                               |
| Pack quantity                                                                       | 1 pcs.                                                                                                                          |                               |
| Electrical connection                                                               |                                                                                                                                 |                               |
| Connector: 1 x M12; Contacts: gold-plated                                           |                                                                                                                                 |                               |
|  |                                                                                                                                 |                               |

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### Connection

