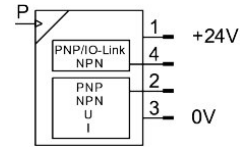


# Pressure sensor SPAU-P12R-H-G18FD-L-PNLK-PNVBA-M12U

Part number: 8182149

**FESTO**



## Data sheet

| Feature                                      | Value                                                        |
|----------------------------------------------|--------------------------------------------------------------|
| 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-EMV                                                       |
| Note on materials                            | RoHS compliant                                               |
| Measured variable                            | Relative pressure                                            |
| Method of measurement                        | Piezoresistive pressure sensor                               |
| Pressure measuring range initial value       | 0 MPa<br>0 bar<br>0 psi                                      |
| Pressure measuring range end value           | 1.2 MPa<br>12 bar<br>174 psi                                 |
| Overload pressure                            | 1.5 MPa<br>15 bar<br>217.5 psi                               |
| Operating medium                             | Compressed air as per ISO 8573-1:2010 [7:4:4]<br>Inert gases |
| Information on operating and pilot media     | Lubricated operation 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<br>2xPNP                       |
| 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                                        |

| Feature                                        | Value                                                                                                      |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------|
|                                                | 1 - 5 V                                                                                                    |
| Rise time                                      | 3 ms                                                                                                       |
| 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 bytes                                                                                                    |
| 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                 | 0.5 KB                                                                                                     |
| 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 | M12x1 A-coded as per EN 61076-2-101                                                                        |
| Electrical connection 1, number of pins/wires  | 4                                                                                                          |
| Electrical connection 1, type of mounting      | not rotatable<br>Compatible with snap-locking<br>Compatible with rotatable screw-type lock                 |
| Type of mounting                               | With DIN rail                                                                                              |
| Mounting position                              | Any                                                                                                        |
| Pneumatic connection                           | G1/8                                                                                                       |
| Product weight                                 | 70 g                                                                                                       |
| Materials in contact with the media            | FPM<br>PA-reinforced<br>high-alloy stainless steel                                                         |
| Display type                                   | Illuminated LCD<br>LED                                                                                     |
| Displayable unit(s)                            | MPa<br>bar<br>In H2O<br>In Hg<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                                                                                          |