

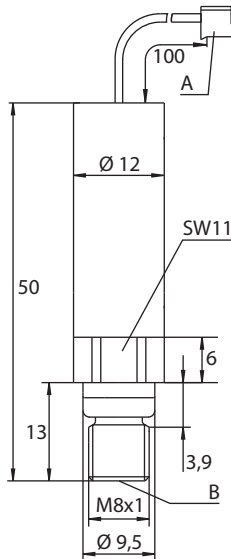
## HySense PR 280

### Miniature pressure sensor

This sensor is ideal for applications where very low weight and minimized dimensions are required (e.g. in regulating valves).



#### Dimensions



- A Connector box PHR-3 by JST  
 B Restrictor drill hole Ø 0.6

#### Qualities

|                                      |   |
|--------------------------------------|---|
| Measuring principle                  | piezo-resistive (poly-crystalline silicon thin film structure on high-grade steel membrane) |
| Pressure type                        | relative pressure   |
| Output signal                        | 0.5 ... 4.5 VDC   |
| Electrical measuring connector       | connector box JST PHR-3   |
| Mechanical connection thread         | M8 x 1  |
| Sealing material                     | O ring FKM  |
| Protection type (EN 60529 / IEC 529) | IP 00   |
| Casing material                      | 1.4571  |
| Membrane material                    | non-corrosive high-grade steel  |
| Tightening torque                    | 8 Nm (± 2 Nm)   |
| Weight                               | ~ 22 g  |

#### Pin assignment

|                     |                                |
|---------------------|--------------------------------|
| Connector box PHR-3 | 0.5 ... 4.5 V DC (three wires) |
|                     | Pin 1 = Ub                     |
|                     | Pin 2 = GND                    |
|                     | Pin 3 = signal                 |

| Ø D | Measuring range |          | Order number     |
|-----|-----------------|----------|------------------|
|     | bar             | MPa      |                  |
| mm  |                 |          | 0.5 ... 4.5 V DC |
| 15  | 0 ... 20        | 0 ... 2  | 34B3-27-03.49    |
| 12  | 0 ... 100       | 0 ... 10 | 34B3-16-03.49    |
|     | 0 ... 160       | 0 ... 16 | 34B3-19-03.49    |
|     | 0 ... 250       | 0 ... 25 | 34B3-17-03.49    |
|     | 0 ... 400       | 0 ... 40 | 34B3-15-03.49    |

**Due to EMC requirements, it is necessary to install the sensor in a capsuled metal casing.**

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### Miniature pressure sensor



| Technical data                   | PR 280  |
|----------------------------------|---|
| Overload range                   | 2 x nominal pressure  |
| Burst pressure                   | 4 x nominal pressure  |
| Signal type                      | three wire  |
| Supply voltage $U_b$             | 12 ... 30 VDC   |
| Current consumption              | < 10 mA   |
| Error limit (of final value)     | comprises the influences non-linearity, hysteresis, repeatability, zero-point- and span error |
| ... at +22 °C (room temperature) | ± 0.5 %   |
| ... at -15 ... +85°C             | ± 0.5 %   |
| ... at +85 ... +100°C            | ± 1.0 %   |
| ... at -40 ... -15°C             | ± 1.0 %   |
| Compensation temperature range   | 0 ... +80 °C  |
| Non-linearity                    | < ± 0.2 % of final value  |
| Reproducibility                  | < ± 0.05 % of final value   |
| Hysteresis                       | < ± 0.1 % of final value  |
| Long-term stability              | < ± 0.2 % of final value/year   |
| Response time                    | < = 1 ms  |
| Frequency range                  | > 1 kHz   |
| Isolation resistance             | > 100 MΩ  |
| Load resistance                  | 2.3 kΩ  |
| Number of load cycles            | > 1 x 10 <sup>7</sup>   |
| Medium temperature               | -20 ... +90 °C  |
| Environmental temperature        | -40 ... +125 °C   |
| Storage temperature              | -40 ... +140 °C   |
| EMV test                         | DIN EN 61000-4-2 / -3 / -4 / -6 / -8  |
| Vibrational stability            | 1 mm oscillation way (10 ... 50 Hz)   20 g (20 ... 2,000 Hz)                                  |
| Shock stability                  | 50 g (6 ms half-sine)   |
| Mounting orientation             | arbitrary   |