

# Pressure sensor SPAU-V1R-F-Q4-L-PNLK-PNVBA-M12

Part number: 8001227

**FESTO**



## Data sheet

[PDF](#) General operating condition

| Feature                                      | Value                                                       |
|----------------------------------------------|-------------------------------------------------------------|
| Symbol                                       | 00995410                                                    |
| Approval                                     | RCM trademark<br>c UL us listed (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       |
| 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       | -0.1 MPa                                                    |
| End value for pressure measuring range       | -1 bar                                                      |
| End value for pressure measuring range       | -14.5 psi                                                   |
| Overload pressure                            | 0.5 MPa                                                     |
| Overload pressure                            | 5 bar                                                       |
| Overload pressure                            | 72.5 psi                                                    |
| Operating medium                             | Compressed air to ISO 8573-1:2010 [7:4:4]<br>Inert gases    |
| 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                   | N/C or N/O contact, switchable                              |
| Max. output current                          | 100 mA                                                      |
| Analogue output                              | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V                            |
| Rise time                                    | 3 ms                                                        |

| Feature                                              | Value                                                                                                      |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Max. load resistance current output                  | 500 Ohm                                                                                                    |
| 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             | Plugs                                                                                                      |
| 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                                    | optional                                                                                                   |
| Pneumatic connection                                 | QS-4                                                                                                       |
| Product weight                                       | 60 g                                                                                                       |
| Material in contact with the medium                  | FPM<br>Nickel-plated brass<br>NBR<br>PA-reinforced                                                         |
| 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 keys                                                               |
| 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                                                                                          |