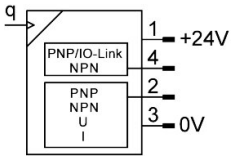
# Flow sensor
# SFAH-0.1U-G18FS-PNLK-PNVBA-M8

Part number: 8158411






## 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 |
| Note on materials | RoHS compliant |
| Measured variable | Mass flow<br>Volumetric flow rate |
| Flow direction | Unidirectional |
| Measuring principle | Thermal |
| Method of measurement | Heat transfer |
| Flow measuring range start value | 0.002 l/min |
| Flow measuring range end value | 0.1 l/min |
| Operating pressure | -0.9 bar...10 bar |
| Operating medium | Argon<br>Compressed air as per ISO 8573-1:2010 [6:4:4]<br>Nitrogen |
| Temperature of medium | 0 °C...50 °C |
| Ambient temperature | 0 °C...50 °C |
| Nominal temperature | 23 °C |
| Accuracy of flow rate | ± (2% o.m.v. + 1% FS) |
| Zero point repetition accuracy in ± %FS | 0.2 %FS |
| Repetition accuracy margin in ± %FS | 0.8 %FS |
| Temperature co-efficient margin in ± %FS/K | typ. 0.15%FS/K |
| Pressure influence range in ± %FS | typ. 1 %FS |
| Switching output | 2 x PNP or 2 x NPN switchable |
| Switching function | Window comparator<br>Threshold value comparator<br>Auto difference monitoring |
| 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 |
| Flow characteristic curve, start value | 0 l/min |
| Flow characteristic curve, end value | 0.1 l/min |
| Max. load resistance of current output | 500 Ohm |
| Min. load resistance of voltage output | 20 kOhm |
| Short-circuit protection | Yes |
| Overload protection | Available |
| 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 IN | 3 Byte |
| IO-Link®, process data content IN | 1 bit BDC (volume monitoring)<br>14 bit PDV (flow measurement)<br>2 bit BDC (flow monitoring) |
| IO-Link®, service data contents IN | 32 bit volume/mass measurement |
| IO-Link®, minimum cycle time | 4 ms |
| IO-Link®, data memory required | 0.5 KB |
| DC operating voltage range | 22 V...26 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 | Snap-locking<br>Screw-type lock<br>not rotatable<br>Compatible with snap-locking<br>Compatible with rotatable screw-type lock |
| Type of mounting | With accessories |
| Mounting position | Any |
| Pneumatic connection | Internal thread G1/8 |
| Pneumatic connection, outlet direction | Straight |
| Product weight | 90 g |
| Housing material | PA-reinforced |
| Materials in contact with the media | Wrought aluminum alloy, anodized<br>Epoxy<br>NBR<br>PA-reinforced<br>Silicon<br>Silicon nitride<br>high-alloy stainless steel |
| Display type | Multi-color backlit LCD |
| Displayable unit(s) | g<br>g/min<br>l<br>l/h<br>l/min<br>scft<br>scft/h |
| Protection against tampering | IO-Link®<br>PIN code |
| Degree of protection | IP40 |

| Feature | Value |
|---|---|
| Pressure drop | 5 mbar |
| Corrosion resistance class (CRC) | 2 - Moderate corrosion stress |
| LABS (PWIS) conformity | VDMA24364-B2-L |
| Cleanroom suitability, measured according to ISO 14644-14 | Class 4 according to ISO 14644-1 |