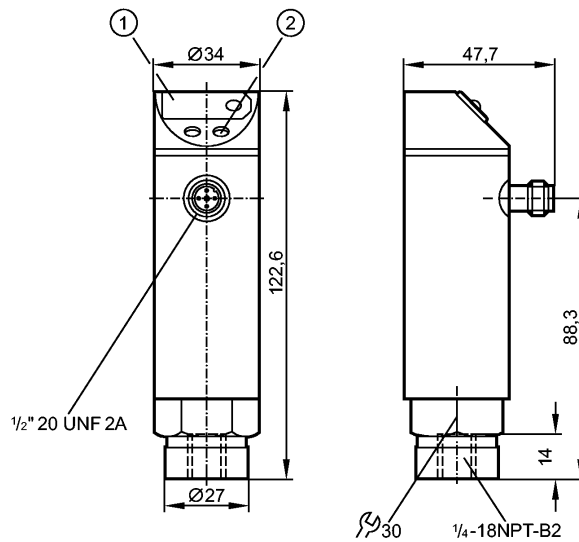


PN4220

PN-400-SBN14-HFBOW/LSI /V

Pressure sensors



- 1: 7-segment LED display
- 2: Programming button



Product characteristics

Electronic pressure monitor

Quick disconnect

Function programmable

Process connection: $\frac{1}{4}''$ NPT

Switching output

7-segment LED 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 | AC / triac | | |
| Operating voltage [V] | 85...265 AC | | |
| Nominal voltage [V] | 90...250 AC (45...65 Hz) | | |
| Voltage tolerance [%] | -5 / +10 | | |
| Current consumption [mA] | < 10 | | |
| Insulation resistance [MΩ] | > 100 (500 V DC) | | |
| Protection class | II | | |
| Reverse polarity protection | no | | |

Outputs

| | | | |
|---------------------|--|--|--|
| Output | Switching output | | |
| Output function | normally open / closed programmable | | |
| Current rating [mA] | 250; (...70 °C); 1000 (...60 °C); 1500 (...45 °C); 2500 (...20 °C) | | |
| Voltage drop [V] | < 2 | | |

PN4220

PN-400-SBN14-HFBOW/LS/ IV

Pressure sensors

| | |
|--------------------------|-------|
| Short-circuit proof | no |
| Overload protection | no |
| Switching frequency [Hz] | ≤ 160 |

| Measuring / setting range | | | |
|---------------------------|-------------|---------------|-----------------|
| Measuring range | 0...400 bar | 0...5800 psi | 0...40 MPa |
| Setting range | | | |
| Set point, SP | 4...400 bar | 60...5800 psi | 0.4...40.0 MPa |
| Reset point, rP | 2...398 bar | 30...5770 psi | 0.2 ...39.8 MPa |
| in steps of | 1 bar | 10 psi | 0.1 MPa |

| Accuracy / deviations | |
|--|---------|
| Accuracy / deviations (in % of the span) | |
| Switch point accuracy | < ± 1.0 |
| Linearity | < ± 0.5 |
| Hysteresis | < ± 0.1 |
| Repeatability **) | < ± 0.1 |
| Long-term stability ***) | < ± 0.1 |
| 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 | < ± 0.3 |

| Reaction times | |
|--|------------------------|
| Power-on delay time [s] | 0.2 |
| Delay time programmable dS, dr [s] | 0, 0.2,...10, 11,...50 |
| Damping for the switching output (dAP) [s] | 0...4 |
| Integrated watchdog | yes |

| Software / programming | |
|--------------------------------|---|
| Programming options | hysteresis / window function; N.O. / N.C; on delay, off delay; damping; calibration of displayed values; display can be rotated / deactivated; display unit |
| Adjustment of the switch point | Programming button |

| Environment | |
|--------------------------|-----------|
| Ambient temperature [°C] | -25...80 |
| 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 61000-4-6 HF conducted: | 10 V |
| | Shock resistance | DIN IEC 68-2-27: |
| Vibration resistance | DIN IEC 68-2-6: | 20 g (10...2000 Hz) |
| MTTF [Years] | | 224.58 |

| Mechanical data | |
|--------------------------|---|
| Process connection | ¼" NPT |
| Materials (wetted parts) | stainless steel (303S22); ceramics; FPM (Viton) |
| Housing materials | stainless steel (304S15); PC (Makrolon); PBT (Pocan); PA; FPM (Viton) |
| Switching cycles min. | 100 million |

PN4220

PN-400-SBN14-HFBOW/LS/ /V

Pressure sensors

| | | |
|--------|------|-------|
| Weight | [kg] | 0.389 |
|--------|------|-------|

Displays / operating elements

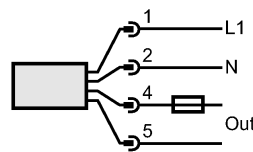
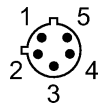
| | |
|---------|---|
| Display | Switching status LED red Function display 7-segment LED display Measured values 7-segment LED display |
|---------|---|

Electrical connection

| | |
|------------|--------------------|
| Connection | 1/2" UNF-Connector |
|------------|--------------------|

Wiring

Programming of the output function:
 Hno = hysteresis / N.O.
 Hnc = hysteresis / N.C.
 Fno = window function / N.O.
 Fnc = window function / N.C.



Note: miniature fuse to IEC60127-2 sheet 1, ≤ 5 A (fast acting)

Remarks

| | |
|---------|---|
| Remarks | n.c. = not connected **) with temperature fluctuations < 10 K ***) in % of the span per year Recommendation: check the unit for reliable function after a short circuit. |
|---------|---|

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