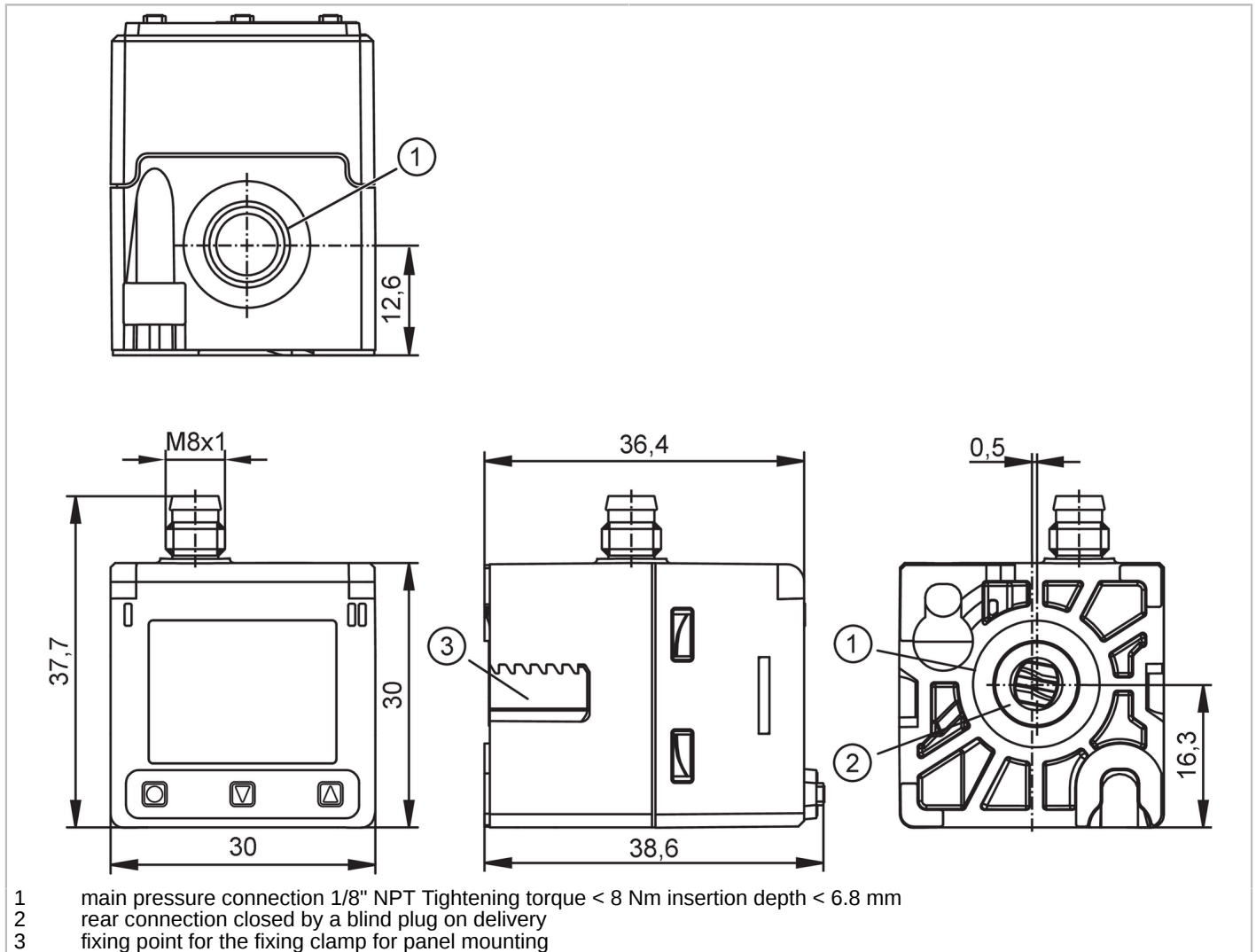


# PQC612



## Pressure sensor for pneumatics

PQ-010-KHN18-MFPKG/AS/



| Product characteristics      |   |                 |
|------------------------------|---|-----------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |                 |
| Measuring range              | -1...10 bar   | -14.5...145 psi |
| Process connection           | threaded connection 1/8" NPT internal thread (2x)           |                 |
| Application                  |   |                 |
| Special feature              | Gold-plated contacts  |                 |
| Application                  | for industrial applications                                 |                 |
| Media                        | compressed air; nitrogen (N2)                               |                 |
| Conditionally suitable for   | other media on request                                      |                 |
| Medium temperature           | 0...60 °C   | 32...140 °F     |
| Min. burst pressure          | 20 bar  | 290 psi         |
| Pressure rating              | 15 bar  | 220 psi         |
| Vacuum resistance            | -1000 mbar  | -14.5 psi       |
| Type of pressure             | relative pressure; vacuum                                   |                 |
| Electrical data              |   |                 |
| Operating voltage            | [V]   | 18...30 DC      |

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|                             |      |                 |
|-----------------------------|------|-----------------|
| Current consumption         | [mA] | < 30            |
| Min. insulation resistance  | [MΩ] | 100; (500 V DC) |
| Protection class            |      | III             |
| Reverse polarity protection |      | yes             |
| 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 |
|------------------------------|---|

### Outputs

|   |      |  |
|---|------|--|
| Total number of outputs                         |      | 2  |
| Output signal                                   |      | switching signal; analogue signal; IO-Link; (configurable) |
| Electrical design                               |      | PNP/NPN; (configurable)                                    |
| Number of digital outputs                       |      | 1  |
| Output function                                 |      | normally open / normally closed; (parameterisable)         |
| Max. voltage drop switching output DC           | [V]  | 2.5  |
| Permanent current rating of switching output DC | [mA] | 100  |
| Switching frequency DC                          | [Hz] | < 170  |
| Number of analogue outputs                      |      | 1  |
| Analogue current output                         | [mA] | 4...20, invertible; (scalable)                             |
| Max. load                                       | [Ω]  | 500  |
| Analogue voltage output                         | [V]  | 0...10 / 1...5, invertible; (scalable)                     |
| Min. load resistance                            | [Ω]  | 2000   |
| Short-circuit protection                        |      | yes  |
| Type of short-circuit protection                |      | pulsed   |
| Overload protection                             |      | yes  |

### Measuring/setting range

|                      |             |                 |
|----------------------|-------------|-----------------|
| Measuring range      | -1...10 bar | -14.5...145 psi |
| Set point SP         | -1...10 bar | -14.5...145 psi |
| Analogue start point | -1...8 bar  | -14.5...116 psi |
| Analogue end point   | 1...10 bar  | 14.5...145 psi  |
| In steps of          | 0.01 bar    | 0.1 psi         |

### Accuracy / deviations

|                           |                 |   |
|---------------------------|-----------------|---|
| Switch point accuracy     | [% of the span] | < ± 0,5; (turn down 1:1)  |
| Repeatability             | [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K: turn down 1:1)                |
| Characteristics deviation | [% of the span] | < ± 0,5; (turn down 1:1; including linearity, hysteresis and repeatability)   |
| Linearity deviation       | [% of the span] | < ± 0.5 % (limit value setting according to DIN EN IEC 62828-1) turn down 1:1 |
| Hysteresis deviation      | [% of the span] | < ± 0,25; (turn down 1:1)   |
| Long-term stability       | [% of the span] | < ± 0,1; (turn down 1:1; per year)  |

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|  |                      |
|--|----------------------|
| Temperature coefficient zero point<br>[% of the span / 10 K] | 0,2; (Turn down 1:1) |
| Temperature coefficient span<br>[% of the span / 10 K]       | 0,2; (Turn down 1:1) |

### Response times

|   |           |
|---|-----------|
| Response time [ms]                      | 6         |
| Damping process value dAP [s]           | 0...4     |
| Damping for the analogue output dAA [s] | 0...99.99 |

### Software / programming

|                           |  |
|---------------------------|--|
| Parameter setting options | display can be rotated and switched off; analogue output selectable and scalable; Teach function; simulation function; diagnostic function |
|---------------------------|--|

### Interfaces

|                                   |  |                   |
|-----------------------------------|--|-------------------|
| Communication interface           | IO-Link  |                   |
| IO-Link revision                  | 1.1.3  |                   |
| SDCI standard                     | IEC 61131-9: 2019-06   |                   |
| SIO mode                          | yes  |                   |
| Required master port type         | A  |                   |
| Process data analogue             | 1  |                   |
| Process data binary               | 2  |                   |
| IO-Link resolution pressure [bar] | 0.001  |                   |
| IO-Link process data (cyclical)   | <b>function</b>  | <b>bit length</b> |
|                                   | pressure   | 16                |
|                                   | device status  | 4                 |
|                                   | SSC1.1   | 1                 |
|                                   | SSC1.2   | 1                 |
| IO-Link functions (acyclical)     | application specific tag; internal temperature; Medium temperature |                   |
| Supported DeviceIDs               | <b>Type of operation</b>   | <b>DeviceID</b>   |
|                                   | default  | 1717              |

### Operating conditions

|                     |             |              |
|---------------------|-------------|--------------|
| Ambient temperature | 0...60 °C   | 32...140 °F  |
| Storage temperature | -25...85 °C | -13...185 °F |
| Protection          | IP 65       |              |

### Tests / approvals

|                              |  |                     |
|------------------------------|--|---------------------|
| EMC                          | DIN EN 61326-1   |                     |
| Shock resistance             | DIN EN 60068-2-27  | 50 g (11 ms)        |
| Vibration resistance         | DIN EN 60068-2-6   | 20 g (10...2000 Hz) |
| UL approval                  | UL approval no.  | J067                |
|                              | File number UL   | E174189             |
| Pressure Equipment Directive | Sound engineering practice; can be used for stable gases fluid group 2 |                     |

### Mechanical data

|                 |   |  |
|-----------------|---|--|
| Weight [g]      | 53.1  |  |
| Housing         | rectangular                                     |  |
| Dimensions [mm] | 37.7 x 30 x 38.6                                |  |
| Materials       | PBT; PC; TPE; NBR; FKM; brass; silicon (coated) |  |

# PQC612



## Pressure sensor for pneumatics

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|                          |   |
|--------------------------|---|
| Materials (wetted parts) | PBT; FKM; brass; silicon (coated)                 |
| Min. pressure cycles     | 50 million  |
| Process connection       | threaded connection 1/8" NPT internal thread (2x) |

### Displays / operating elements

|              |  |                 |
|--------------|--|-----------------|
| Display      | Display 1"                                     | 128 x 96 pixels |
|              | switching status                               | 1 x LED, yellow |
| Display unit | bar; MPa; psi; mmHg; inHg; kgf/cm <sup>2</sup> |                 |

### Accessories

|                |                                 |
|----------------|---------------------------------|
| Items supplied | head cap screw: 2 x (M3 x 8 mm) |
|----------------|---------------------------------|

### Remarks

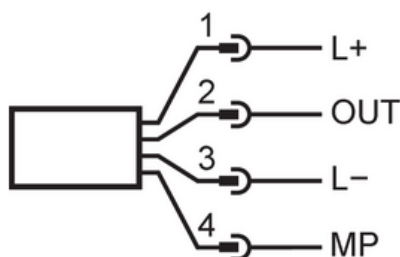
|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection

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



### Connection



### Electrical connection - plug

|   |     |             |
|---|-----|-------------|
| 1 | L+  |             |
| 2 | OUT | AO          |
| 3 | L-  |             |
| 4 | MP  | DO, IO-Link |

AO: analogue output; DO: digital output; MP: multi-function connection

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### Diagrams and graphs

drilling template

