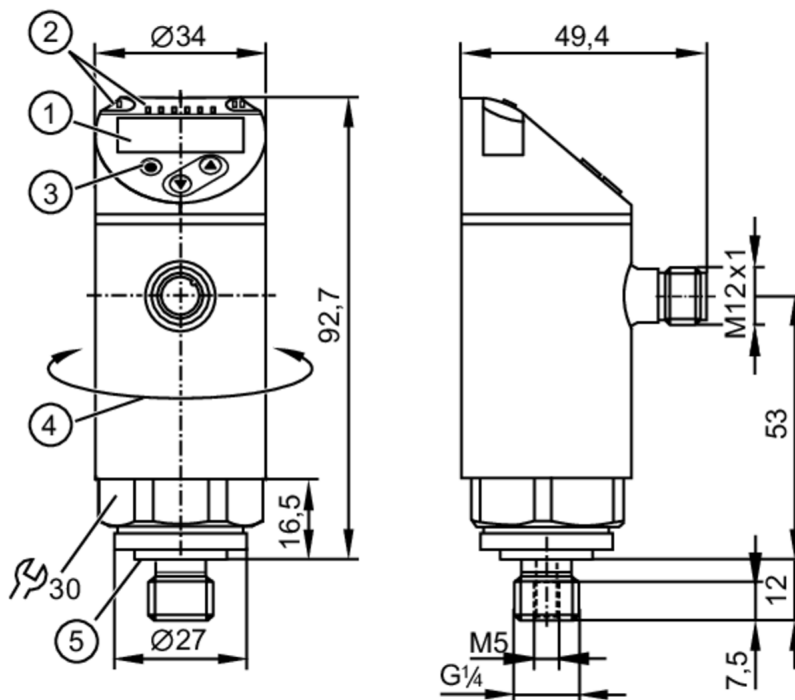




## Pressure sensor with display

PN-025-REG14-QFRKG/US/ IV



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / switching status
- 3 programming button
- 4 upper part of the housing can be rotated 345°
- 5 Sealing



### Product characteristics

|                              |                                                              |             |             |
|------------------------------|--------------------------------------------------------------|-------------|-------------|
| Number of inputs and outputs | Number of digital outputs: 2                                 |             |             |
| Measuring range              | 0...25 bar                                                   | 0...362 psi | 0...2.5 MPa |
| Process connection           | threaded connection G 1/4 external thread internal thread:M5 |             |             |

### Application

|                         |                                            |          |        |
|-------------------------|--------------------------------------------|----------|--------|
| Special feature         | Gold-plated contacts                       |          |        |
| Measuring element       | ceramic-capacitive pressure measuring cell |          |        |
| Application             | for industrial applications                |          |        |
| Media                   | liquids and gases                          |          |        |
| Medium temperature [°C] | -25...80                                   |          |        |
| Min. bursting pressure  | 350 bar                                    | 5075 psi | 35 MPa |
| Pressure rating         | 150 bar                                    | 2175 psi | 15 MPa |
| Type of pressure        | relative pressure                          |          |        |

### Electrical data

|                                 |                            |  |  |
|---------------------------------|----------------------------|--|--|
| Operating voltage [V]           | 18...30 DC; (to SELV/PELV) |  |  |
| Current consumption [mA]        | < 35                       |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC)            |  |  |
| Protection class                | III                        |  |  |
| Reverse polarity protection     | yes                        |  |  |
| Power-on delay time [s]         | < 0.3                      |  |  |



## Pressure sensor with display

PN-025-REG14-QFRKG/US/ IV

|                                                           |                                                                                                                          |             |                 |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|
| 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; IO-Link; (configurable)                                                                                |             |                 |
| Electrical design                                         | PNP/NPN                                                                                                                  |             |                 |
| Number of digital outputs                                 | 2                                                                                                                        |             |                 |
| Output function                                           | normally open / normally closed; (parameterisable)                                                                       |             |                 |
| Max. voltage drop switching output DC [V]                 | 2.5                                                                                                                      |             |                 |
| Permanent current rating of switching output DC [mA]      | 150; (200 (...60 °C) 250 (...40 °C))                                                                                     |             |                 |
| Switching frequency DC [Hz]                               | < 170                                                                                                                    |             |                 |
| Short-circuit protection                                  | yes                                                                                                                      |             |                 |
| Type of short-circuit protection                          | pulsed                                                                                                                   |             |                 |
| Overload protection                                       | yes                                                                                                                      |             |                 |
| Measuring/setting range                                   |                                                                                                                          |             |                 |
| Measuring range                                           | 0...25 bar                                                                                                               | 0...362 psi | 0...2.5 MPa     |
| Set point SP                                              | 0.2...25 bar                                                                                                             | 4...362 psi | 0.02...2.5 MPa  |
| Reset point rP                                            | 0.1...24.9 bar                                                                                                           | 2...360 psi | 0.01...2.49 MPa |
| In steps of                                               | 0.1 bar                                                                                                                  | 2 psi       | 0.01 MPa        |
| 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...80 °C)                                                                                                    |             |                 |
| Temperature coefficient span [% of the span / 10 K]       | < ± 0,2; (-0...80 °C)                                                                                                    |             |                 |
| Response times                                            |                                                                                                                          |             |                 |
| Response time [ms]                                        | < 3                                                                                                                      |             |                 |
| Delay time programmable dS, dr [s]                        | 0...50                                                                                                                   |             |                 |
| Software / programming                                    |                                                                                                                          |             |                 |
| Parameter setting options                                 | hysteresis / window; normally open / normally closed; switching logic; switch-on/switch-off delay; Damping; Display unit |             |                 |



## Pressure sensor with display

PN-025-REG14-QFRKG/US/ IV

| Interfaces                    |                                                                                            |                                         |
|-------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------|
| Communication interface       | IO-Link                                                                                    |                                         |
| Transmission type             | COM2 (38,4 kBaud)                                                                          |                                         |
| IO-Link revision              | 1.1                                                                                        |                                         |
| SDCI standard                 | IEC 61131-9                                                                                |                                         |
| Profiles                      | Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis               |                                         |
| 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                                                                                    | 402                                     |
| Operating conditions          |                                                                                            |                                         |
| Ambient temperature [°C]      | -25...80                                                                                   |                                         |
| Storage temperature [°C]      | -40...100                                                                                  |                                         |
| Protection                    | IP 65; IP 67                                                                               |                                         |
| 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]                  | 260                                                                                        |                                         |
| UL approval                   | UL Approval no.                                                                            | J001                                    |
| Pressure Equipment Directive  | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request      |                                         |
| Mechanical data               |                                                                                            |                                         |
| Weight [g]                    | 260.5                                                                                      |                                         |
| Materials                     | stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC                                 |                                         |
| Materials (wetted parts)      | stainless steel (1.4404 / 316L); ceramics; FKM                                             |                                         |
| Min. pressure cycles          | 100 million                                                                                |                                         |
| Tightening torque [Nm]        | 25...35; (recommended tightening torque; depends on lubrication, seal and pressure rating) |                                         |
| Process connection            | threaded connection G 1/4 external thread internal thread:M5                               |                                         |
| Restrictor element integrated | no (can be retrofitted)                                                                    |                                         |
| Displays / operating elements |                                                                                            |                                         |
| Display                       | Display unit                                                                               | 3 x LED, green (bar, psi, MPa)          |
|                               | switching status                                                                           | 2 x LED, yellow                         |
|                               | measured values                                                                            | alphanumeric display, red/green 4-digit |
| Remarks                       |                                                                                            |                                         |
| Pack quantity                 | 1 pcs.                                                                                     |                                         |

# PN7593



## Pressure sensor with display

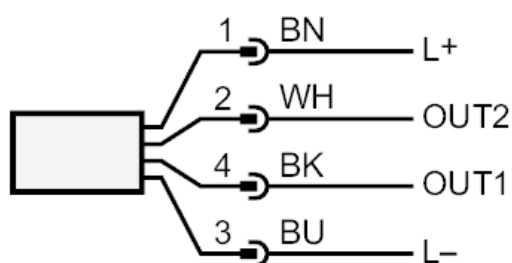
PN-025-REG14-QFRKG/US/ IV

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



### Connection



|      |                                                 |
|------|-------------------------------------------------|
| OUT1 | switching output<br>IO-Link                     |
| OUT2 | switching output<br>colours to DIN EN 60947-5-2 |
|      | Core colours :                                  |
| BK = | black                                           |
| BN = | brown                                           |
| BU = | blue                                            |
| WH = | white                                           |