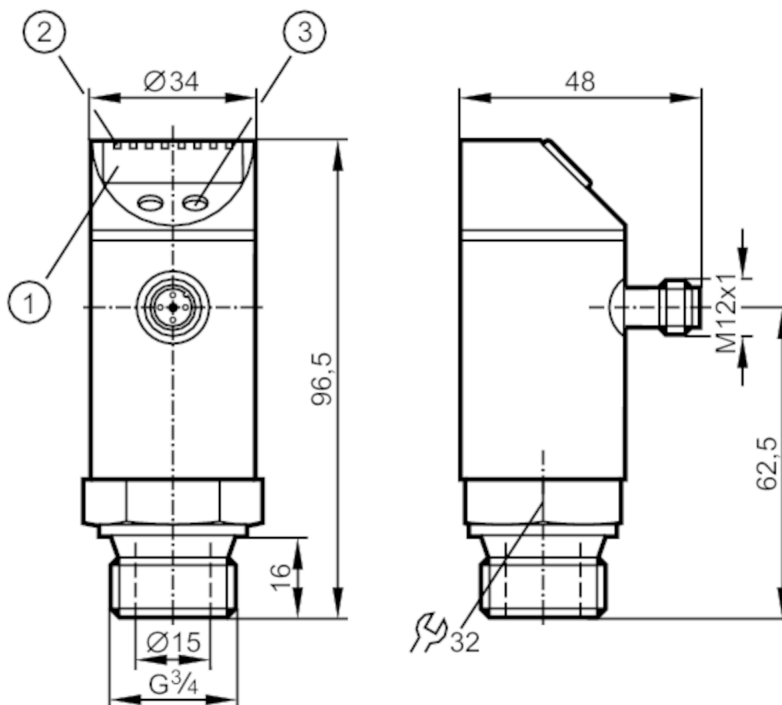


# PY9964



## Pressure sensor with display

PN-010-RER34-LFPKG/US/ IV



- 1 alphanumeric display 4-digit
- 2 LEDs Display unit / switching status
- 3 programming button



### Application

|                          |                             |          |         |
|--------------------------|-----------------------------|----------|---------|
| Application              | for industrial applications |          |         |
| Media                    | liquids and gases           |          |         |
| Medium temperature [°C]  | -15...80                    |          |         |
| Pressure rating          | 75 bar                      | 1087 psi | 7.5 MPa |
| Min. bursting pressure   | 150 bar                     | 2175 psi | 15 MPa  |
| Vacuum resistance [mbar] | -1000                       |          |         |
| Type of pressure         | relative pressure           |          |         |
| No dead space            | yes                         |          |         |

### Electrical data

|                                 |                                               |  |  |
|---------------------------------|-----------------------------------------------|--|--|
| Operating voltage [V]           | 18...36 DC; (according to EN 50178 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: 1; Number of analogue outputs: 1 |
|------------------------------|-------------------------------------------------------------|



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| Outputs                                         |                        |                                                                                                                                  |                 |                    |
|-------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|
| Total number of outputs                         |                        | 2                                                                                                                                |                 |                    |
| Output signal                                   |                        | switching signal; analogue signal; (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]                   | 250                                                                                                                              |                 |                    |
| Switching frequency DC                          | [Hz]                   | < 170                                                                                                                            |                 |                    |
| Number of analogue outputs                      |                        | 1                                                                                                                                |                 |                    |
| Analogue current output                         | [mA]                   | 4...20                                                                                                                           |                 |                    |
| Max. load                                       | [Ω]                    | (Ub - 10 V) / 20 mA                                                                                                              |                 |                    |
| Analogue voltage output                         | [V]                    | 0...10                                                                                                                           |                 |                    |
| Min. load resistance                            | [Ω]                    | 2000                                                                                                                             |                 |                    |
| Short-circuit protection                        |                        | yes                                                                                                                              |                 |                    |
| Type of short-circuit protection                |                        | pulsed                                                                                                                           |                 |                    |
| Measuring/setting range                         |                        |                                                                                                                                  |                 |                    |
| Measuring range                                 |                        | -1...10 bar                                                                                                                      | -14.5...145 psi | -0.1...1 MPa       |
| Set point SP                                    |                        | -0.9...10 bar                                                                                                                    | -12...145 psi   | -0.09...1 MPa      |
| Reset point rP                                  |                        | -0.95...9.95 bar                                                                                                                 | -13...144 psi   | -0.095...0.995 MPa |
| In steps of                                     |                        | 0.05 bar                                                                                                                         | 1 psi           | 0.005 MPa          |
| Accuracy / deviations                           |                        |                                                                                                                                  |                 |                    |
| Switch point accuracy                           |                        | < ± 0,5                                                                                                                          |                 |                    |
|                                                 | [% of the final value] |                                                                                                                                  |                 |                    |
| Repeatability                                   |                        | < ± 0,1; (with temperature fluctuations < 10 K)                                                                                  |                 |                    |
|                                                 | [% of the final value] |                                                                                                                                  |                 |                    |
| Characteristics deviation                       |                        | < ± 0,5                                                                                                                          |                 |                    |
|                                                 | [% of the final value] |                                                                                                                                  |                 |                    |
| Hysteresis deviation                            |                        | < ± 0,25                                                                                                                         |                 |                    |
|                                                 | [% of the final value] |                                                                                                                                  |                 |                    |
| Long-term stability                             |                        | < ± 0,05                                                                                                                         |                 |                    |
|                                                 | [% of the final value] |                                                                                                                                  |                 |                    |
| Response times                                  |                        |                                                                                                                                  |                 |                    |
| Delay time programmable dS, dr                  | [s]                    | 0; 0,2...50                                                                                                                      |                 |                    |
| Max. response time analogue output              | [ms]                   | 3                                                                                                                                |                 |                    |
| Software / programming                          |                        |                                                                                                                                  |                 |                    |
| Parameter setting options                       |                        | hysteresis / window; normally open / normally closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output |                 |                    |

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| Operating conditions                                                                |                                                                                          |                               |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------|
| Ambient temperature                                                                 | [°C]                                                                                     | -15...80                      |
| Storage temperature                                                                 | [°C]                                                                                     | -40...100                     |
| Protection                                                                          |                                                                                          | IP 67                         |
| 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]                                                                                  | 229.64                        |
| Pressure Equipment Directive                                                        | Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request    |                               |
| Mechanical data                                                                     |                                                                                          |                               |
| Weight                                                                              | [g]                                                                                      | 284.2                         |
| Materials                                                                           | stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; PTFE |                               |
| Materials (wetted parts)                                                            | stainless steel (1.4404 / 316L); ceramics (99.9 % Al2O3); FKM                            |                               |
| Min. pressure cycles                                                                | 100 million                                                                              |                               |
| Process connection                                                                  | threaded connection G 3/4 external thread                                                |                               |
| Displays / operating elements                                                       |                                                                                          |                               |
| Display                                                                             | Display unit                                                                             | 3 x LED, green                |
|                                                                                     | switching status                                                                         | LED, yellow                   |
|                                                                                     | function display                                                                         | alphanumeric display, 4-digit |
|                                                                                     | measured values                                                                          | alphanumeric display, 4-digit |
| Remarks                                                                             |                                                                                          |                               |
| Pack quantity                                                                       | 1 pcs.                                                                                   |                               |
| Electrical connection                                                               |                                                                                          |                               |
| Connector: 1 x M12; Contacts: gold-plated                                           |                                                                                          |                               |
|  |                                                                                          |                               |

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### Connection



OUT1                    switching output

OUT2                    analogue output

colours to DIN EN 60947-5-2

Core colours :

BK =                    black

BN =                    brown

BU =                    blue

WH =                    white