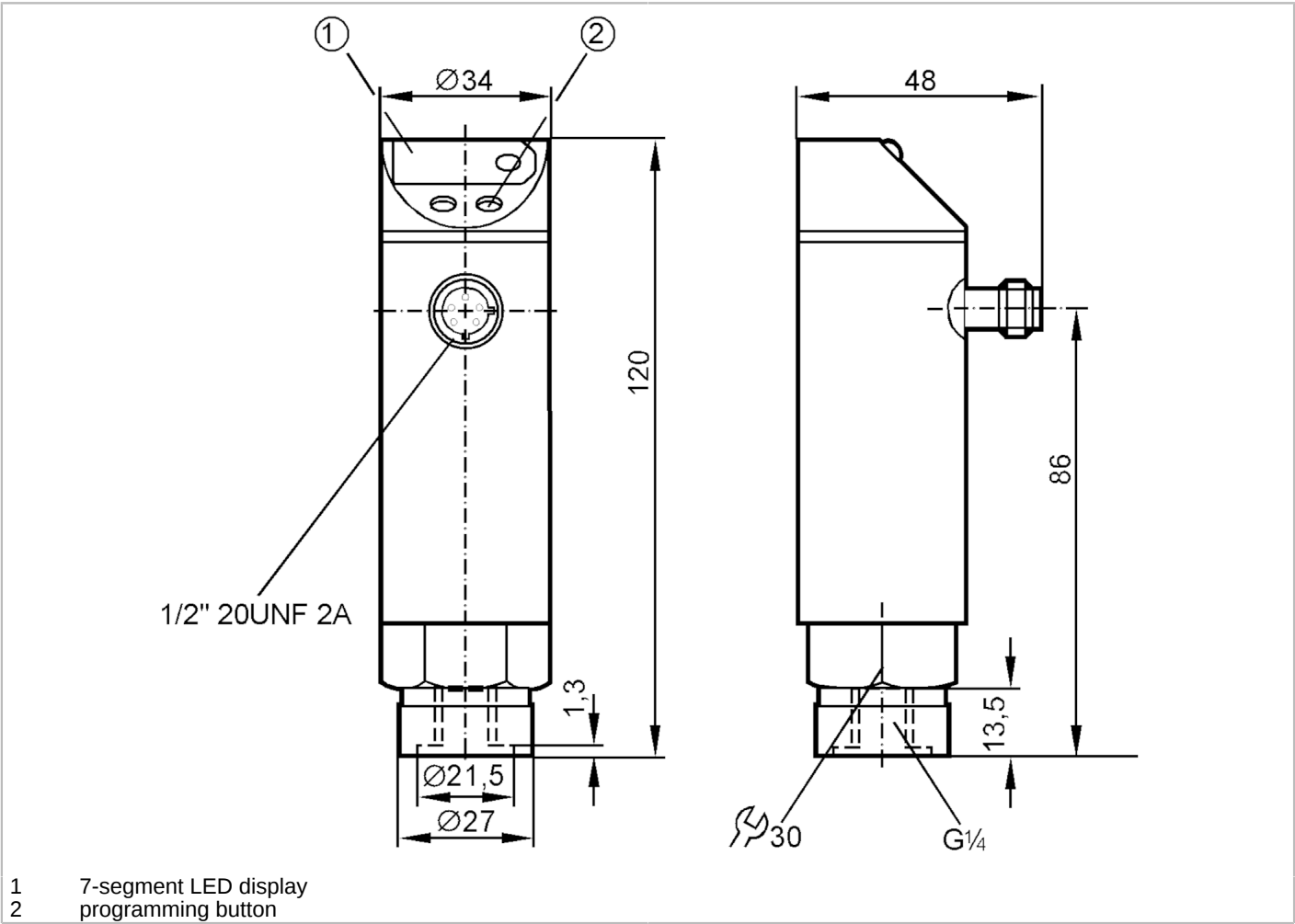


# PY9920



## Pressure sensor with display

PN-400-SBR14-HFBOW/LS/ IV



### 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 G 1/4 internal thread |              |            |

### Application

|                        |      |          |           |         |
|------------------------|------|----------|-----------|---------|
| Medium temperature     | [°C] | -25...80 |           |         |
| Min. bursting pressure |      | 1000 bar | 14500 psi | 100 MPa |
| Pressure rating        |      | 600 bar  | 8700 psi  | 60 MPa  |

### Electrical data

|                             |      |                 |
|-----------------------------|------|-----------------|
| Operating voltage tolerance | [%]  | 5...10          |
| Operating voltage           | [V]  | 85...265 AC     |
| Nominal voltage AC          | [V]  | < 250           |
| Current consumption         | [mA] | < 10            |
| Min. insulation resistance  | [MΩ] | 100; (500 V DC) |
| Protection class            |      | II              |
| Reverse polarity protection |      | no              |
| Power-on delay time         | [s]  | 0.2             |



## Pressure sensor with display

PN-400-SBR14-HFBOW/LS/ /V

|                                                      |                                                                                                                                                                                  |               |                |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------|
| 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 [X21]                          | < ± 1,0                                                                                                                                                                          |               |                |
| Repeatability [X21]                                  | < ± 0,1; (with temperature fluctuations < 10 K)                                                                                                                                  |               |                |
| Linearity deviation [X21]                            | < ± 0,5                                                                                                                                                                          |               |                |
| Hysteresis deviation [X21]                           | < ± 0,1                                                                                                                                                                          |               |                |
| Long-term stability [X21]                            | < ± 0,1; (per year)                                                                                                                                                              |               |                |
| Temperature coefficient zero point [X22]             | < ± 0,2; (-25...80 °C)                                                                                                                                                           |               |                |
| Temperature coefficient span [X22]                   | < ± 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                                                                                                                                                               |               |                |
| 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                                                                                                                                                                            |               |                |

# PY9920



## Pressure sensor with display

PN-400-SBR14-HFBOW/LS/ /V

| 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                         | [ANN]                                                                                 | 224.58              |
| Pressure Equipment Directive | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request |                     |

| Mechanical data               |                                                  |     |
|-------------------------------|--------------------------------------------------|-----|
| Weight                        | [g]                                              | 387 |
| Materials                     | FKM; PA; PBT; PC; stainless steel (1.4301 / 304) |     |
| Materials (wetted parts)      | stainless steel (1.4305 / 303); ceramics; FKM    |     |
| Min. pressure cycles          | 100 million                                      |     |
| Process connection            | threaded connection G 1/4 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 |
| Display unit                  | bar; psi; MPa    |                       |

| 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



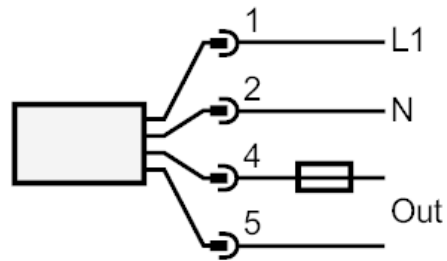
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## Pressure sensor with display

PN-400-SBR14-HFBOW/LS/ /V

### Connection



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