

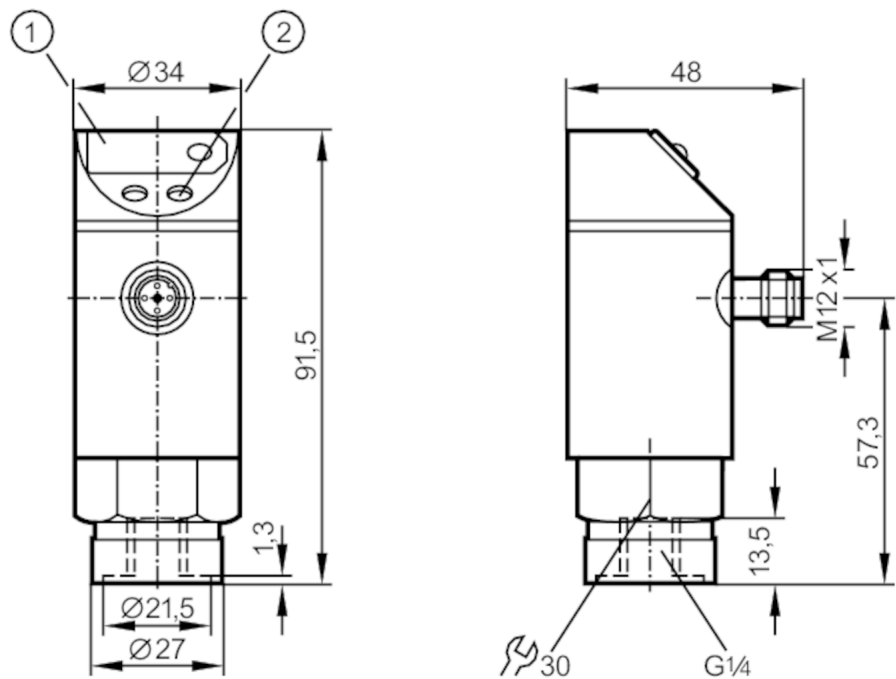
PN7027



Pressure sensor with display

PN-001-RBR14-QFPKG/US/ IV

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- 1 7-segment LED display
- 2 programming button



| Product characteristics      |                                           |
|------------------------------|-------------------------------------------|
| Output signal                | switching signal                          |
| Measuring range [bar]        | 0...1                                     |
| 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                                  |
| Pressure rating [bar]        | 10                                        |
| Min. bursting pressure [bar] | 30                                        |
| Type of pressure             | relative pressure                         |



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| Electrical data                                                 |       |                                                    |                                                                                             |     |    |    |    |    |    |     |     |     |
|-----------------------------------------------------------------|-------|----------------------------------------------------|---------------------------------------------------------------------------------------------|-----|----|----|----|----|----|-----|-----|-----|
| Operating voltage                                               | [V]   | 18...30 DC                                         |                                                                                             |     |    |    |    |    |    |     |     |     |
| Current consumption                                             | [mA]  | < 60                                               |                                                                                             |     |    |    |    |    |    |     |     |     |
| Min. insulation resistance                                      | [MΩ]  | 100; (500 V DC)                                    |                                                                                             |     |    |    |    |    |    |     |     |     |
| Protection class                                                |       | III                                                |                                                                                             |     |    |    |    |    |    |     |     |     |
| Reverse polarity protection                                     |       | yes                                                |                                                                                             |     |    |    |    |    |    |     |     |     |
| Power-on delay time                                             | [s]   | 0.2                                                |                                                                                             |     |    |    |    |    |    |     |     |     |
| 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                                   |                                                                                             |     |    |    |    |    |    |     |     |     |
| Electrical design                                               |       | PNP                                                |                                                                                             |     |    |    |    |    |    |     |     |     |
| 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                                                |                                                                                             |     |    |    |    |    |    |     |     |     |
| Short-circuit protection                                        |       | yes                                                |                                                                                             |     |    |    |    |    |    |     |     |     |
| Type of short-circuit protection                                |       | pulsed                                             |                                                                                             |     |    |    |    |    |    |     |     |     |
| Overload protection                                             |       | yes                                                |                                                                                             |     |    |    |    |    |    |     |     |     |
| Measuring/setting range                                         |       |                                                    |                                                                                             |     |    |    |    |    |    |     |     |     |
| Measuring range                                                 | [bar] | 0...1                                              |                                                                                             |     |    |    |    |    |    |     |     |     |
| Set point SP                                                    | [bar] | 0.02...1                                           |                                                                                             |     |    |    |    |    |    |     |     |     |
| Reset point rP                                                  | [bar] | 0.01...0.99                                        |                                                                                             |     |    |    |    |    |    |     |     |     |
| In steps of                                                     | [bar] | 0.01                                               |                                                                                             |     |    |    |    |    |    |     |     |     |
| Accuracy / deviations                                           |       |                                                    |                                                                                             |     |    |    |    |    |    |     |     |     |
| Switch point accuracy<br>[% of the final value]                 |       | < ± 1,0                                            |                                                                                             |     |    |    |    |    |    |     |     |     |
| Repeatability<br>[% of the final value]                         |       | < ± 0,25; (with temperature fluctuations < 10 K)   |                                                                                             |     |    |    |    |    |    |     |     |     |
| Temperature drift per 10 K                                      |       | < ± 0.3                                            |                                                                                             |     |    |    |    |    |    |     |     |     |
| Response times                                                  |       |                                                    |                                                                                             |     |    |    |    |    |    |     |     |     |
| Switching frequency for a given set response time of one output |       | Response time (dAP)                                | [ms]                                                                                        | 3   | 6  | 10 | 17 | 30 | 60 | 125 | 250 | 500 |
|                                                                 |       | Switching frequency                                | [Hz]                                                                                        | 170 | 80 | 50 | 30 | 16 | 8  | 4   | 2   | 1   |
| Response time                                                   |       | [ms]                                               | at rectangular pressure characteristic; switch point (SPx) = 70 %; reset point (rPx) = 30 % |     |    |    |    |    |    |     |     |     |
| Delay time programmable dS, dr                                  |       | [s]                                                | 0, 0,2,...10, 11,...50                                                                      |     |    |    |    |    |    |     |     |     |

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| Software / programming                                                              |                                                                                           |                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------|
| Adjustment of the switch point                                                      | programming button                                                                        |                       |
| Parameter setting options                                                           | hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping |                       |
| 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 61000-4-6 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)   |
| Mechanical data                                                                     |                                                                                           |                       |
| Materials                                                                           | EPDM/X; FKM; PA; PBT; PC; PTFE; stainless steel (1.4301 / 304)                            |                       |
| 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                                                                             | switching status                                                                          | 2 x LED, red          |
|                                                                                     | function display                                                                          | 7-segment LED display |
|                                                                                     | measured values                                                                           | 7-segment LED display |
| Remarks                                                                             |                                                                                           |                       |
| Pack quantity                                                                       | 1 pcs.                                                                                    |                       |
| Electrical connection                                                               |                                                                                           |                       |
| Connector: 1 x M12; Contacts: gold-plated                                           |                                                                                           |                       |
|  |                                                                                           |                       |

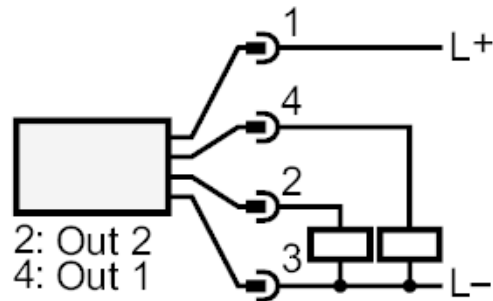
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### Connection



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