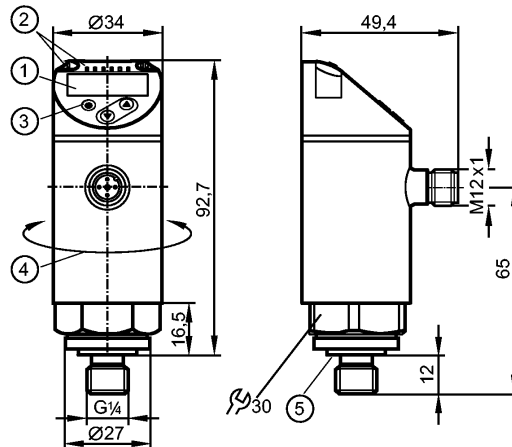


PN7570

PN-400-SEG14-QFRKG/US/ IV

Pressure sensors



- 1: 4-digit alphanumeric display / alternating indication of red and green
- 2: LEDs (display unit / switching status)
- 3: Programming button
- 4: Upper part of the housing can be rotated by 345°
- 5: sealing FKM / DIN 3869

Made in Germany



Product characteristics

| |
|--|
| Electronic pressure monitor |
| M12 connector |
| Function programmable |
| Measuring element: metal thin film cell |
| Process connection: G 1/4 A / M5 I |
| 2 outputs OUT1 = switching output OUT2 = switching output |
| 4-digit alphanumeric display / alternating indication of red and green |
| Measuring range: 0...400 bar / 0...5800 psi / 0...40 MPa |

Application

| | | | |
|-------------------------|--|-----------|---------|
| Application | Type of pressure: relative pressure liquids and gases of the fluid group 2 according to Article 9 of the Pressure Equipment Directive (PED) | | |
| Pressure rating | 800 bar | 11580 psi | 80 MPa |
| Bursting pressure min. | 1700 bar | 24650 psi | 170 MPa |
| Medium temperature [°C] | -25...80 | | |

Electrical data

| | |
|-----------------------------|------------------|
| Electrical design | DC PNP/NPN |
| Operating voltage [V] | 18...30 DC 1) |
| Current consumption [mA] | < 35 |
| Insulation resistance [MΩ] | > 100 (500 V DC) |
| Protection class | III |
| Reverse polarity protection | yes |

Outputs

| | |
|-----------------|---|
| Output | 2 outputs OUT1 = switching output OUT2 = switching output |
| Output function | 2 x normally open / closed programmable |

PN7570

PN-400-SEG14-QFRKG/US/ IV

Pressure sensors

| | | |
|--------------------------|------|---|
| Current rating | [mA] | 150 (...80°C) / 200 (...60°C) / 250 (...40°C) |
| Voltage drop | [V] | < 2.5 |
| Short-circuit protection | | pulsed |
| Overload protection | | yes |
| Switching frequency | [Hz] | ≤ 170 |

Measuring / setting range

| | | | |
|-----------------|-------------|---------------|----------------|
| Measuring range | 0...400 bar | 0...5800 psi | 0...40 MPa |
| Setting range | | | |
| Set point, SP | 4...400 bar | 40...5800 psi | 0.4...40 MPa |
| Reset point, rP | 2...398 bar | 20...5780 psi | 0.2...39.8 MPa |
| in steps of | 2 bar | 20 psi | 0.2 MPa |

Accuracy / deviations

| | | | |
|--|--|--------------------------------|--|
| Accuracy / deviations (in % of the span) | | | |
| Switch point accuracy | | < ± 0.5 | |
| Characteristics deviation *) | | < ± 0.25 (BFSL) / < ± 0.5 (LS) | |
| Hysteresis | | < ± 0.25 | |
| Repeatability **) | | < ± 0.1 | |
| Long-term stability ***) | | < ± 0.05 | |
| Temperature coefficients (TEMPCO) in the temperature range -25...80° C (in % of the span per 10 K) | | | |
| Greatest TEMPCO of the zero point | | 0.2 | |
| Greatest TEMPCO of the span | | 0.2 | |

Reaction times

| | | |
|-------------------------------------|------|--------|
| Power-on delay time | [s] | 0.3 |
| Min. response time switching output | [ms] | < 3 |
| Delay time programmable dS, dr | [s] | 0...50 |
| Integrated watchdog | | yes |

Software / programming

| | |
|---------------------|--|
| Programming options | hysteresis / window function; NO / NC; output polarity; on delay, off delay; damping; display unit |
|---------------------|--|

Interfaces

| | |
|---------------------------|--|
| IO-Link Device | |
| Transfer type | COM2 (38.4 kBaud) |
| IO-Link revision | 1.1 |
| SDCI standard | IEC 61131-9 |
| IO-Link Device ID | 399 d / 00 018f 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 | 2 |
| Min. process cycle time | [ms] 2.3 |

Environment

| | | |
|---------------------|------|-----------|
| Ambient temperature | [°C] | -25...80 |
| Storage temperature | [°C] | -40...100 |

PN7570

PN-400-SEG14-QFRKG/US/ IV

Pressure sensors

| | |
|------------|---------------|
| Protection | IP 65 / IP 67 |
|------------|---------------|

Tests / approvals

| | |
|------------------------------|---|
| Pressure equipment directive | Article 3, section 3 - sound engineering practice |
| 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] | 201.44 |
| UL approval number | J003 |

Mechanical data

| | |
|--------------------------|---|
| Process connection | G ¼ A / M5 I |
| Materials (wetted parts) | 1.4542 |
| Housing materials | 1.4542; 1.4404; PBT/PC-GF 30; PBT-GF 20; PC |
| Switching cycles min. | 100 million |
| Tightening torque [Nm] | 25...35 (recommended tightening torque²) |
| Weight [kg] | 0.257 |

Displays / operating elements

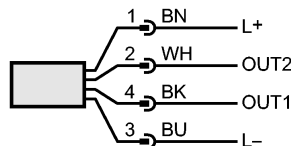
| | |
|---------|--|
| Display | Display unit 3 x LED green (bar, psi, MPa) Switching status 2 x LED yellow 4-digit alphanumeric display / alternating indication Measured values of red and green |
|---------|--|

Electrical connection

| | |
|------------|-------------------------------------|
| Connection | M12 connector; Gold-plated contacts |
|------------|-------------------------------------|

Wiring

- Core colours
- BK black
- BN brown
- BU blue
- WH white



OUT1: switching output or IO-Link
 OUT2: switching output
 Colours to DIN EN 60947-5-6

Remarks

| | |
|---------|--|
| Remarks | 1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in% of the span / 6 months 2) Depends on lubrication, seal and pressure rating |
|---------|--|

| | |
|-----------------------|---|
| Pack quantity [piece] | 1 |
|-----------------------|---|