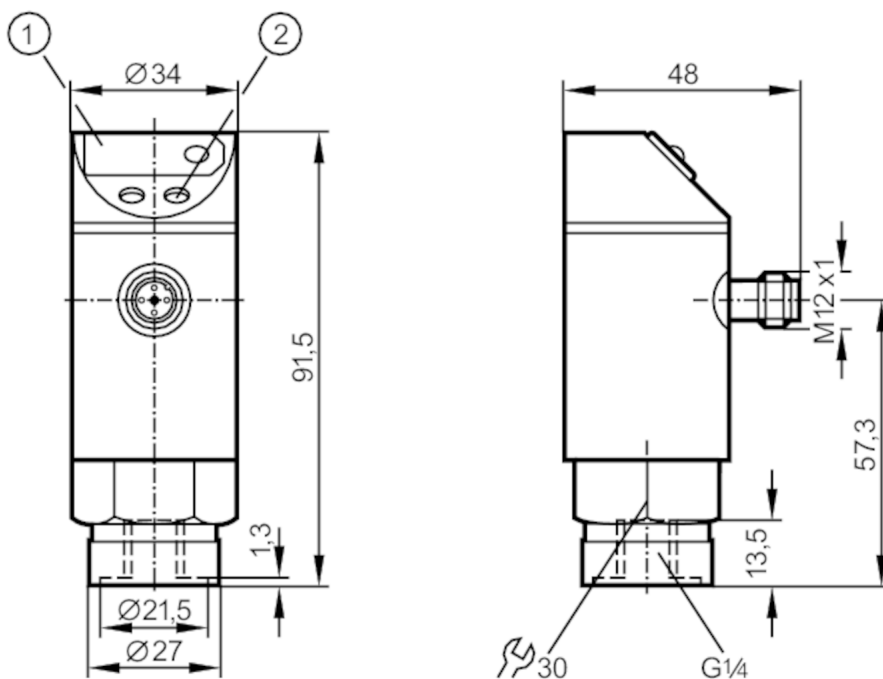




## Pressure sensor with display

PN-001-RDR14-KFPKG/US/ IV

Article no longer available - archive entry



- 1 7-segment LED display  
2 programming button



### Product characteristics

|                              |                                                             |
|------------------------------|-------------------------------------------------------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |
| 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                    |
| Min. bursting pressure [bar] | 30                          |
| Pressure rating [bar]        | 10                          |
| Type of pressure             | relative pressure           |

### Electrical data

|                                 |                 |
|---------------------------------|-----------------|
| Operating voltage [V]           | 20...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             |



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| Inputs / outputs                                                |  |                                                                                             |     |    |    |    |    |    |     |     |     |
|-----------------------------------------------------------------|--|---------------------------------------------------------------------------------------------|-----|----|----|----|----|----|-----|-----|-----|
| Number of inputs and outputs                                    |  | Number of digital outputs: 1; Number of analogue outputs: 1                                 |     |    |    |    |    |    |     |     |     |
| Outputs                                                         |  |                                                                                             |     |    |    |    |    |    |     |     |     |
| Total number of outputs                                         |  | 2                                                                                           |     |    |    |    |    |    |     |     |     |
| Output signal                                                   |  | switching signal; analogue signal; (configurable)                                           |     |    |    |    |    |    |     |     |     |
| Electrical design                                               |  | PNP                                                                                         |     |    |    |    |    |    |     |     |     |
| Number of digital outputs                                       |  | 1                                                                                           |     |    |    |    |    |    |     |     |     |
| Max. voltage drop switching output DC [V]                       |  | 2                                                                                           |     |    |    |    |    |    |     |     |     |
| Permanent current rating of switching output DC [mA]            |  | 250                                                                                         |     |    |    |    |    |    |     |     |     |
| Number of analogue outputs                                      |  | 1                                                                                           |     |    |    |    |    |    |     |     |     |
| Analogue current output [mA]                                    |  | 4...20                                                                                      |     |    |    |    |    |    |     |     |     |
| Max. load [Ω]                                                   |  | 500                                                                                         |     |    |    |    |    |    |     |     |     |
| 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 [% of the final value]                    |  | < ± 1,5                                                                                     |     |    |    |    |    |    |     |     |     |
| Repeatability [% of the final value]                            |  | < ± 0,25; (with temperature fluctuations < 10 K)                                            |     |    |    |    |    |    |     |     |     |
| Characteristics deviation [% of the final value]                |  | < ± 1,0                                                                                     |     |    |    |    |    |    |     |     |     |
| 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                                                                      |     |    |    |    |    |    |     |     |     |
| Max. response time analogue output [ms]                         |  | 3                                                                                           |     |    |    |    |    |    |     |     |     |
| Software / programming                                          |  |                                                                                             |     |    |    |    |    |    |     |     |     |
| Adjustment of the switch point                                  |  | programming button                                                                          |     |    |    |    |    |    |     |     |     |
| Parameter setting options                                       |  | hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping   |     |    |    |    |    |    |     |     |     |

PN3057



Pressure sensor with display

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| 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 (316L/1.4404); stainless steel (1.4539 / 904L) |
| Materials (wetted parts) | FKM; ceramics; stainless steel (1.4539 / 904L)                                                 |
| Min. pressure cycles     | 100 million                                                                                    |
| Process connection       | threaded connection G 1/4 internal thread                                                      |

| Displays / operating elements |                  |                       |
|-------------------------------|------------------|-----------------------|
| Display                       | switching status | 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; coding: A; Contacts: gold-plated



Connection

