

# Flow sensor SFAH-5B-Q6S-PNLK-PNVBA-M8

Part number: 8158414

FESTO



[PDF General operating condition](#)

## Data sheet

| Feature                                      | Value   |
|--|---|
| Symbol                                       | 00995794  |
| 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 RoHS instructions   |
| Certificate issuing authority                | UL E322346  |
| Note on materials                            | RoHS-compliant  |
| Measured variable                            | Mass flow rate<br>Volumetric flow rate  |
| Flow direction                               | Bidirectional   |
| Measuring principle                          | Thermal   |
| Measurement method                           | Heat transfer   |
| Start value for flow rate measuring range    | 0.1 l/min   |
| End value for flow rate measuring range      | 5 l/min   |
| Operating pressure                           | -0.9 bar ... 10 bar   |
| Operating medium                             | Compressed air to ISO 8573-1:2010 [6:4:4]<br>Nitrogen                         |
| Media temperature                            | 0 °C ... 50 °C  |
| Ambient temperature                          | 0 °C ... 50 °C  |
| Nominal temperature                          | 23 °C   |
| Accuracy of flow rate                        | ± (2% o.m.v. + 1% FS)   |
| Repetition accuracy offset in ± %FS          | 0.2 %FS   |
| Repetition accuracy span in ± %FS            | 0.8 %FS   |
| Temperature coefficient span in ± %FS/K      | Typ. 0.15%FS/K  |
| Pressure influence span 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 or N/O contact, switchable  |
| Max. output current                          | 100 mA  |
| Analogue output                              | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V  |
| Flow characteristic curve start value        | -5 l/min  |
| Flow characteristic curve end value          | 5 l/min   |

| Feature  | Value  |
|--|--|
| Max. load resistance current output                  | 500 Ohm  |
| Min. load resistance voltage output                  | 20 kOhm  |
| Short circuit current rating                         | 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 kBaud)  |
| IO-Link, SIO-Mode support                            | Yes  |
| IO-Link, Port class                                  | A  |
| IO-Link, Process data length IN                      | 3 bytes  |
| IO-Link, Process data content IN                     | 1 bit BDC (volume monitoring)<br>14 bit PDV (measured flow value)<br>2 bit BDC (flow monitoring)           |
| IO-Link, Service data IN                             | 32-bit volume/mass measurement   |
| IO-Link, Min. cycle time                             | 4 ms   |
| IO-Link, Data storage required                       | <500 Byte  |
| Operational voltage range DC                         | 22 V ... 26 V  |
| No-load supply current                               | ≤25 mA   |
| Reverse polarity protection                          | For all electrical connections   |
| Electrical connection 1, connection type             | Plugs  |
| Electrical connection 1, connector system            | M8x1, A-coded, to EN 61076-2-104   |
| 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          | 00991171   |
| Type of mounting                                     | With accessories   |
| Mounting position                                    | optional   |
| Pneumatic connection                                 | For tubing O.D. 6 mm   |
| Pneumatic connection, outlet direction               | Straight   |
| Product weight                                       | 60 g   |
| Material housing                                     | PA-reinforced  |
| Material in contact with the medium                  | Silicon<br>Silicon nitride<br>High-alloy stainless steel   |
| Display type   | Illuminated LCD, multi-colour  |
| Displayable units                                    | g<br>g/min<br>l<br>l/h<br>l/min<br>scft<br>scft/h<br>scft/min  |
| Setting options                                      | IO-Link®<br>Teach-in<br>Via display and keys   |
| Protection against tampering                         | IO-Link<br>PIN code  |
| Degree of protection                                 | IP40   |
| Pressure drop  | <5 mbar  |
| Protection class                                     | III  |

| <b>Feature</b>  | <b>Value</b>                     |
|---|----------------------------------|
| 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 |
| Pollution degree  | 3                                |