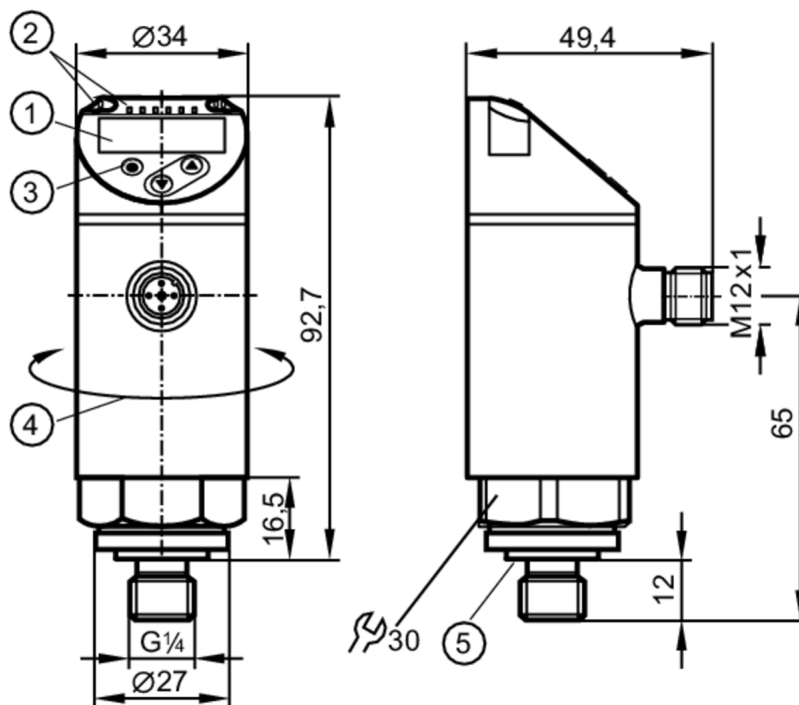




## Pressure sensor with display

PN-100-SEG14-MFRKG/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



### Application

|                            |                                                    |          |        |
|----------------------------|----------------------------------------------------|----------|--------|
| Measuring element          | ceramic-capacitive pressure measuring cell         |          |        |
| Application                | for industrial applications                        |          |        |
| Media                      | Liquids                                            |          |        |
| Conditionally suitable for | use in gases at pressures > 25 bar only on request |          |        |
| Medium temperature [°C]    | -25...80                                           |          |        |
| Pressure rating            | 300 bar                                            | 4350 psi | 30 MPa |
| Min. bursting pressure     | 650 bar                                            | 9400 psi | 65 MPa |
| Vacuum resistance [mbar]   | -1000                                              |          |        |
| Type of pressure           | relative pressure                                  |          |        |

### Electrical data

|                                 |                                               |  |  |
|---------------------------------|-----------------------------------------------|--|--|
| Operating voltage [V]           | 18...30 DC; (according to EN 50178 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                                           |  |  |
| Integrated watchdog             | yes                                           |  |  |

### Inputs / outputs

|                              |                                                             |
|------------------------------|-------------------------------------------------------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |
|------------------------------|-------------------------------------------------------------|



## Pressure sensor with display

PN-100-SEG14-MFRKG/US/ /V

| 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]                 | 2.5                                                                                       |               |                 |
| Permanent current rating of switching output DC [mA]      | 150; (200 (...60 °C) 250 (...40 °C))                                                      |               |                 |
| Switching frequency DC [Hz]                               | < 170                                                                                     |               |                 |
| Number of analogue outputs                                | 1                                                                                         |               |                 |
| Analogue current output [mA]                              | 4...20                                                                                    |               |                 |
| Max. load [Ω]                                             | 500                                                                                       |               |                 |
| Analogue voltage output [V]                               | 0...10                                                                                    |               |                 |
| Min. load resistance [Ω]                                  | 2000                                                                                      |               |                 |
| Short-circuit protection                                  | yes                                                                                       |               |                 |
| Type of short-circuit protection                          | pulsed                                                                                    |               |                 |
| Overload protection                                       | yes                                                                                       |               |                 |
| Measuring/setting range                                   |                                                                                           |               |                 |
| Measuring range                                           | 0...100 bar                                                                               | 0...1450 psi  | 0...10 MPa      |
| Set point SP                                              | 1...100 bar                                                                               | 10...1450 psi | 0.1...10 MPa    |
| Reset point rP                                            | 0.5...99.5 bar                                                                            | 5...1445 psi  | 0.05...9.95 MPa |
| In steps of                                               | 0.5 bar                                                                                   | 5 psi         | 0.05 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; (-25...80 °C)                                                                        |               |                 |
| Temperature coefficient span [% of the span / 10 K]       | 0,2; (-25...80 °C)                                                                        |               |                 |



## Pressure sensor with display

PN-100-SEG14-MFRKG/US/ /V

| Response times                       |                                                                                                                                  |                     |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Response time                        | [ms]                                                                                                                             | < 3                 |
| Delay time programmable dS, dr       | [s]                                                                                                                              | 0...50              |
| Damping for the switching output dAP | [s]                                                                                                                              | 0...4               |
| Damping for the analogue output dAA  | [s]                                                                                                                              | 0...4               |
| 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 |                     |
| Interfaces                           |                                                                                                                                  |                     |
| Communication interface              | IO-Link                                                                                                                          |                     |
| Transmission type                    | COM2                                                                                                                             |                     |
| IO-Link revision                     | 1.1                                                                                                                              |                     |
| SDCI standard                        | IEC 61131-9                                                                                                                      |                     |
| IO-Link device ID                    | 429 d / 00 01 ad h                                                                                                               |                     |
| 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                  | 1                                                                                                                                |                     |
| Min. process cycle time              | [ms]                                                                                                                             | 2.3                 |
| 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]                                                                                                                          | 181                 |
| UL approval                          | UL Approval no.                                                                                                                  | J005                |
| Pressure Equipment Directive         | Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request                                            |                     |

# PN3592



## Pressure sensor with display

PN-100-SEG14-MFRKG/US/ /V

| Mechanical data                                                                     |                                                                                  |                                                                                            |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Weight                                                                              | [g]                                                                              | 296.6                                                                                      |
| Materials                                                                           | stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC                       |                                                                                            |
| Materials (wetted parts)                                                            | stainless steel (1.4404 / 316L); Al2O3 (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 (DIN EN ISO 1179-2); internal threadM5 |                                                                                            |
| Process connection sealing                                                          | FKM (to DIN 3869)                                                                |                                                                                            |
| Restrictor element integrated                                                       | no (can be retrofitted)                                                          |                                                                                            |
| Displays / operating elements                                                       |                                                                                  |                                                                                            |
| Display                                                                             | Display unit                                                                     | 3 x LED, green (bar, psi, MPa)                                                             |
|                                                                                     | switching status                                                                 | 1 x LED, yellow                                                                            |
|                                                                                     | measured values                                                                  | alphanumeric display, red/green 4-digit                                                    |
| Remarks                                                                             |                                                                                  |                                                                                            |
| Pack quantity                                                                       | 1 pcs.                                                                           |                                                                                            |
| Electrical connection                                                               |                                                                                  |                                                                                            |
| Connector: 1 x M12; Contacts: gold-plated                                           |                                                                                  |                                                                                            |
|  |                                                                                  |                                                                                            |

# PN3592



## Pressure sensor with display

PN-100-SEG14-MFRKG/US/ /V

### Connection



OUT1                switching output

OUT2                analogue output

Core colours :

BK =                black

BN =                brown

BU =                blue

WH =                white