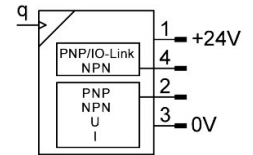


# Flow sensor SFAH-50U-Q6S-PNLK-PNVBA-M8

Part number: 8158419

**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                         |
| 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             | 1 l/min                                                                       |
| Flow measuring range end value               | 50 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 of margin in ± %FS/bar    | 1 %FS/b.                                                                      |
| 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           | 50 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                           | For pneumatic tubing outside diameter 6 mm                                                                                    |
| Pneumatic connection, outlet direction         | Straight                                                                                                                      |
| Product weight                                 | 60 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/min<br>scft<br>scft/h<br>scft/min                                                                        |
| Setting options                                | IO-Link®                                                                                                                      |
| Protection against tampering                   | IO-Link®<br>PIN code                                                                                                          |

| Feature                                                   | Value                            |
|-----------------------------------------------------------|----------------------------------|
| Degree of protection                                      | IP40                             |
| Pressure drop                                             | 12 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 |