

# Flow sensor SFAH-200U-Q6S-PNLK-PNVBA-M8

Part number: 8158421

FESTO



## Data sheet

[PDF General operating condition](#)

| Feature                                      | Value   |
|--|---|
| Symbol                                       | 00995794  |
| 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 RoHS instructions   |
| Certificate issuing authority                | UL E322346  |
| Note on materials                            | RoHS-compliant  |
| Measured variable                            | Mass flow rate<br>Volumetric flow rate  |
| Flow direction                               | Unidirectional  |
| Measuring principle                          | Thermal   |
| Method of measurement                        | Heat transfer   |
| Flow measuring range start value             | 4 l/min   |
| Flow measuring range end value               | 200 l/min   |
| Operating pressure                           | -0.9 bar ... 10 bar   |
| Operating medium                             | 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<br>1 - 5 V  |
| Flow characteristic curve, start value       | 0 l/min   |
| Flow characteristic curve, end value         | 200 l/min   |

| Feature   | Value  |
|---|--|
| 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                        | <500 byte  |
| DC operating voltage range                            | 22 V ... 26 V  |
| Idle current  | ≤25 mA   |
| 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 snap-locking<br>Compatible with rotatable screw-type lock                                  |
| Electrical connection for input 1, connection pattern | 00991171   |
| 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                   | Silicon<br>Silicon nitride<br>High-alloy stainless steel   |
| Display type  | Illuminated LCD, multi-color   |
| Displayable unit(s)                                   | g<br>g/min<br>l<br>l/min<br>scft<br>scft/h<br>scft/min   |
| Setting options                                       | IO-Link®<br>Teach-in<br>Via display and pushbuttons  |
| Protection against tampering                          | IO-Link®<br>PIN code   |
| Degree of protection                                  | IP40   |
| Pressure drop   | 56 mbar  |
| Protection class                                      | III  |
| Corrosion resistance class (CRC)                      | 2 - Moderate corrosion stress  |

| <b>Feature</b>  | <b>Value</b>                     |
|---|----------------------------------|
| LABS (PWIS) conformity                                    | VDMA24364-B2-L                   |
| Cleanroom suitability, measured according to ISO 14644-14 | Class 4 according to ISO 14644-1 |
| Contamination level                                       | 3                                |