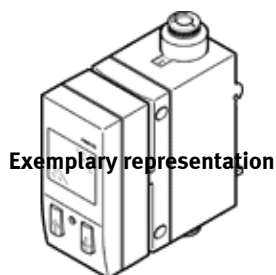


# Flow sensor SFAB-

Part number: 563795

FESTO



Exemplary representation

## Data sheet

Overall data sheet – Individual values depend upon your configuration.

| Feature                                      | Value   |
|--|---|
| Authorization                                | RCM Mark<br>c UL us - Recognized (OL)   |
| CE symbol (see declaration of conformity)    | according to EU-EMV guideline<br>according to EU-Ex protection guideline (ATEX)<br>in accordance with EU RoHS directive                                     |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK RoHS instructions   |
| ATEX category Gas                            | II 3G   |
| Explosion ignition protection type Gas       | Ex nA IIC T5 X Gc   |
| ATEX category Dust                           | II 3D   |
| Explosion ignition protection type Dust      | Ex tc IIIB T80°C X Dc IP54  |
| Explosion-proof ambient temperature          | 0°C ≤ Ta ≤ +50°C  |
| Certificate issuing department               | UL E322346  |
| Materials note                               | Conforms to RoHS  |
| Measured variable                            | Mass flow rate<br>Temperature<br>Volume<br>Volumetric flow rate   |
| Direction of flow                            | Unidirectional<br>P1 → P2   |
| Measuring principle                          | Thermal   |
| Measurement method                           | Heat Loss   |
| Flow measurement range initial value         | 0.1 ... 10 l/min  |
| Flow measurement range final value           | 3 ... 1,000 l/min   |
| Temperature measuring range starting value   | 0 °C  |
| Temperature measuring range end value        | 50 °C   |
| Operating pressure MPa                       | 0 ... 1 MPa   |
| Working pressure                             | 0 ... 10 bar  |
| Operating medium                             | Argon<br>Compressed air in accordance with ISO8573-1:2010 [6:4:4]<br>Compressed air in accordance with ISO8573-1:2010 [7:4:4]<br>Carbon dioxide<br>Nitrogen |
| Medium temperature                           | 0 ... 50 °C   |
| Ambient temperature                          | 0 ... 50 °C   |
| Nominal temperature                          | 23 °C   |
| Accuracy of flow rate                        | ± (3% o.m.v. + 0,3% FS)   |
| Accuracy of temperature in ± °C              | 5 °C  |
| Repetition accuracy zero point in ± %FS      | 0.2 %FS   |
| Repetition accuracy margin in ± %FS          | 0.8 %FS   |
| Temperature co-efficient margin in ± %FS/K   | typ. 0,1%FS/K   |
| Pressure dependency margin in ± %FS/bar      | 0.5 %FS/b.  |
| Switch output                                | 2 x PNP or 2 x NPN switchable   |
| Switching function                           | Window comparator   |

| Feature  | Value  |
|--|--|
|  | Threshold value comparator   |
| Switching element function                       | N/C or N/O contact, switchable   |
| Switch-on time                                   | 10 ms  |
| Switch-off time                                  | 10 ms  |
| Max. output current                              | 100 mA   |
| Analog output                                    | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V   |
| Characteristic curve for flow rate initial value | 0 l/min  |
| Characteristic curve for flow rate final value   | 10 ... 1,000 l/min   |
| Temperature characteristic curve starting value  | 0 °C   |
| Temperature characteristic curve end value       | 100 °C   |
| Output characteristic curve initial value        | 0 V  |
| Output characteristic curve final value          | 10 V   |
| Output characteristic curve initial value        | 4 mA   |
| Output characteristic curve final value          | 20 mA  |
| Max. load resistance, current output             | 500 Ohm  |
| Min. load resistance, voltage output             | 10 kOhm  |
| Short circuit strength                           | Yes  |
| Overload withstand capability                    | Available  |
| Protocol   | IO-Link  |
| IO-Link®, revision ID                            | V1.1   |
| IO-Link®, device profile                         | Identification and diagnostics<br>F. Extended identification<br>F. Measurement data, standard<br>F. Multiple switching signal<br>Firmware Update<br>Function Locator<br>Function Teach single value<br>Function Product URI<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 measured value 16-bit MDC<br>Flow rate monitoring 2-bit SSC<br>Temperature measured value 16-bit MDC<br>Temperature monitoring 2-bit SSC<br>Volume/mass pulse 1-bit SSC  |
| IO-Link, Service data contents IN                | Volume/mass measured value 32-bit MDC  |
| IO-Link®, minimum cycle time                     | 1.2 ms   |
| IO-Link, data memory required                    | 0.5 Kilobyte   |
| Operating voltage range DC                       | 15 ... 30 V  |
| Idle current                                     | 90 ... 120 mA  |
| Polarity protected                               | for all electrical connections   |
| Electrical connection 1, connection type         | Plug   |
| Electrical connection 1, connection technology   | M12x1, A-coded in accordance with EN 61076-2-101   |
| Electrical connection 1, number of pins/wires    | 5  |
| Mounting type                                    | with through hole<br>with top-hat rail<br>with wall/surface fixing   |
| Assembly position                                | Any  |
| Pneumatic connection                             | For tubing outside diameter 6 mm<br>For tubing outside diameter 8 mm<br>For tubing outside diameter 10 mm<br>For tubing outside diameter 12 mm<br>for tubing, 1/4" outside diameter<br>for tubing, 5/16" outside diameter<br>for tubing, 3/8" outside diameter |

| Feature                                 | Value  |
|---|--|
| Product weight                          | 160 g  |
| Material housing                        | PA-reinforced  |
| Type of display                         | Illuminated LCD, multicolored                                |
| Unit(s) that can be displayed           | g<br>g/min<br>l<br>l/h<br>l/min<br>m3<br>m3/h<br>scf<br>scfm |
| Setting options                         | IO-Link<br>Teach-In<br>Via display and buttons               |
| Protection against manipulation         | IO-Link<br>PIN-Code  |
| Protection class                        | IP65   |
| Pressure drop                           | < 100 mbar   |
| Safety class                            | III  |
| Corrosion resistance classification CRC | 2 - Moderate corrosion stress                                |
| PWIS conformity                         | VDMA24364-B1/B2-L  |