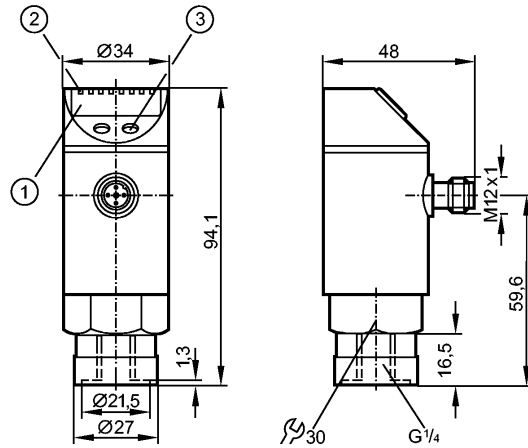


PN5000

PN-400-SBR14-HFPKG/US/ IV

Pressure sensors

New generation available: PN7070



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button



Product characteristics

| |
|--|
| Electronic pressure monitor |
| Quick disconnect |
| Function programmable |
| Process connection: G 1/4 I |
| 1 switching output |
| 4-digit alphanumeric display |
| Measuring range: 0...400 bar / 0...5800 psi / 0...40 MPa |

Application

| | | | |
|-------------------------|---|-----------|---------|
| Application | Type of pressure: relative pressure Liquids and gases Use in gases at pressures > 25 bar only after contacting the manufacturer ifm | | |
| Pressure rating | 600 bar | 8700 psi | 60 MPa |
| Bursting pressure min. | 1000 bar | 14500 psi | 100 MPa |
| Medium temperature [°C] | -25...80 | | |

Electrical data

| | |
|-----------------------------|------------------|
| Electrical design | DC PNP |
| Operating voltage [V] | 18...36 DC 1) |
| Current consumption [mA] | < 50 |
| Insulation resistance [MΩ] | > 100 (500 V DC) |
| Protection class | III |
| Reverse polarity protection | yes |
| Overvoltage protection [V] | up to 40 V |

Outputs

| | |
|--------------------------|-------------------------------------|
| Output | 1 switching output |
| Output function | normally open / closed programmable |
| Current rating [mA] | 250 |
| Voltage drop [V] | < 2 |
| Short-circuit protection | yes (non-latching) |

PN5000

PN-400-SBR14-HFPKG/US/ IV

Pressure sensors

| | | |
|---------------------|------|-------|
| 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 | 60...5790 psi | 0.4...40.0 MPa |
| Reset point, rP | 2...398 bar | 30...5760 psi | 0.2...39.8 MPa |
| in steps of | 2 bar | 30 psi | 0.2 MPa |
| Factory setting | SP1 = 100 bar; rP1 = 92 bar | | |

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 0...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 |
| Delay time programmable dS, dr | [s] | 0; 0.2...50 |
| Integrated watchdog | | yes |

Software / programming

| | |
|---------------------|--|
| Programming options | hysteresis / window function; N.O. / N.C; on delay, off delay; damping; display unit |
|---------------------|--|

Environment

| | | |
|---------------------|------|---|
| Ambient temperature | [°C] | -20...80 (UB < 32 V) / -20...60 (UB > 32 V) |
| 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] | 231 |

Mechanical data

| | | |
|--------------------------|---|-------------|
| Process connection | | G ¼ I |
| Materials (wetted parts) | stainless steel (303S22); ceramics; FPM (Viton) | |
| Housing materials | stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton) | |
| Switching cycles min. | | 100 million |
| Weight | [kg] | 0.271 |

Displays / operating elements

PN5000

PN-400-SBR14-HFPKG/US/ /V

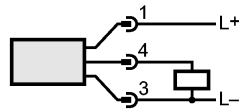
Pressure sensors

| | |
|---------|--|
| Display | Display unit 3 x LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display |
|---------|--|

Electrical connection

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

Wiring



Remarks

| | |
|---------|--|
| Remarks | 1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in % of value of measuring range / 6 months |
|---------|--|

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

New generation available: PN7070