

# Pressure sensor SPAU-P10R-F-Q4-L-PNLK-PNVBA-M12

Part number: 8001224

FESTO



General operating condition

## Data sheet

| Feature                                      | Value   |
|--|---|
| Symbol                                       | 00995410  |
| Approval                                     | RCM<br>c UL us - Listed (Oil)                               |
| 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 RoHS instructions                                     |
| KC mark                                      | KC-EMV  |
| Note on materials                            | RoHS compliant  |
| Measured variable                            | Relative pressure   |
| Measurement method                           | Piezoresistive pressure sensor                              |
| Start value for pressure measuring range     | 0 MPa   |
| Start value for pressure measuring range     | 0 bar   |
| Start value for pressure measuring range     | 0 psi   |
| End value for pressure measuring range       | 1 MPa   |
| End value for pressure measuring range       | 10 bar  |
| End value for pressure measuring range       | 145 psi   |
| Overload pressure                            | 1.5 MPa   |
| Overload pressure                            | 15 bar  |
| Overload pressure                            | 217.5 psi   |
| Operating medium                             | Compressed air to ISO 8573-1:2010 [7:4:4]<br>Inert gas      |
| Note on operating and pilot medium           | Lubricated operation possible                               |
| Media temperature                            | 0 °C ... 50 °C  |
| Ambient temperature                          | 0 °C ... 50 °C  |
| Resolution ADC                               | 12 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                             | 2 x PNP or 2 x NPN, switchable                              |
| Switching function                           | Freely programmable   |
| Switching element function                   | NC or NO, switchable  |
| Max. output current                          | 100 mA  |
| Analogue output                              | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V                            |
| Rise time                                    | 3 ms  |
| Max. load resistance current output          | 500 Ohm   |

| Feature  | Value  |
|--|--|
| Min. load resistance voltage output                  | 10 kOhm  |
| 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                       | 500 Byte   |
| Operational voltage range DC                         | 20 V ... 30 V  |
| Reverse polarity protection                          | For all electrical connections   |
| Electrical connection 1, connection type             | Plug   |
| Electrical connection 1, connector system            | M12x1, A-coded to EN 61076-2-101   |
| Electrical connection 1, number of connections/cores | 4  |
| Electrical connection 1, type of mounting            | Not rotatable  |
| Electrical connection 1, compatible type of mounting | Compatible with latching lock<br>Compatible with rotatable screw-type lock                                 |
| Electrical connection 1, connection pattern          | 00995386   |
| Type of mounting                                     | Front panel mounting   |
| Mounting position                                    | Any  |
| Pneumatic connection                                 | QS-4   |
| Product weight                                       | 60 g   |
| Material in contact with the medium                  | Fluoro rubber<br>Brass, nickel-plated<br>NBR<br>Reinforced PA  |
| Display type   | Illuminated LCD  |
| Displayable units                                    | MPa<br>bar<br>inH2O<br>inHg<br>kPa<br>kgf/cm²<br>mmHg<br>psi   |
| Setting options                                      | IO-Link®<br>Teach-in<br>Via display and buttons  |
| Protection against tampering                         | IO-Link®<br>PIN code   |
| Setting range threshold value                        | 0 % ... 100 %  |
| Setting range hysteresis                             | 0 % ... 90 %   |
| Degree of protection                                 | IP65<br>IP67   |
| Corrosion resistance class CRC                       | 2 - Moderate corrosion stress  |
| LABS (PWIS) conformity                               | VDMA24364-B1/B2-L  |