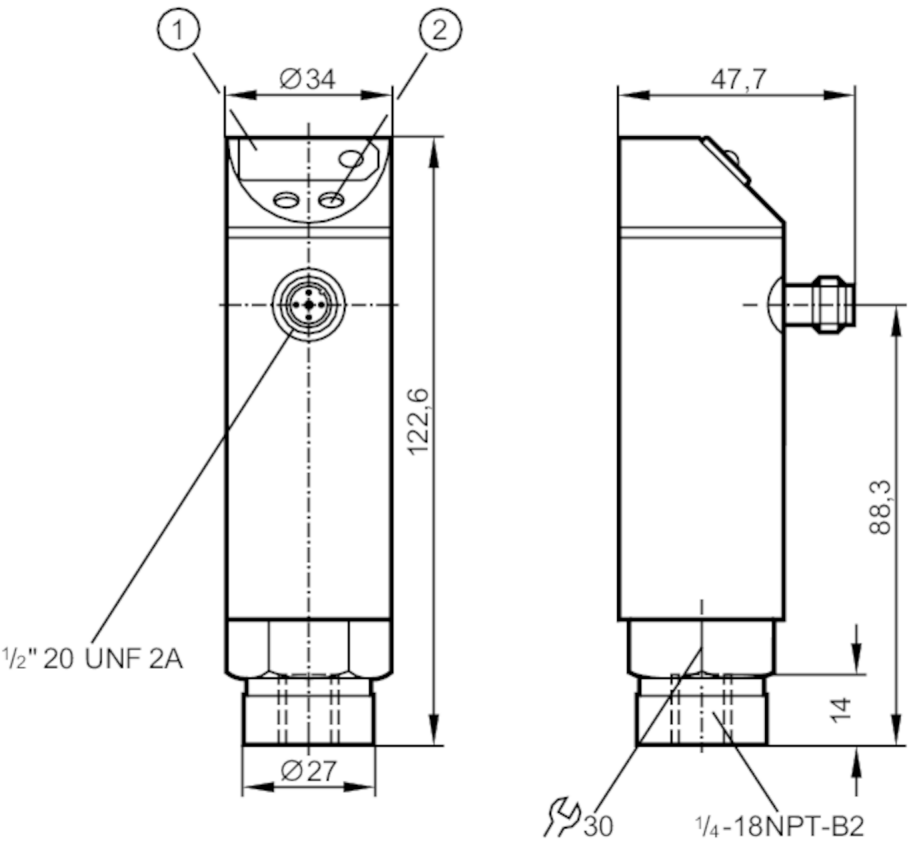


PN4220



Pressure sensor with display

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



- 1 7-segment LED display
- 2 programming button



| Product characteristics         |                                                    |              |            |
|---------------------------------|----------------------------------------------------|--------------|------------|
| Number of inputs and outputs    | Number of digital outputs: 1                       |              |            |
| Measuring range                 | 0...400 bar                                        | 0...5800 psi | 0...40 MPa |
| Process connection              | threaded connection 1/4" NPT internal thread       |              |            |
| Application                     |                                                    |              |            |
| Application                     | for industrial applications                        |              |            |
| Media                           | liquids and gases                                  |              |            |
| Conditionally suitable for      | use in gases at pressures > 25 bar only on request |              |            |
| Medium temperature [°C]         | -25...80                                           |              |            |
| Min. bursting pressure          | 1000 bar                                           | 14500 psi    | 100 MPa    |
| Pressure rating                 | 600 bar                                            | 8700 psi     | 60 MPa     |
| Type of pressure                | relative pressure                                  |              |            |
| Electrical data                 |                                                    |              |            |
| Operating voltage tolerance [%] | 5...10                                             |              |            |
| Operating voltage [V]           | 90...250 AC                                        |              |            |
| Nominal voltage AC [V]          | < 250                                              |              |            |
| Current consumption [mA]        | < 10                                               |              |            |
| Min. insulation resistance [MΩ] | 100; (500 V DC)                                    |              |            |



## Pressure sensor with display

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|                             |     |
|-----------------------------|-----|
| Protection class            | II  |
| Reverse polarity protection | no  |
| Power-on delay time [s]     | 0.2 |
| Integrated watchdog         | yes |

### Inputs / outputs

|                              |                              |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 1 |
|------------------------------|------------------------------|

### Outputs

|                                                      |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| Total number of outputs                              | 1                                                                 |
| Output signal                                        | switching signal                                                  |
| Electrical design                                    | Triac                                                             |
| Number of digital outputs                            | 1                                                                 |
| Output function                                      | normally open / normally closed; (parameterisable)                |
| Max. voltage drop switching output AC [V]            | 2                                                                 |
| Permanent current rating of switching output AC [mA] | 250; ((...70 °C) 1000 (...60 °C) 1500 (...45 °C) 2500 (...20 °C)) |
| Switching frequency AC [Hz]                          | < 160                                                             |
| Short-circuit proof                                  | no                                                                |
| Overload protection                                  | no                                                                |

### Measuring/setting range

|                 |             |               |                |
|-----------------|-------------|---------------|----------------|
| Measuring range | 0...400 bar | 0...5800 psi  | 0...40 MPa     |
| Set point SP    | 4...400 bar | 60...5800 psi | 0.4...40 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

|                                                           |                                                 |
|-----------------------------------------------------------|-------------------------------------------------|
| Switch point accuracy [% of the span]                     | < ± 1,0                                         |
| Repeatability [% of the span]                             | < ± 0,1; (with temperature fluctuations < 10 K) |
| Linearity deviation [% of the span]                       | < ± 0,5                                         |
| Hysteresis deviation [% of the span]                      | < ± 0,1                                         |
| Long-term stability [% of the span]                       | < ± 0,1; (per year)                             |
| Temperature coefficient zero point [% of the span / 10 K] | < ± 0,2; (-25...80 °C)                          |
| Temperature coefficient span [% of the span / 10 K]       | < ± 0,3; (-25...80 °C)                          |

### Response times

|                                    |                        |
|------------------------------------|------------------------|
| Delay time programmable dS, dr [s] | 0, 0,2,...10, 11,...50 |
| Damping process value dAP [s]      | 0...4                  |

### Software / programming

|                                |                    |
|--------------------------------|--------------------|
| Adjustment of the switch point | programming button |
|--------------------------------|--------------------|

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|                           |                                                                                                                                                                                  |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parameter setting options | hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Operating conditions

|                     |      |           |
|---------------------|------|-----------|
| 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                                                                       | 50 g (11 ms)        |
| Vibration resistance         | DIN IEC 68-2-6                                                                        | 20 g (10...2000 Hz) |
| MTTF                         | [years]                                                                               | 224.58              |
| Pressure Equipment Directive | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request |                     |

### Mechanical data

|                               |                                                |        |
|-------------------------------|------------------------------------------------|--------|
| Weight                        | [g]                                            | 367.15 |
| Materials                     | stainless steel (304/1.4301); PC; PBT; PA; FKM |        |
| Materials (wetted parts)      | stainless steel (303/1.4305); ceramics; FKM    |        |
| Min. pressure cycles          | 100 million                                    |        |
| Process connection            | threaded connection 1/4" NPT internal thread   |        |
| Restrictor element integrated | yes                                            |        |

### Displays / operating elements

|         |                  |                       |
|---------|------------------|-----------------------|
| Display | switching status | LED, red              |
|         | function display | 7-segment LED display |
|         | measured values  | 7-segment LED display |

### Electrical connection

|                     |                                                          |
|---------------------|----------------------------------------------------------|
| Required protection | miniature fuse to IEC60127-2 sheet 1; ≤ 5 A; fast acting |
|---------------------|----------------------------------------------------------|

### Remarks

|               |                 |
|---------------|-----------------|
| Remarks       | n.c. = not used |
| Pack quantity | 1 pcs.          |

### Electrical connection

Connector: 1 x 1/2"; coding: C



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### Connection



Note miniature fuse to IEC60127-2 sheet 1  $\leq 5$  A fast acting