

# Pressure sensor SPAU-V1R-H-Q4D-L-PNLK-PNVBA-M8D

Part number: 8001213

**FESTO**



[PDF](#) General operating condition

## Data sheet

| Feature                                      | Value                                                      |
|----------------------------------------------|------------------------------------------------------------|
| Symbol                                       | 00995410                                                   |
| Certification                                | RCM compliance mark<br>c UL us - Listed (OL)               |
| CE marking (see declaration of conformity)   | As per EU EMC directive<br>As per EU RoHS directive        |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK RoHS instructions      |
| KC characters                                | KC EMC                                                     |
| Note on materials                            | RoHS-compliant                                             |
| Measured variable                            | Relative pressure                                          |
| Method of measurement                        | Piezoresistive pressure sensor                             |
| Pressure measuring range initial value       | 0 MPa                                                      |
| Pressure measuring range initial value       | 0 bar                                                      |
| Pressure measuring range initial value       | 0 psi                                                      |
| Pressure measuring range end value           | -0.1 MPa                                                   |
| Pressure measuring range end value           | -1 bar                                                     |
| Pressure measuring range end value           | -14.5 psi                                                  |
| Overload pressure                            | 0.5 MPa                                                    |
| Overload pressure                            | 5 bar                                                      |
| Overload pressure                            | 72.5 psi                                                   |
| Operating medium                             | Compressed air as per ISO 8573-1:2010 [7:4:4]<br>Inert gas |
| Information on operating and pilot media     | Operation with oil lubrication possible                    |
| Temperature of medium                        | 0 °C ... 50 °C                                             |
| Ambient temperature                          | 0 °C ... 50 °C                                             |
| ADC resolution                               | 12 bit                                                     |
| Accuracy in ± % FS                           | 1.5 %FS                                                    |
| Repetition accuracy in ± %FS                 | 0.3 %FS                                                    |
| Temperature co-efficient 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 contact/N/O contact switchable                         |
| Max. output current                          | 100 mA                                                     |
| Analog output                                | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V                           |
| Rise time                                    | 3 ms                                                       |

| Feature                                               | Value                                                                                                      |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Max. load resistance of current output                | 500 Ohm                                                                                                    |
| Min. load resistance of voltage output                | 10 kOhm                                                                                                    |
| Short-circuit protection                              | 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 kBd)                                                                                            |
| IO-Link®, SIO mode support                            | Yes                                                                                                        |
| IO-Link®, port class                                  | A                                                                                                          |
| IO-Link®, process data width OUT                      | 0 Byte                                                                                                     |
| IO-Link®, process data width IN                       | 2 Byte                                                                                                     |
| IO-Link®, process data content IN                     | 14 bit PDV (pressure measurement)<br>2 bit BDC (pressure monitoring)                                       |
| IO-Link®, minimum cycle time                          | 3 ms                                                                                                       |
| IO-Link®, data memory required                        | 500 byte                                                                                                   |
| DC operating voltage range                            | 20 V ... 30 V                                                                                              |
| Reverse polarity protection                           | for all electrical connections                                                                             |
| Electrical connection 1, connection type              | Plug                                                                                                       |
| Electrical connection 1, connection technology        | M8x1 A-coded as per EN 61076-2-104                                                                         |
| Electrical connection 1, number of pins/wires         | 4                                                                                                          |
| Electrical connection 1, type of mounting             | not rotatable                                                                                              |
| Electrical connection 1, type of mounting             | Compatible with latching lock<br>Compatible with screw lock rotatable                                      |
| Electrical connection for input 1, connection pattern | 00991171                                                                                                   |
| Type of mounting                                      | With H-rail                                                                                                |
| Mounting position                                     | Any                                                                                                        |
| Pneumatic connection                                  | QS-4                                                                                                       |
| Product weight                                        | 50 g                                                                                                       |
| Materials in contact with the media                   | FPM<br>Brass, nickel-plated<br>NBR<br>PA-reinforced                                                        |
| Display type                                          | Illuminated LCD                                                                                            |
| Displayable unit(s)                                   | 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 pushbuttons                                                        |
| 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                                                                                          |