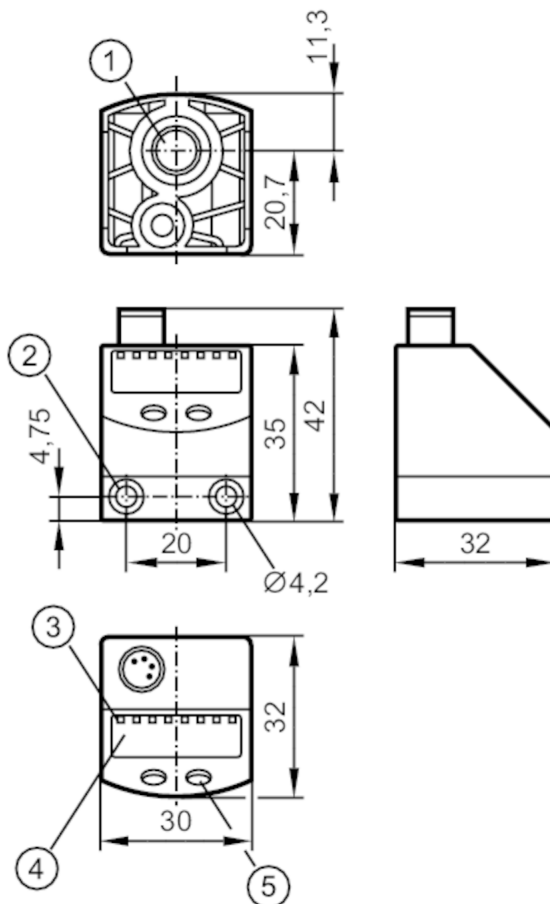




## Pressure sensor for pneumatics

PQ-1-1-RHR18-QFNKG/AS/



- 1 main pressure connection G 1/8 Tightening torque < 8 Nm insertion depth < 7.5 mm
- 2 Tightening torque < 0.5 Nm
- 3 LEDs Display unit / switching status
- 4 alphanumeric display 4-digit
- 5 programming button



### Product characteristics

|                              |                                           |                   |
|------------------------------|-------------------------------------------|-------------------|
| Number of inputs and outputs | Number of digital outputs: 2              |                   |
| Measuring range              | -1...1 bar                                | -1000...1000 mbar |
| Process connection           | threaded connection G 1/8 internal thread |                   |

### Application

|                              |                             |  |
|------------------------------|-----------------------------|--|
| Special feature              | Gold-plated contacts        |  |
| Application                  | for industrial applications |  |
| Media                        | compressed air              |  |
| Conditionally suitable for   | other media on request      |  |
| Medium temperature [°C]      | 0...60                      |  |
| Min. bursting pressure [bar] | 30                          |  |
| Pressure rating [bar]        | 20                          |  |
| Type of pressure             | relative pressure; vacuum   |  |



## Pressure sensor for pneumatics

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| Electrical data                                 |                        |                                                                                           |
|-------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------|
| Operating voltage                               | [V]                    | 18...32 DC; (to 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: 2                                                              |
| Outputs                                         |                        |                                                                                           |
| Total number of outputs                         |                        | 2                                                                                         |
| Output signal                                   |                        | switching signal                                                                          |
| Electrical design                               |                        | 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]                   | 100                                                                                       |
| Switching frequency DC                          | [Hz]                   | < 200                                                                                     |
| Short-circuit protection                        |                        | yes                                                                                       |
| Type of short-circuit protection                |                        | pulsed                                                                                    |
| Measuring/setting range                         |                        |                                                                                           |
| Measuring range                                 | -1...1 bar             | -1000...1000 mbar                                                                         |
| Set point SP                                    | [bar]                  | -0.98...1                                                                                 |
| Reset point rP                                  | [bar]                  | -0.99...0.99                                                                              |
| In steps of                                     | [bar]                  | 0.01                                                                                      |
| 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...60 °C)                                                                          |
| Temperature coefficient span                    | [% of the span / 10 K] | 0,2; (0...60 °C)                                                                          |



## Pressure sensor for pneumatics

PQ-1-1-RHR18-QFNKG/AS/

| Response times                 |                                                                                                                                               |                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Response time                  | [ms]                                                                                                                                          | < 2.5                         |
| Delay time programmable dS, dr | [s]                                                                                                                                           | 0; 0,002...5                  |
| Software / programming         |                                                                                                                                               |                               |
| Parameter setting options      | hysteresis / window; normally open / normally closed; diagnostic function; switching logic; switch-on/switch-off delay; Damping; Display unit |                               |
| Operating conditions           |                                                                                                                                               |                               |
| Ambient temperature            | [°C]                                                                                                                                          | 0...70                        |
| Storage temperature            | [°C]                                                                                                                                          | -25...85                      |
| 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]                                                                                                                                       | 443                           |
| Pressure Equipment Directive   | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request                                                         |                               |
| Mechanical data                |                                                                                                                                               |                               |
| Weight                         | [g]                                                                                                                                           | 85.5                          |
| Materials                      | PBT; FKM; polyester                                                                                                                           |                               |
| Materials (wetted parts)       | brass; FKM; silicon (coated); PBT                                                                                                             |                               |
| Min. pressure cycles           | 50 million                                                                                                                                    |                               |
| Process connection             | threaded connection G 1/8 internal thread                                                                                                     |                               |
| Displays / operating elements  |                                                                                                                                               |                               |
| Display                        | Display unit                                                                                                                                  | 4 x LED, green                |
|                                | switching status                                                                                                                              | 2 x LED, yellow               |
|                                | function display                                                                                                                              | alphanumeric display, 4-digit |
|                                | measured values                                                                                                                               | alphanumeric display, 4-digit |
| Display unit                   | bar; kPa; psi; inHg                                                                                                                           |                               |
| Accessories                    |                                                                                                                                               |                               |
| Accessories (optional)         | mounting set for DIN rail: TH 35-7,5 / EN60715, E37340                                                                                        |                               |
|                                | Thread extension: 1/8", E30075                                                                                                                |                               |
|                                | push-in air fitting for tube: Ø 6 mm, E30076                                                                                                  |                               |
|                                | push-in air fitting for tube: Ø 8 mm, E30077                                                                                                  |                               |
| Remarks                        |                                                                                                                                               |                               |
| Pack quantity                  | 1 pcs.                                                                                                                                        |                               |

# PQ0809



## Pressure sensor for pneumatics

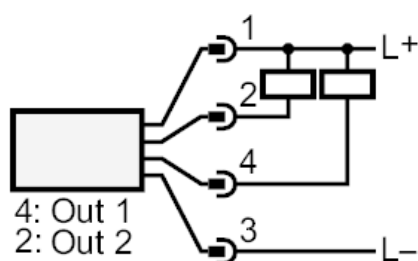
PQ-1-1-RHR18-QFNKG/AS/

### Electrical connection

Connector: 1 x M8; coding: A; Contacts: gold-plated



### Connection



|      |                   |
|------|-------------------|
| OUT1 | switching output  |
| OUT2 | switching output  |
|      | Diagnostic output |