

## PN5002

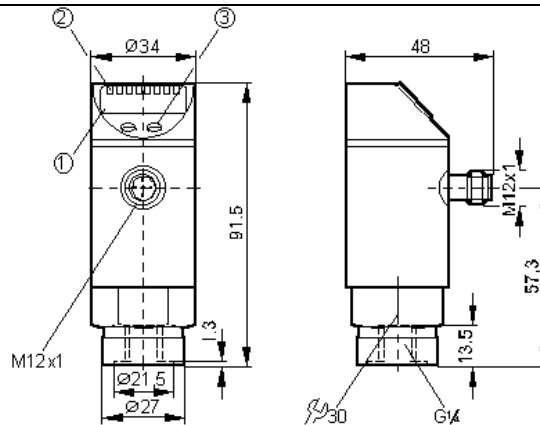
Electronic pressure monitor  
PN50  
G $\frac{1}{4}$  I

Function programmable

1 switching output

4-digit alphanumeric display

Measuring range  
0...100 bar  
0...1450 PSI  
0...10 MPa



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

### Application

Type of pressure: relative pressure

Liquids and gases

For gaseous media the application is limited to max. 25 bar

### Electrical design

DC PNP

### Output

normally open / closed programmable

Operating voltage [V]

18...36 DC <sup>1)</sup>

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

300 bar

4350 PSI

30 MPa

Bursting pressure

650 bar

9400 PSI

65 MPa

### Setting range

Switch-on point, SP

1.0...100.0 bar

20...1450 PSI

0.10...10.00 MPa

Switch-off point, rP

0.5...99.5 bar

10...1440 PSI

0.05...9.95 MPa

in steps of

0.5 bar

10 PSI

0.05 MPa

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

<  $\pm$  0.5

Repeatability \*\*)

<  $\pm$  0.5

Long-time stability \*\*\*)

<  $\pm$  0.25

Temperature coefficients

<  $\pm$  0.1

(TEMPCO) in the temperature  
range -20...80 °C (in% of the  
span per 10 K)

<  $\pm$  0.05

- greatest TEMPCO of the zero  
point

0.2

- greatest TEMPCO of the span

0.2

Power-on delay time [s]

0.3

Switching frequency [Hz]

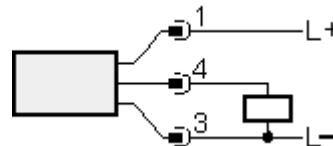
170...1

Delay time programmable dS,  
dr [s]

0; 0.2...50

# PN5002

|                               |                                                                                                                                                                          |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display unit                  | bar, PSI, MPa                                                                                                                                                            |
| Operating temperature [°C]    | -20...80 (UB < 30V) / -20...60 (UB > 30V)                                                                                                                                |
| Medium temperature [°C]       | -25...80                                                                                                                                                                 |
| Storage temperature [°C]      | -40...100                                                                                                                                                                |
| Protection                    | IP 67 (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<br>EN 61000-4-3 HF radiated: 10 V/m<br>EN 61000-4-4 Burst: 2 kV<br>EN 61000-4-5 Surge: 0.5 / 1 kV<br>EN 61000-4-6 HF conducted: 10 V |
| Housing material              | stainless steel (304S15)<br>stainless steel (316S12)<br>PC (Macrolon)<br>Pocan<br>PEI<br>FPM (Viton)<br>EPDM/X (Santoprene)                                              |
| 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 | <sup>1)</sup> to EN50178, SELV, PELV;<br>referring to UL: "limited voltage" with overcurrent protection in accordance with UL508<br><sup>*</sup> ) linearity, incl. hysteresis and repeatability;<br>(limit value setting to DIN 16086)<br><sup>**</sup> ) with temperature fluctuations < 10 K<br><sup>***</sup> ) in % of value of measuring range / 6 months |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|