

Pressure sensors

PN5006

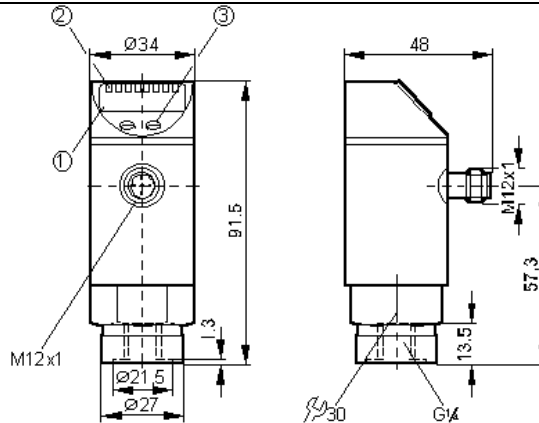
Electronic pressure monitor
PN50
G 1/4

Function programmable

1 switching output

4-digit alphanumeric display

Measuring range
0...2.5 bar
0...36.3 PSI
0...250 kPa



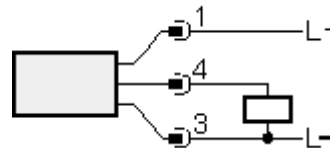
1: 4-digit alphanumeric display, 2: LED's, 3: Programming button

| | | | |
|---|--|----------------|-------------|
| Application | Type of pressure: relative pressure | | |
| | Liquids and gases | | |
| Electrical design | DC PNP | | |
| Output | normally open / closed programmable | | |
| Operating voltage [V] | 18...36 DC 1) | | |
| Current rating [mA] | 250 | | |
| Short-circuit protection | • | | |
| Reverse polarity protection / Overload protection | up to 40 V | | |
| Integrated Watchdog | • | | |
| Voltage drop [V] | < 2 | | |
| Current consumption [mA] | < 50 | | |
| Permissible overl. pressure | 20 bar | 290 PSI | 2000 kPa |
| Bursting pressure | 50 bar | 725 PSI | 5000 kPa |
| Setting range | | | |
| Switch-on point, SP | 0.02...2.50 bar | 0.4...36.2 PSI | 2...250 kPa |
| Switch-off point, rP | 0.01...2.49 bar | 0.2...36.0 PSI | 1...249 kPa |
| in steps of | 0.01 bar | 0.2 PSI | 1 kPa |
| Programming options | hysteresis / window function; N.O. / N.C; on delay, off delay; damping; display unit | | |
| Accuracy / deviations (in% of the span) | | | |
| Accuracy of switch point | | | |
| Characteristics deviation *) | | | |
| Hysteresis | | < ± 0.5 | |
| Repeatability **) | | < ± 0.5 | |
| Long-time stability ***) | | < ± 0.25 | |
| Temperature coefficients (TEMPCO) in the temperature range -20...80 °C (in% of the span per 10 K) | | < ± 0.1 | |
| - greatest TEMPCO of the zero point | | < ± 0.05 | |
| - greatest TEMPCO of the span | | 0.2 | |
| Power-on delay time [s] | | 0.2 | |
| Switching frequency [Hz] | | 0.3 | |
| Switching frequency [Hz] | | 170...1 | |
| Delay time programmable dS, dr [s] | | 0; 0.2...50 | |

PN5006

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|-------------------------------|--|
| Display unit | bar, PSI, kPa |
| Operating temperature [°C] | -20...80 (UB < 30V) / -20...60 (UB > 30V) |
| Medium temperature [°C] | -25...80 |
| Storage temperature [°C] | -40...100 |
| Protection | IP 65 (IEC 60529) / (UL50), III (EN 50178) |
| Insulation resistance [MΩ] | > 100 (500 V DC) |
| Shock resistance [g] | 50 (DIN / IEC 68-2-27, 11ms) |
| Vibration resistance [g] | 20 (DIN / IEC 68-2-6, 10 - 2000 Hz) |
| Switching cycles min. | 100 million |
| 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 |
| Housing material | stainless steel (304S15) stainless steel (316S12) PC (Macrolon) Pocan PEI FPM (Viton) EPDM/X (Santoprene) PTFE |
| Materials (wetted parts) | stainless steel (303S22); ceramics; FPM (Viton) |
| Function display | yellow |
| Switching status LED | 3 x green (display unit) |
| Operation LED | 4-digit alphanumeric display |
| System pressure, function LED | |
| Connection | M12 connector, gold-plated contacts |

Wiring



Remarks

1) to EN50178, SELV, PELV;
referring to UL: "limited voltage" with overcurrent protection in accordance with UL508
*) linearity, incl. hysteresis and repeatability;
(limit value setting to DIN 16086)
**) with temperature fluctuations < 10 K
***) in % of value of measuring range / 6 months