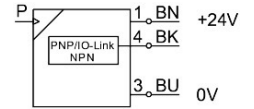


# Pressure sensor

## SPAE-P10R-F-PNLK-2.5K

Part number: 8001449

**FESTO**



## Data sheet

| Feature                                      | Value                                                       |
|----------------------------------------------|-------------------------------------------------------------|
| Approval                                     | RCM trademark<br>c UL us - Recognized (OL)                  |
| CE mark (see declaration of conformity)      | To EU EMC Directive<br>In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK RoHS instructions       |
| Certificate issuing authority                | UL E322346                                                  |
| Note on materials                            | RoHS-compliant                                              |
| Measured variable                            | Relative pressure                                           |
| Measurement method                           | Piezoresistive pressure sensor with display                 |
| Start value for pressure measuring range     | 0 MPa<br>0 bar<br>0 psi                                     |
| End value for pressure measuring range       | 1 MPa<br>10 bar<br>145 psi                                  |
| Overload pressure                            | 1.5 MPa<br>15 bar<br>217.5 psi                              |
| Operating medium                             | Compressed air to ISO 8573-1:2010 [7:4:4]                   |
| Note on operating and pilot medium           | Lubricated operation possible                               |
| Media temperature                            | 0 °C...50 °C                                                |
| Ambient temperature                          | 0 °C...50 °C                                                |
| Resolution ADC                               | 10 bit                                                      |
| Accuracy in ± % FS                           | 1.5 %FS                                                     |
| Repetition accuracy in ± %FS                 | 0.3 %FS                                                     |
| Temperature coefficient in ± %FS/K           | 0.05 %FS/K                                                  |
| Switching output                             | PNP/NPN, switchable                                         |
| Switching function                           | Freely programmable                                         |
| Switching element function                   | N/C contact<br>N/O contact<br>Switchable                    |
| Switch-on time                               | 1 ms                                                        |
| Switch-off time                              | 1 ms                                                        |

| Feature                          | Value                                                                                                      |
|----------------------------------|------------------------------------------------------------------------------------------------------------|
| Max. output current              | 100 mA                                                                                                     |
| Display range start value        | 0 %FS                                                                                                      |
| Display range end value          | 99 %FS                                                                                                     |
| Short circuit current rating     | yes                                                                                                        |
| Protocol                         | IO-Link®                                                                                                   |
| IO-Link, Protocol version        | Device V 1.1                                                                                               |
| IO-Link, Profile                 | Smart sensor profile                                                                                       |
| IO-Link, Function classes        | Binary data channel (BDC)<br>Process data variable (PDV)<br>Identification<br>Diagnostics<br>Teach channel |
| IO-Link, communication mode      | COM2 (38.4 kBaud)                                                                                          |
| IO-Link, SIO-Mode support        | Yes                                                                                                        |
| IO-Link, Port class              | A                                                                                                          |
| IO-Link, Process data length OUT | 0 bytes                                                                                                    |
| IO-Link, Process data length IN  | 2 bytes                                                                                                    |
| IO-Link, Process data content IN | 14 bit PDV (pressure measurement value)<br>2 bit BDC (pressure monitoring)                                 |
| IO-Link, Min. cycle time         | 3 ms                                                                                                       |
| IO-Link, Data storage required   | 0.5 KB                                                                                                     |
| Operational voltage range DC     | 18 V...30 V                                                                                                |
| Reverse polarity protection      | For all electrical connections                                                                             |
| Electrical connection            | 3-wire<br>Cable<br>Open end                                                                                |
| Cable length                     | 2.5 m                                                                                                      |
| Type of mounting                 | Via through-hole and screw                                                                                 |
| Mounting position                | optional                                                                                                   |
| Pneumatic connection             | Flange                                                                                                     |
| Product weight                   | 40 g                                                                                                       |
| Material housing                 | PA-reinforced                                                                                              |
| Material sealing ring            | FPM                                                                                                        |
| Display type                     | LED indicator<br>2-digit                                                                                   |
| Displayable units                | %FS                                                                                                        |
| Switching status indication      | Yellow LED                                                                                                 |
| Setting options                  | IO-Link®<br>Teach-in<br>Via display and keys                                                               |
| Protection against tampering     | PIN code                                                                                                   |
| Setting range threshold value    | 1 %...98 %                                                                                                 |
| Degree of protection             | IP40                                                                                                       |
| Corrosion resistance class CRC   | 2 - Moderate corrosion stress                                                                              |
| LABS (PWIS) conformity           | VDMA24364-B2-L                                                                                             |
| Cleanroom class                  | Class 4 according to ISO 14644-1                                                                           |