

PQ3834

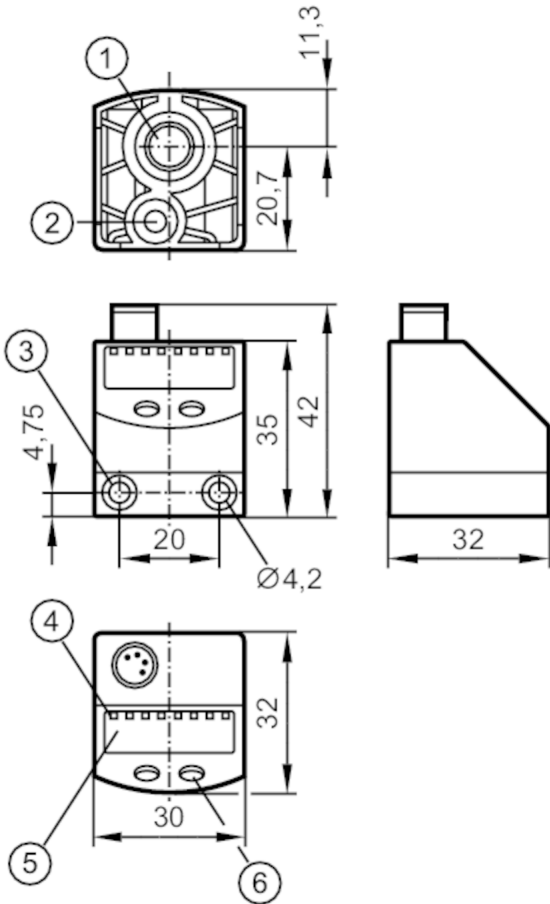


Pressure sensor for pneumatics

PQ-010-KHR18-KFPKG/AS/

phase-out article

Alternative articles: PQD484 or PQD384  
When selecting an alternative article and accessories please note that technical data may differ!



- 1 main pressure connection G 1/8 Tightening torque < 8 Nm insertion depth < 7.5 mm
- 2 auxiliary pressure connection M 5 Tightening torque < 2.5 Nm insertion depth < 7.5 mm
- 3 Tightening torque < 0.5 Nm
- 4 LEDs Display unit / switching status
- 5 alphanumeric display 4-digit
- 6 programming button



| Product characteristics      |                                                              |               |                |                 |
|------------------------------|--------------------------------------------------------------|---------------|----------------|-----------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1  |               |                |                 |
| Measuring range              | -1...10 bar                                                  | -15...145 psi | -30...296 inHg | -100...1000 kPa |
| Process connection           | threaded connection G 1/8 internal thread internal thread:M5 |               |                |                 |
| Application                  |                                                              |               |                |                 |
| Special feature              | Gold-plated contacts                                         |               |                |                 |
| Application                  | for industrial applications                                  |               |                |                 |
| Conditionally suitable for   | other media on request                                       |               |                |                 |
| Medium temperature [°C]      | 0...60                                                       |               |                |                 |
| Min. burst pressure          | 30 bar                                                       | 435 psi       | 886 inHg       | 3000 kPa        |



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|                             |                                                                                                        |         |          |          |
|-----------------------------|--------------------------------------------------------------------------------------------------------|---------|----------|----------|
| Note on min. burst pressure | max. overpressure on second pressure connection:<br>12 bar / 1200 kPa / 174 PSI / 354,4 inHg / 1,2 MPa |         |          |          |
| Pressure rating             | 20 bar                                                                                                 | 290 psi | 591 inHg | 2000 kPa |
| Vacuum resistance           | -1000 mbar                                                                                             |         | -0.1 MPa |          |
| Type of pressure            | relative pressure; differential pressure; vacuum                                                       |         |          |          |

| 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                        |
| Power-on delay time [s]         | 0.5                        |
| Integrated watchdog             | yes                        |

| 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; IO-Link; (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] | 100                                                        |
| Switching frequency DC [Hz]                          | < 100                                                      |
| 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                                                     |

| Measuring/setting range |                  |               |                |                 |
|-------------------------|------------------|---------------|----------------|-----------------|
| Measuring range         | -1...10 bar      | -15...145 psi | -30...296 inHg | -100...1000 kPa |
| Set point SP            | -0.9...10 bar    | -13...145 psi | -26...296 inHg | -90...1000 kPa  |
| Reset point rP          | -0.95...9.95 bar | -14...144 psi | -28...294 inHg | -95...995 kPa   |
| In steps of             | 0.05 bar         | 1 psi         | 2 inHg         | 5 kPa           |

| 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                       | < ± 0,05; (per 6 months)                                                                  |



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|                                    |                                                                                                                                                    |                         |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| [% of the span]                    |                                                                                                                                                    |                         |
| Temperature coefficient zero point |                                                                                                                                                    | 0,2; (0...60 °C)        |
| [% of the span / 10 K]             |                                                                                                                                                    |                         |
| Temperature coefficient span       |                                                                                                                                                    | 0,2; (0...60 °C)        |
| [% of the span / 10 K]             |                                                                                                                                                    |                         |
| Response times                     |                                                                                                                                                    |                         |
| Response time                      | [ms]                                                                                                                                               | < 6                     |
| Delay time programmable dS, dr     | [s]                                                                                                                                                | 0; 0,002...5            |
| Step response time analogue output | [ms]                                                                                                                                               | 6                       |
| Software / programming             |                                                                                                                                                    |                         |
| Parameter setting options          | hysteresis / window; normally open / normally closed; analogue output; IO-Link; switching logic; switch-on/switch-off delay; Damping; Display unit |                         |
| Interfaces                         |                                                                                                                                                    |                         |
| Communication interface            | IO-Link                                                                                                                                            |                         |
| Transmission type                  | COM2 (38,4 kBaud)                                                                                                                                  |                         |
| IO-Link revision                   | 1.1                                                                                                                                                |                         |
| SDCI standard                      | IEC 61131-9 FDIS                                                                                                                                   |                         |
| Profiles                           | Smart Sensor - SSP 0                                                                                                                               | Generic Profiled Sensor |
|                                    | Function                                                                                                                                           | Device identification   |
|                                    | Function                                                                                                                                           | Process data variable   |
| SIO mode                           | yes                                                                                                                                                |                         |
| Required master port type          | A                                                                                                                                                  |                         |
| Process data analogue              | 1                                                                                                                                                  |                         |
| Process data binary                | 2                                                                                                                                                  |                         |
| Min. process cycle time            | [ms]                                                                                                                                               | 2.3                     |
| Supported DeviceIDs                | Type of operation                                                                                                                                  | DeviceID                |
|                                    | default                                                                                                                                            | 367                     |
| Operating conditions               |                                                                                                                                                    |                         |
| Ambient temperature                | [°C]                                                                                                                                               | 0...70                  |
| Storage temperature                | [°C]                                                                                                                                               | -25...85                |
| Protection                         | IP 65                                                                                                                                              |                         |
| Tests / approvals                  |                                                                                                                                                    |                         |
| EMC                                | DIN EN 61000-6-2                                                                                                                                   |                         |
|                                    | DIN EN 61000-6-3                                                                                                                                   |                         |
| Shock resistance                   | DIN EN 60068-2-27                                                                                                                                  | 50 g (11 ms)            |
| Vibration resistance               | DIN EN 60068-2-6                                                                                                                                   | 20 g (10...2000 Hz)     |
| MTTF                               | [years]                                                                                                                                            | 437                     |
| Pressure Equipment Directive       | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request                                                              |                         |
| Mechanical data                    |                                                                                                                                                    |                         |
| Weight                             | [g]                                                                                                                                                | 87                      |
| Housing                            | rectangular                                                                                                                                        |                         |
| Dimensions                         | [mm]                                                                                                                                               | 42 x 30 x 32            |
| Materials                          | PBT; FKM; polyester                                                                                                                                |                         |

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|                          |                                                              |
|--------------------------|--------------------------------------------------------------|
| Materials (wetted parts) | brass; FKM; silicon (coated); PBT                            |
| Min. pressure cycles     | 50 million                                                   |
| Process connection       | threaded connection G 1/8 internal thread internal thread:M5 |

Displays / operating elements

|              |                     |                               |
|--------------|---------------------|-------------------------------|
| Display      | Display unit        | 4 x LED, green                |
|              | switching status    | 1 x LED, yellow               |
|              | function display    | alphanumeric display, 4-digit |
|              | measured values     | alphanumeric display, 4-digit |
| Display unit | bar; kPa; psi; inHg |                               |

Remarks

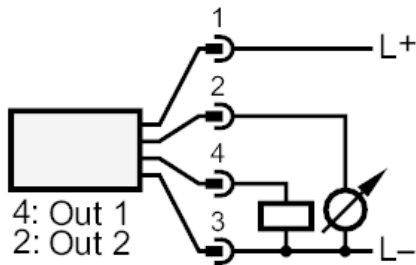
|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

Electrical connection

Connector: 1 x M8; coding: A; Contacts: 4, gold-plated



Connection



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