# PN7222

#### Pressure sensor with display



PN-100PSBN14-QFP

Pressure rating

Type of pressure

Electrical data Operating voltage

Protection class

Current consumption

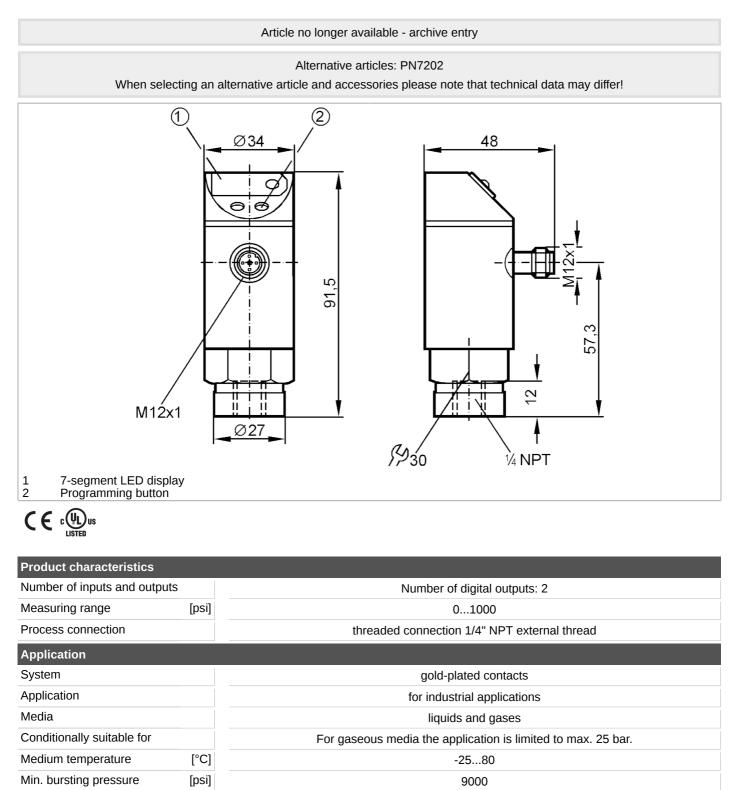
Min. insulation resistance

[psi]

[V]

[mA]

[MΩ]



4500

relative pressure

18...30 DC

< 60

100; (500 V DC)

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### Pressure sensor with display

PN-100PSBN14-QFP



| Reverse polarity protection                                     |        |  |          |          |            | yes        |            |         |          |            |        |
|---|--------|--|----------|----------|------------|------------|------------|---------|----------|------------|--------|
| Power-on delay time   | [S]    | 0.2  |          |          |            |            |            |         |          |            |        |
| Integrated watchdog   |        | yes  |          |          |            |            |            |         |          |            |        |
| Inputs / outputs  |        |  |          |          |            |            |            |         |          |            |        |
| Number of inputs and outputs                                    |        |  |          |          | Number     | of digital | outputs:   | 2       |          |            |        |
| Outputs   |        |  |          |          |            |            |            |         |          |            |        |
| Total number of outputs   |        | 2  |          |          |            |            |            |         |          |            |        |
| Output signal   |        | switching signal   |          |          |            |            |            |         |          |            |        |
| Electrical design   |        | PNP  |          |          |            |            |            |         |          |            |        |
| Number of digital outputs                                       |        | 2  |          |          |            |            |            |         |          |            |        |
| Output function   |        | normally open / closed; (configurable)   |          |          |            |            |            |         |          |            |        |
| Max. voltage drop switching output DC                           | [V]    | 2  |          |          |            |            |            |         |          |            |        |
| Permanent current rating of switching output DC                 | [mA]   | 250  |          |          |            |            |            |         |          |            |        |
| Short-circuit protection  |        | yes  |          |          |            |            |            |         |          |            |        |
| Type of short-circuit<br>protection                             |        | yes (non-latching)   |          |          |            |            |            |         |          |            |        |
| Overload protection   |        | yes  |          |          |            |            |            |         |          |            |        |
| Measuring/setting range   |        |  |          |          |            |            |            |         |          |            |        |
| Measuring range   | [psi]  | 01000  |          |          |            |            |            |         |          |            |        |
| Set point SP  | [psi]  | 10999  |          |          |            |            |            |         |          |            |        |
| Reset point rP  | [psi]  | 5995   |          |          |            |            |            |         |          |            |        |
| In steps of   | [psi]  | 5  |          |          |            |            |            |         |          |            |        |
| Accuracy / deviations   |        |  |          |          |            |            |            |         |          |            |        |
| Switch point accuracy [% of the final y                         | value] |  |          |          |            | < ± 1,0    |            |         |          |            |        |
| Repeatability   |        |  |          |          | (          |            | <b>6</b> 1 |         |          |            |        |
| [% of the final value]  |        | $< \pm 0,25$ ; (with temperature fluctuations $< 10$ K)  |          |          |            |            |            |         |          |            |        |
| Temperature drift per 10 K                                      |        | < ± 0.3  |          |          |            |            |            |         |          |            |        |
| Reaction times  |        |  |          |          |            |            |            |         |          |            |        |
| Switching frequency for a given set response time of one output |        | Respon <b>s[e</b> ns]<br>time<br>(dAP)   | 3        | 6        | 10         | 17         | 30         | 60      | 125      | 250        | 500    |
| one output  |        | Switchin[Hz]<br>frequency  | 170      | 80       | 50         | 30         | 16         | 8       | 4        | 2          | 1      |
| Response time   | [ms]   |  | r pressu | re chara | cteristic; | Set point  | t (SPx) =  | 70 %; R | eset poi | nt (rPx) : | = 30 % |
| Delay time programmable dS, dr                                  | [s]    | at rectangular pressure characteristic; Set point (SPx) = 70 %; Reset point (rPx) = 30 %<br>0, 0,2,10, 11,50 |          |          |            |            |            |         |          |            |        |
| Software / programming  |        |  |          |          |            |            |            |         |          |            |        |
| Adjustment of the switch point                                  |        | Programming button   |          |          |            |            |            |         |          |            |        |
| Parameter setting options                                       |        | hysteresis / window; normally open / closed; switch-on/switch-off delay; Damping                             |          |          |            |            |            |         |          |            |        |
| Operating conditions  |        | ·  |          |          |            |            |            |         |          |            | _      |
| Ambient temperature   | [°C]   |  |          |          |            | -2580      | )          |         |          |            |        |
| Storage temperature   | [°C]   | -40100   |          |          |            |            |            |         |          |            |        |
| - ·   |        |  |          |          |            |            |            |         |          |            |        |

### PN7222

### Pressure sensor with display



PN-100PSBN14-QFP

| 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  | 50 g (11 ms)          |  |  |  |  |  |  |
| Vibration resistance                                 | DIN IEC 68-2-6   | 20 g (102000 Hz)      |  |  |  |  |  |  |
| Mechanical data                                      |  |                       |  |  |  |  |  |  |
| Material   | EPDM/X; FKM; PA; PBT; PC; PTFE; stainless steel (1.4301 / 304) |                       |  |  |  |  |  |  |
| Materials (wetted parts)                             | stainless steel (1.4305 / 303); ceramics; FKM                  |                       |  |  |  |  |  |  |
| Min. pressure cycles                                 | 100 million  |                       |  |  |  |  |  |  |
| Process connection                                   | threaded connection 1/4" NPT external thread                   |                       |  |  |  |  |  |  |
| Displays / operating elements                        |  |                       |  |  |  |  |  |  |
| Display  | Switching status   | 2 x LED, red          |  |  |  |  |  |  |
|  | Function display   | 7-segment LED display |  |  |  |  |  |  |
|  | Measured values  | 7-segment LED display |  |  |  |  |  |  |
| Remarks  |  |                       |  |  |  |  |  |  |
| Pack quantity  | 1 pcs.   |                       |  |  |  |  |  |  |
| Electrical connection                                |  |                       |  |  |  |  |  |  |
| Connector: 1 x M12; coding: A; Contacts: gold-plated |  |                       |  |  |  |  |  |  |
|  |  |                       |  |  |  |  |  |  |
|  |  |                       |  |  |  |  |  |  |
| $3^2 + 4^1$  |  |                       |  |  |  |  |  |  |

Connection

