

# Flow sensor SFAB-50U-WQ6-PNLK-PNVBA-M12

Part number: 8162827

FESTO



General operating condition

## Data sheet

| Feature                                      | Value   |
|--|---|
| Symbol                                       | 00995566  |
| Approval                                     | RCM<br>c UL us - Listed (Oil)   |
| 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>Temperature<br>Volume<br>Volumetric flow rate         |
| Flow direction                               | Unidirectional<br>P1 -> P2  |
| Measuring principle                          | thermal   |
| Measurement method                           | Heat loss   |
| Start value for flow rate measuring range    | 0.5 l/min   |
| End value for flow rate measuring range      | 50 l/min  |
| Temperature measurement start value          | 0 °C  |
| Temperature measurement end value            | 50 °C   |
| Operating pressure                           | 0 MPa ... 1 MPa   |
| Operating pressure                           | 0 bar ... 10 bar  |
| Operating pressure                           | 0 psi ... 145 psi   |
| Operating medium                             | Compressed air to ISO 8573-1:2010 [6:4:4]<br>Carbon dioxide<br>Nitrogen |
| Media temperature                            | 0 °C ... 50 °C  |
| Ambient temperature                          | 0 °C ... 50 °C  |
| Nominal temperature                          | 23 °C   |
| Accuracy of flow rate                        | ± (3% o.m.v. + 0.3% FS)   |
| Accuracy temperature in ± °C                 | 5 °C  |
| Repetition accuracy offset in ± %FS          | 0.2 %FS   |
| Repetition accuracy span in ± %FS            | 0.8 %FS   |
| Temperature coefficient span in ± %FS/K      | typ. 0.1%FS/K   |
| Pressure influence span in ± %FS/bar         | 0.5 %FS/b.  |
| Switching output                             | 2 x PNP or 2 x NPN, switchable  |
| Switching function                           | Window comparator<br>Threshold value comparator                         |

| Feature  | Value  |
|--|--|
| Switching element function                           | NC or NO, switchable   |
| Switch-on time                                       | 10 ms  |
| Switch-off time                                      | 10 ms  |
| Max. output current                                  | 100 mA   |
| Analogue 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                  | 50 l/min   |
| Temperature characteristic curve start value         | 0 °C   |
| Temperature characteristic curve end value           | 100 °C   |
| Output characteristic curve start value              | 0 V  |
| Output characteristic curve end value                | 10 V   |
| Output characteristic curve starting value           | 4 mA   |
| Output characteristic curve end value                | 20 mA  |
| 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, revision ID                                 | V1.1   |
| IO-Link, device profile                              | Function Extended identification<br>Function Measurement data, standard resolution<br>Function Multiple switching signal<br>Firmware update<br>Function locator<br>Function Product URI<br>Function Teach single value<br>Identification and diagnostics<br>Smart Sensor - SSP 4.1.2 |
| IO-Link, transmission rate                           | COM3   |
| IO-Link, SIO-Mode support                            | Yes  |
| IO-Link, port type                                   | Class A  |
| IO-Link, process data length output                  | 0 bit  |
| IO-Link, process data length input                   | 64 bit   |
| IO-Link, Process data content IN                     | Flow rate measurement 16 bit MDC<br>Flow rate monitoring 2-bit SSC<br>Measured temperature value 16 bit MDC<br>Temperature monitoring 2-bit SSC<br>Volume / mass pulse 1 bit SSC   |
| IO-Link, Service data IN                             | Volume/mass measured value 32 bit  |
| IO-Link, minimum cycle time                          | 1.2 ms   |
| IO-Link, Data storage required                       | 500 Byte   |
| Operational voltage range DC                         | 15 V ... 30 V  |
| No-load supply current                               | 90 mA  |
| Reverse polarity protection                          | For all electrical connections   |
| Electrical connection 1, connection type             | Plug   |
| Electrical connection 1, connector system            | M12x1, A-coded to EN 61076-2-101   |
| Electrical connection 1, number of connections/cores | 5  |
| Electrical connection 1, type of mounting            | Not rotatable  |
| Electrical connection 1, compatible type of mounting | Compatible with rotatable screw-type lock  |
| Electrical connection 1, connection pattern          | 00995383   |
| Type of mounting                                     | With through-hole<br>via DIN rail<br>Via wall/surface bracket  |
| Mounting position                                    | Any  |
| Pneumatic connection                                 | For tubing O.D. 6 mm   |

| Feature                        | Value  |
|--------------------------------|--|
| Product weight                 | 160 g  |
| Material housing               | Reinforced PA  |
| Display type                   | Illuminated LCD, multi-colour  |
| Displayable units              | g<br>g/min<br>l<br>l/min<br>m <sup>3</sup><br>m <sup>3</sup> /h<br>scf<br>scfm |
| Setting options                | IO-Link®<br>Teach-in<br>Via display and buttons                                |
| Protection against tampering   | IO-Link®<br>PIN code   |
| Degree of protection           | IP65   |
| Pressure drop                  | <100 mbar  |
| Protection class               | III  |
| Corrosion resistance class CRC | 2 - Moderate corrosion stress  |
| LABS (PWIS) conformity         | VDMA24364-B1/B2-L  |