



## Pressure sensor with display

PN-400-SBR14-LFPKG/US/ IV

Article no longer available - archive entry

Alternative articles: PN3000

When selecting an alternative article and accessories please note that technical data may differ!



- 1 7-segment LED display
- 2 Programming button



### Product characteristics

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analog outputs: 1 |
| Measuring range [bar]        | 0...400                                                   |
| Process connection           | threaded connection G 1/4 Internal thread                 |

### Application

|                              |                                                              |
|------------------------------|--------------------------------------------------------------|
| Application                  | for industrial applications                                  |
| Media                        | liquids and gases                                            |
| Conditionally suitable for   | For gaseous media the application is limited to max. 25 bar. |
| Medium temperature [°C]      | -25...80                                                     |
| Min. bursting pressure [bar] | 1000                                                         |
| Pressure rating [bar]        | 600                                                          |
| Type of pressure             | relative pressure                                            |

### Electrical data

|                                 |                 |
|---------------------------------|-----------------|
| Operating voltage [V]           | 20...30 DC      |
| Current consumption [mA]        | < 60            |
| Min. insulation resistance [MΩ] | 100; (500 V DC) |
| Protection class                | III             |

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|                             |     |
|-----------------------------|-----|
| 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: 1; Number of analog outputs: 1 |
|------------------------------|-----------------------------------------------------------|

### Outputs

|                                                      |                                                 |
|------------------------------------------------------|-------------------------------------------------|
| Total number of outputs                              | 2                                               |
| Output signal                                        | switching signal; analog signal; (configurable) |
| Electrical design                                    | PNP                                             |
| Number of digital outputs                            | 1                                               |
| Max. voltage drop switching output DC [V]            | 2                                               |
| Permanent current rating of switching output DC [mA] | 250                                             |
| Number of analog outputs                             | 1                                               |
| Analog voltage output [V]                            | 0...10                                          |
| Min. load resistance [ $\Omega$ ]                    | 2000                                            |
| Short-circuit protection                             | yes                                             |
| Type of short-circuit protection                     | yes (non-latching)                              |
| Overload protection                                  | yes                                             |

### Measuring/setting range

|                       |         |
|-----------------------|---------|
| Measuring range [bar] | 0...400 |
| Set point SP [bar]    | 4...400 |
| Reset point rP [bar]  | 2...398 |
| In steps of [bar]     | 2       |

### Accuracy / deviations

|                                                  |                                                         |
|--------------------------------------------------|---------------------------------------------------------|
| Switch point accuracy [% of the final value]     | $< \pm 1,5$                                             |
| Repeatability [% of the final value]             | $< \pm 0,25$ ; (with temperature fluctuations $< 10$ K) |
| Characteristics deviation [% of the final value] | $< \pm 1,0$                                             |
| Temperature drift per 10 K                       | $< \pm 0.3$                                             |

### Reaction times

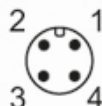
|                                                                 |                                                                                          |     |    |    |    |    |    |     |     |     |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------|-----|----|----|----|----|----|-----|-----|-----|
| Switching frequency for a given set response time of one output | Response time (dAP) [ms]                                                                 | 3   | 6  | 10 | 17 | 30 | 60 | 125 | 250 | 500 |
|                                                                 | Switching frequency [Hz]                                                                 | 170 | 80 | 50 | 30 | 16 | 8  | 4   | 2   | 1   |
| Response time [ms]                                              | at rectangular pressure characteristic; Set point (SPx) = 70 %; Reset point (rPx) = 30 % |     |    |    |    |    |    |     |     |     |
| Delay time programmable dS, dr [s]                              | 0, 0,2,...10, 11,...50                                                                   |     |    |    |    |    |    |     |     |     |
| Max. response time analog output [ms]                           | 3                                                                                        |     |    |    |    |    |    |     |     |     |

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| Software / programming                                                              |                                                           |                       |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------|
| Adjustment of the switch point                                                      | Programming button                                        |                       |
| 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)   |
| Mechanical data                                                                     |                                                           |                       |
| Material                                                                            | EPDM/X; FKM; NBR; PBT; PC; stainless steel (1.4301 / 304) |                       |
| Materials (wetted parts)                                                            | FKM; ceramics; stainless steel (1.4305 / 303)             |                       |
| Min. pressure cycles                                                                | 100 million                                               |                       |
| Process connection                                                                  | threaded connection G 1/4 Internal thread                 |                       |
| Displays / operating elements                                                       |                                                           |                       |
| Display                                                                             | Switching status                                          | 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                                                       |                                                           |                       |
|  |                                                           |                       |

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### Connection

