

Flow sensors SFAH



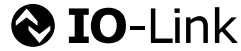
# Flow sensors SFAH

Features

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## At a glance

### Communication interface



#### Universal flow measurement

- 8 flow measuring ranges from 0.002 l/min to 200 l/min
- High measuring dynamics (1:50)
- Available as uni- or bidirectional
- Excellent accuracy
- Optional test report

#### Quick installation

- No inlet sections required
- Adjustable QS bracket connections
- L1 and M8 plug connector for fast commissioning



#### Convenient design

- Compact design 20x58 mm
- Degree of protection IP40

#### Easy operation

- Clear 2-line display
- Configurable, red perimeter of entire display
- Intuitive menu navigation

#### Switchable electrical outputs

- Various switching functions
- Switching outputs (PNP/NPN, NO/NC)
- Analogue outputs (0...10V, 1...5V, 4...20 mA)

### Product description

The flow sensor SFAH is suitable for monitoring compressed air and non-corrosive gases. The sensor can be used in many industry segments thanks to its compact design. The method of measurement is based on the thermal heat-transfer method. The bypass construction means that it is less susceptible to disruption by particles and moisture. The flow value is transmitted to the connected control system as a switching signal, as an analogue signal or via IO-Link®.

### Area of application

- Process monitoring
- Handling of extremely small parts
- Monitoring of compressed air consumption
- Leak test
- Monitoring of forming gas
- Pneumatic object detection via air-gap measurement

### Functions

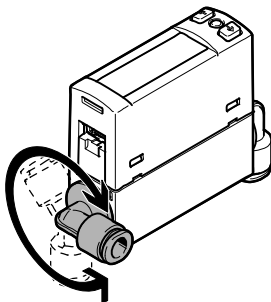
- Monitoring and setting a flow rate threshold, a flow rate range or a change in flow rate
- Monitoring using the teach-in function or by entering values
- Mass flow rate and volumetric flow rate are displayed in the common measurement units
- ECO function with option to switch off the display
- Optional security code can be freely chosen (4-digit code)
- Adjustable low-pass filter for smoothing the flow signal
- Scaling the analogue output to increase the signal dynamics
- Offset compensation possible
- Min./max. value memory
- All settings that have been entered on one sensor (master) can be transferred (replicated) to other, identical sensors
- High pressure range -0.9 bar to 10 bar

### IO-Link

- Serial communication integrated using IO-Link® 1.1
- Cyclical transfer of two switching states and the measured flow value
- Remote parameterisation of the sensor is possible using an IO-Link® master
- Easy sensor replacement with automatic parameterisation
- Sensor identification, diagnostics and teach-in possible via IO-Link®

#### Space-saving

Adjustable QS angled connections



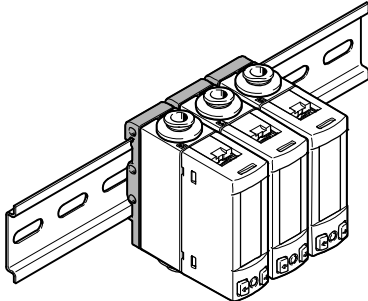
# Flow sensors SFAH

Features

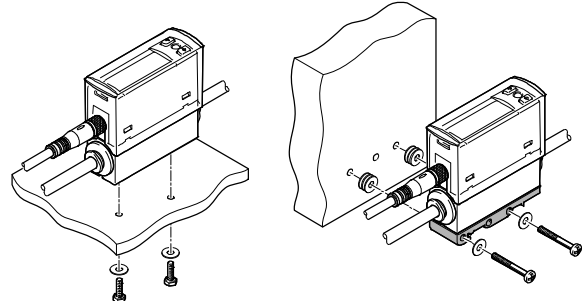
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## Mounting options

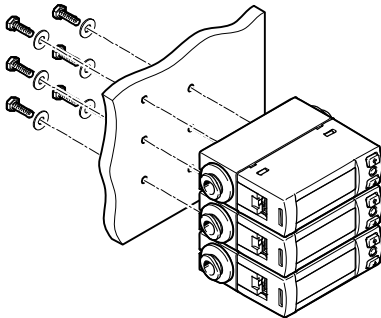
### H-rail mounting



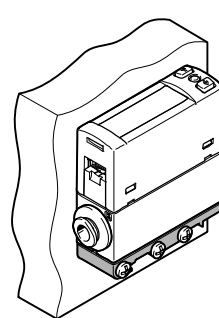
### Safety guard



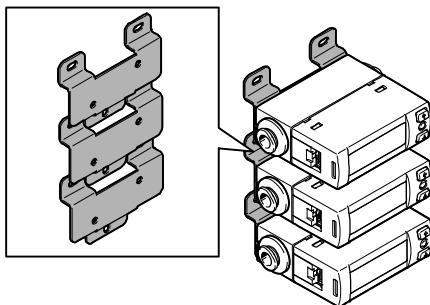
### Plate mounting from beneath



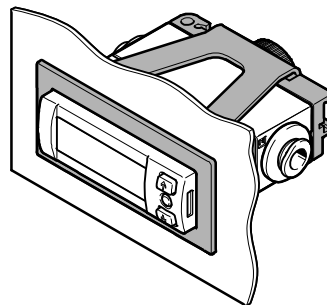
### Plate mounting from the side



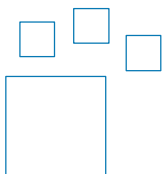
### Wall mounting



### Front panel mounting



## Ordering data – Product options



**Configurable product**  
This product and all its options can be ordered using the configurator.

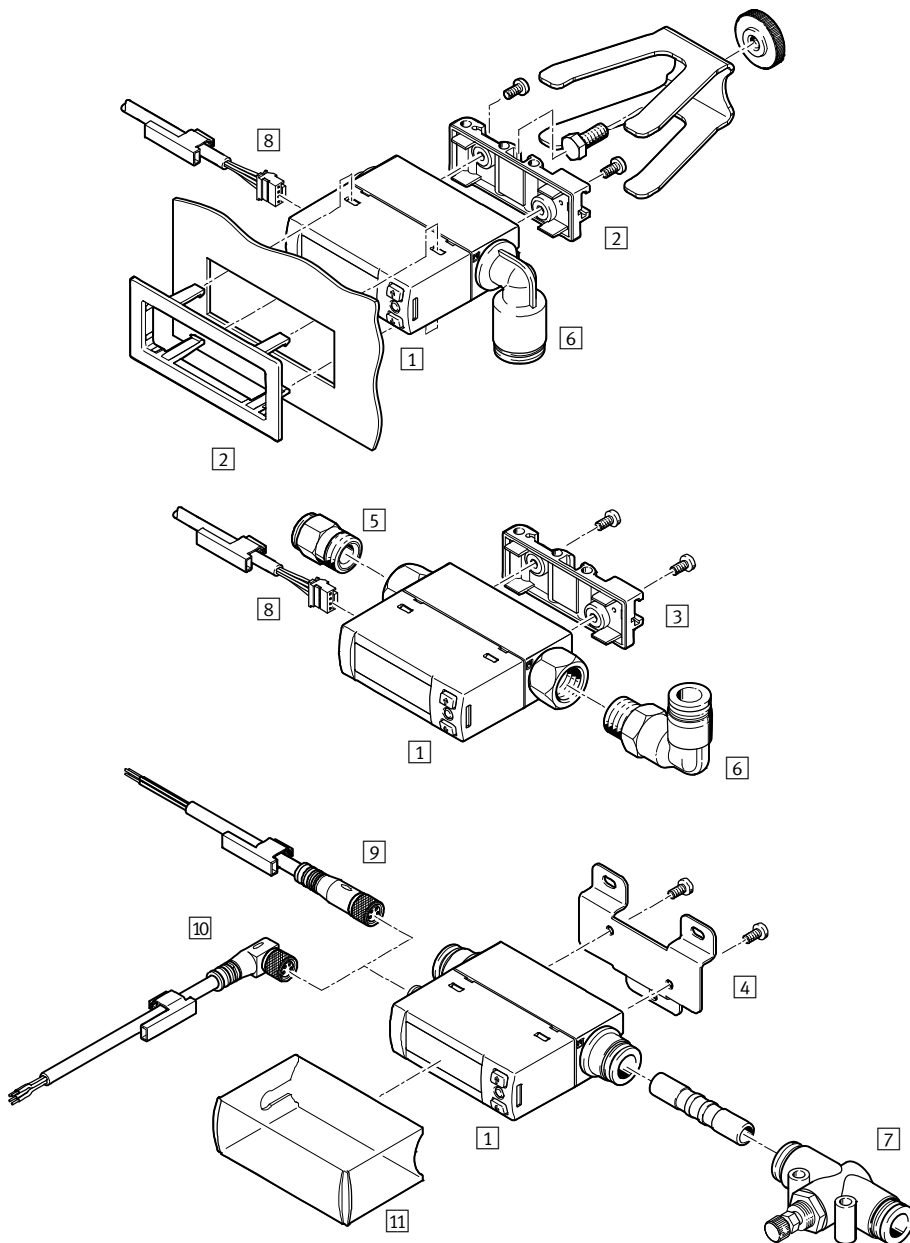
The configurator can be found under Products on the DVD or at  
→ [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...)

Enter the type (or part number) in the search field:  
• SFAH 8035300

# Flow sensors SFAH

Peripherals overview

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| Accessories |                                                                              | → Page/Internet |
|-------------|------------------------------------------------------------------------------|-----------------|
| 1           | Flow sensor SFAH                                                             | 6               |
| 2           | Front panel mounting kit SAMH-FH-F                                           | 15              |
| 3           | H-rail mounting SAMH-FH-H                                                    | 14              |
| 4           | Wall mounting SAMH-FH-W                                                      | 14              |
| 5           | Push-in fitting QS                                                           | 16              |
| 6           | Push-in fitting QSL                                                          | 16              |
| 7           | One-way flow control valve GRO-QS-...                                        | gro             |
| 8           | Connecting cable NEBS-L1G4-...                                               | 16              |
| 9           | Connecting cable NEBU-M8G4-...                                               | 16              |
| 10          | Connecting cable NEBU-M8W4-...                                               | 16              |
| 11          | Safety guard SACC-FH-G-S3, only in combination with electrical connection M8 | 15              |

# Flow sensors SFAH

Type codes

|  |  |      |   |  |  |   |  |  |  |   |  |   |  |   |  |   |  |   |  |
|--|--|------|---|--|--|---|--|--|--|---|--|---|--|---|--|---|--|---|--|
|  |  | SFAH | - |  |  | - |  |  |  | - |  | - |  | - |  | - |  | + |  |
|--|--|------|---|--|--|---|--|--|--|---|--|---|--|---|--|---|--|---|--|

| Type |             |
|------|-------------|
| SFAH | Flow sensor |

| Flow measuring range |                |
|----------------------|----------------|
| 0,1 <sup>1)</sup>    | Max. 0.1 l/min |
| 0,5                  | Max. 0.5 l/min |
| 1                    | Max. 1 l/min   |
| 5                    | Max. 5 l/min   |
| 10                   | Max. 10 l/min  |
| 50                   | Max. 50 l/min  |
| 100                  | Max. 100 l/min |
| 200                  | Max. 200 l/min |

| Flow input |                |
|------------|----------------|
| B          | Bidirectional  |
| U          | Unidirectional |

| Pneumatic connection |                        |
|----------------------|------------------------|
| Q4                   | Push-in connector 4 mm |
| Q6                   | Push-in connector 6 mm |
| Q8                   | Push-in connector 8 mm |
| G14                  | G1/4                   |
| G18                  | G1/8                   |

| Thread type |               |
|-------------|---------------|
|             | None          |
| F           | Female thread |

| Outlet orientation |                   |
|--------------------|-------------------|
| S                  | Straight          |
| AR                 | Angled, rotatable |

| Electrical output 1 |                      |
|---------------------|----------------------|
| PNLK                | PNP, NPN or IO-Link® |

| Electrical output 2 |                                                  |
|---------------------|--------------------------------------------------|
| PNVBA               | PNP, NPN<br>0 ... 10 V, 1 ... 5 V or 4 ... 20 mA |

| Electrical connection |                           |
|-----------------------|---------------------------|
| L1                    | Plug connector, design L1 |
| M8                    | Plug connector M8         |

| Certificates |             |
|--------------|-------------|
|              | None        |
| T            | Test report |

1) For low leakage requirements at the bottom of the measuring range, use G1/4 or G1/8 female thread in conjunction with pneumatic connection.

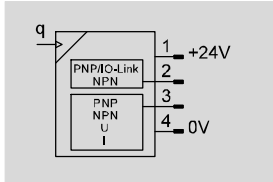
# Flow sensors SFAH

Technical data

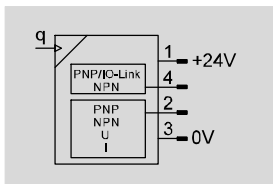
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Function

SFAH-...-L1



SFAH-...-M8



- Flow rate
  - 0.002 ... 0.1 l/min
  - 0.01 ... 0.5 l/min
  - 0.02 ... 1 l/min
  - 0.1 ... 5 l/min
  - 0.2 ... 10 l/min
  - 1 ... 50 l/min
  - 2 ... 100 l/min
  - 4 ... 200 l/min
- Maximum versatility and reduced warehousing thanks to switchable electrical outputs
- Measuring signal filter for setting the rise time
- Additional filter for smoothing the display values



| General technical data                     |                      |
|--------------------------------------------|----------------------|
| Certification                              | RCM compliance mark  |
| CE marking (see declaration of conformity) | To EU EMC Directive  |
|                                            | To EU RoHS Directive |
| KC marking                                 | KC-EMV               |
| Note on materials                          | RoHS-compliant       |

| Input signal, measuring element              |         | -0.1                                      | -0.5 | -1   | -5  | -10 | -50 | -100 | -200 |
|----------------------------------------------|---------|-------------------------------------------|------|------|-----|-----|-----|------|------|
| Measured variable                            |         | Mass flow rate, volumetric flow rate      |      |      |     |     |     |      |      |
| Flow direction                               | B       | Bidirectional                             |      |      |     |     |     |      |      |
|                                              | U       | Unidirectional                            |      |      |     |     |     |      |      |
| Measuring principle                          |         | Thermal                                   |      |      |     |     |     |      |      |
| Method of measurement                        |         | Heat transfer                             |      |      |     |     |     |      |      |
| Flow measuring range start value             | [l/min] | 0.002                                     | 0.01 | 0.02 | 0.1 | 0.2 | 1   | 2    | 4    |
| Flow measuring range end value <sup>1)</sup> | [l/min] | 0.1                                       | 0.5  | 1    | 5   | 10  | 50  | 100  | 200  |
| Operating pressure                           | [bar]   | -0.9 ... 10                               |      |      |     |     |     |      |      |
| Operating medium                             |         | Compressed air to ISO 8573-1:2010 [6:4:4] |      |      |     |     |     |      |      |
|                                              |         | Nitrogen                                  |      |      |     |     |     |      |      |
|                                              |         | Argon                                     |      |      |     |     |     |      |      |
| Temperature of medium                        | [°C]    | 0 ... 50                                  |      |      |     |     |     |      |      |
| Ambient temperature                          | [°C]    | 0 ... 50                                  |      |      |     |     |     |      |      |
| Nominal temperature                          | [°C]    | 23                                        |      |      |     |     |     |      |      |

1) For feature ...B-...: The measuring range applies in both the positive and negative direction.

| Output, general                       |                                                 |
|---------------------------------------|-------------------------------------------------|
| Accuracy of flow rate                 | +/- (2% o.m.v. + 1% FS)                         |
| Repetition accuracy zero point        | [%FS]                                           |
| Repetition accuracy span              | [%FS]                                           |
| Temperature coefficient span          | [%FS/K]                                         |
| Pressure influence span <sup>1)</sup> | Typ. ±1 (in the pressure range -0.7 ... 10 bar) |

1) In the pressure range -0.9 ... -0.7 bar, an additional pressure influence span of typ. ±4% FS can be expected.

# Flow sensors SFAH

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| Switching output           |                                |     |
|----------------------------|--------------------------------|-----|
| Switching output           | 2 x PNP or 2 x NPN, switchable |     |
| Switching function         | Window comparator              |     |
|                            | Threshold value comparator     |     |
|                            | Auto difference monitoring     |     |
| Switching element function | N/C or N/O contact, switchable |     |
| Max. output current        | [mA]                           | 100 |

| Analogue output                        |         |            |           |             |
|----------------------------------------|---------|------------|-----------|-------------|
| Analogue output                        | -PNVBA- | 0 ... 10 V | 1 ... 5 V | 4 ... 20 mA |
| Max. load resistance of current output | [Ohm]   | 500        |           |             |
| Min. load resistance of voltage output | [kOhm]  | 20         |           |             |

| Output, additional data  |     |
|--------------------------|-----|
| Short circuit protection | Yes |
| Overload protection      | Yes |

| IO-Link® device to IEC 61131-9     |                                    |
|------------------------------------|------------------------------------|
| Protocol                           | IO-Link®                           |
| Protocol version                   | Device V 1.1                       |
| Profile                            | Smart sensor profile               |
| Function classes                   | Binary data channel (BDC)          |
|                                    | Process data variable (PDV)        |
|                                    | Identification                     |
|                                    | Diagnostics                        |
|                                    | Teach channel                      |
| Communication mode                 | COM2 (38.4 kBaud)                  |
| SIO mode support                   | Yes                                |
| Port class                         | A                                  |
| Process data width IN              | 3 bytes                            |
| Process data content IN            | 2 bit BDC (flow monitoring)        |
|                                    | 1 bit BDC (volume monitoring)      |
|                                    | 14 bit PDV (measured flow value)   |
| IO-Link®, service data contents IN | 32 bit PDV (measured volume value) |
| IO-Link®, minimum cycle time       | 4 ms                               |
| IO-Link®, data memory required     | < 0.5 KB                           |

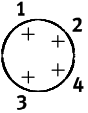
| Electronics                 |                                |           |
|-----------------------------|--------------------------------|-----------|
| Operating voltage range DC  | [V]                            | 22 ... 26 |
| Idle current                | [mA]                           | ≤ 25      |
| Reverse polarity protection | For all electrical connections |           |

# Flow sensors SFAH

Technical data

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| Electromechanical components | M8                               | L1  |
|------------------------------|----------------------------------|-----|
| Connection type              | Plug connector                   |     |
| Connection technology        | M8x1, A-coded, to EN 61076-2-104 | L1J |
| Number of pins, wires        | 4                                |     |

| Pin allocation                                                                    |     |                                                   |
|-----------------------------------------------------------------------------------|-----|---------------------------------------------------|
|                                                                                   | Pin | Significance                                      |
| <b>M8</b>                                                                         |     |                                                   |
|  | 1   | Operating voltage +24 V                           |
|                                                                                   | 2   | Electrical output 2 (OutB or Anlg)                |
|                                                                                   | 3   | Operating voltage 0 V                             |
|                                                                                   | 4   | Electrical output 1 (OutA, C/Q line for IO-Link®) |
| <b>L1</b>                                                                         |     |                                                   |
|  | 1   | Operating voltage +24 V                           |
|                                                                                   | 2   | Electrical output 1 (OutA, C/Q line for IO-Link®) |
|                                                                                   | 3   | Electrical output 2 (OutB or Anlg)                |
|                                                                                   | 4   | Operating voltage 0 V                             |

| Mechanical system                   |     | -Q4                              | -Q6                     | -Q8                     | -G18F                   | -G14F                   |
|-------------------------------------|-----|----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Type of mounting                    |     | Via accessories                  |                         |                         |                         |                         |
| Mounting position                   |     | Any                              |                         |                         |                         |                         |
| Pneumatic connection                |     | For tubing O.D.<br>4 mm          | For tubing O.D.<br>6 mm | For tubing O.D.<br>8 mm | Female thread<br>Ø G1/8 | Female thread<br>Ø G1/4 |
| Outlet orientation                  | S   | Straight                         |                         |                         |                         |                         |
|                                     | AR  | Angled, rotatable                |                         |                         | –                       |                         |
| Product weight                      | [g] | 60                               |                         |                         | 90                      |                         |
| Materials                           |     |                                  |                         |                         |                         |                         |
| Housing                             |     | PA reinforced                    |                         |                         |                         |                         |
| Materials in contact with the media |     | NBR                              |                         |                         |                         |                         |
|                                     |     | Silicon                          |                         |                         |                         |                         |
|                                     |     | PA reinforced                    |                         |                         |                         |                         |
|                                     |     | Silicon nitride                  |                         |                         |                         |                         |
|                                     |     | High-alloy stainless steel       |                         |                         |                         |                         |
|                                     |     | Epoxy                            |                         |                         |                         |                         |
|                                     |     | Anodised wrought aluminium alloy |                         |                         |                         |                         |

# Flow sensors SFAH

Technical data

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| Display/operation |     |                                                 |
|-------------------|-----|-------------------------------------------------|
| Display type      |     | Illuminated LCD, multi-colour                   |
| Displayable units |     |                                                 |
|                   | 0.1 | l/min, l/h, scft/h, g/min, l, scft, g           |
|                   | 0.5 |                                                 |
|                   | 1   |                                                 |
|                   | 5   | l/min, l/h, scft/min, scft/h, g/min, l, scft, g |
|                   | 10  |                                                 |
|                   | 50  | l/min, scft/min, scft/h, g/min, l, scft, g      |
|                   | 100 |                                                 |
|                   | 200 |                                                 |
| Setting options   |     | Teach-in                                        |
|                   |     | IO-Link®                                        |
|                   |     | Via display and keys                            |
| Tamper-proof      |     | IO-Link®                                        |
|                   |     | PIN code                                        |

| Immissions/emissions                         |        | 0.1  | 0.5 | 1 | 5 | 10 | 50 | 100 | 200 |
|----------------------------------------------|--------|------|-----|---|---|----|----|-----|-----|
| Degree of protection <sup>1)</sup>           |        | IP40 |     |   |   |    |    |     |     |
| Maximum permissible leakage                  | [l/h]  | 0.1  |     |   |   |    |    |     |     |
| Pressure drop delta p <sup>2)</sup>          | [mbar] | < 5  |     |   |   |    | 12 | 15  | 56  |
| Protection class                             |        | III  |     |   |   |    |    |     |     |
| Corrosion resistance class CRC <sup>3)</sup> |        | 2    |     |   |   |    |    |     |     |

1) Protection to IP54 is provided in combination with a safety guard assembled horizontally as illustrated on page 3.

2) With 6 bar at the input and q max.

3) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

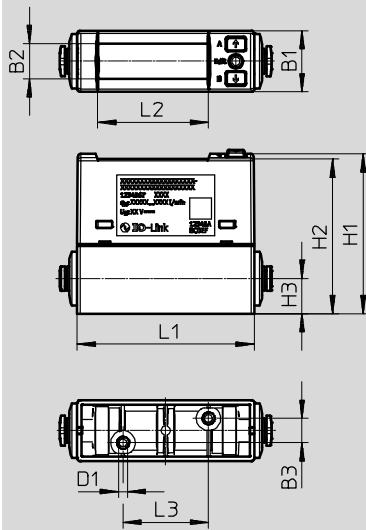
# Flow sensors SFAH

Technical data

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## Dimensions

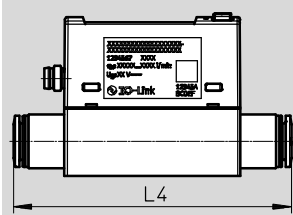
Download CAD data → [www.festo.com](http://www.festo.com)



| Type      | B1 | B2   | B3 | D1 | H1    | H2   | H3   | L1 | L2   | L3 |
|-----------|----|------|----|----|-------|------|------|----|------|----|
| SFAH- ... | 20 | 11.5 | 8  | M3 | ~52.4 | 50.7 | 11.5 | 58 | 36.3 | 28 |

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



| Type                | L4<br>Max. |
|---------------------|------------|
| SFAH- ... -Q4S- ... | 70         |
| SFAH- ... -Q6S- ... | 70         |
| SFAH- ... -Q8S- ... | 85         |

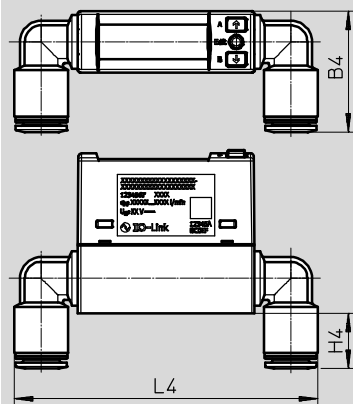
# Flow sensors SFAH

Technical data

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## Dimensions

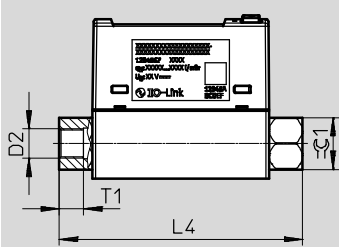
Download CAD data → [www.festo.com](http://www.festo.com)



| Type                 | B4<br>Max. | H4<br>Max. | L4<br>Max. |
|----------------------|------------|------------|------------|
| SFAH- ... -Q4AR- ... | 30         | 8          | 83         |
| SFAH- ... -Q6AR- ... | 31         | 9          | 88         |
| SFAH- ... -Q8AR- ... | 38         | 17         | 98         |

## Dimensions

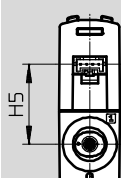
Download CAD data → [www.festo.com](http://www.festo.com)



| Type                  | D2   | L4 | T1 | ≈ 1 |
|-----------------------|------|----|----|-----|
| SFAH- ... -G14FS- ... | G1/4 | 80 | 12 | 17  |
| SFAH- ... -G18FS- ... | G1/8 | 80 | 8  | 17  |

## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



| Type          | H5   |
|---------------|------|
| SFAH- ... -L1 | 26.3 |

# Flow sensors SFAH

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Dimensions Download CAD data → [www.festo.com](http://www.festo.com)



| Type          | D3   | H5   | L5   |
|---------------|------|------|------|
| SFAH- ... -M8 | M8x1 | 20.7 | ~6.6 |

Dimensions Download CAD data → [www.festo.com](http://www.festo.com)



| Type          | L5    |
|---------------|-------|
| SFAH- ... -M8 | ~35.9 |

Dimensions Download CAD data → [www.festo.com](http://www.festo.com)

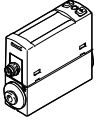


| Type          | L5    |
|---------------|-------|
| SFAH- ... -M8 | ~18.5 |

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Technical data

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| Ordering data                                                                     |                                 |                      |          |                               |
|-----------------------------------------------------------------------------------|---------------------------------|----------------------|----------|-------------------------------|
| Version                                                                           | Flow measuring range<br>[l/min] | Connection type      | Part No. | Type                          |
|  | 0.1 l/min                       | For tubing O.D. 4 mm | 8058461  | SFAH-Q1U-Q4S-PNLK-PNVBA-L1    |
|                                                                                   |                                 |                      | 8058462  | SFAH-Q1U-Q4S-PNLK-PNVBA-M8    |
|                                                                                   | 0.5 l/min                       |                      | 8058463  | SFAH-Q5U-Q4S-PNLK-PNVBA-L1    |
|                                                                                   |                                 |                      | 8058464  | SFAH-Q5U-Q4S-PNLK-PNVBA-M8    |
|                                                                                   | 1 l/min                         | For tubing O.D. 6 mm | 8058465  | SFAH-1U-Q4S-PNLK-PNVBA-L1     |
|                                                                                   |                                 |                      | 8058466  | SFAH-1U-Q4S-PNLK-PNVBA-M8     |
|                                                                                   | 5 l/min                         |                      | 8058467  | SFAH-5U-Q6S-PNLK-PNVBA-L1     |
|                                                                                   |                                 |                      | 8058468  | SFAH-5U-Q6S-PNLK-PNVBA-M8     |
|                                                                                   | 10 l/min                        | For tubing O.D. 8 mm | 8058469  | SFAH-10U-Q6S-PNLK-PNVBA-L1    |
|                                                                                   |                                 |                      | 8058470  | SFAH-10U-Q6S-PNLK-PNVBA-M8    |
|                                                                                   | 50 l/min                        |                      | 8058471  | SFAH-50U-Q8S-PNLK-PNVBA-L1    |
|                                                                                   |                                 |                      | 8058472  | SFAH-50U-Q8S-PNLK-PNVBA-M8    |
|                                                                                   |                                 | Female thread G1/8   | 8058473  | SFAH-50U-G18FS-PNLK-PNVBA-M8  |
|                                                                                   | 100 l/min                       | For tubing O.D. 8 mm | 8058474  | SFAH-100U-Q8S-PNLK-PNVBA-L1   |
|                                                                                   |                                 |                      | 8058475  | SFAH-100U-Q8S-PNLK-PNVBA-M8   |
|                                                                                   |                                 | Female thread G1/4   | 8058476  | SFAH-100U-G14FS-PNLK-PNVBA-M8 |
|                                                                                   | 200 l/min                       | For tubing O.D. 8 mm | 8058477  | SFAH-200U-Q8S-PNLK-PNVBA-L1   |
|                                                                                   |                                 |                      | 8058478  | SFAH-200U-Q8S-PNLK-PNVBA-M8   |
|                                                                                   |                                 | Female thread G1/4   | 8058479  | SFAH-200U-G14FS-PNLK-PNVBA-M8 |

# Flow sensors SFAH

Accessories

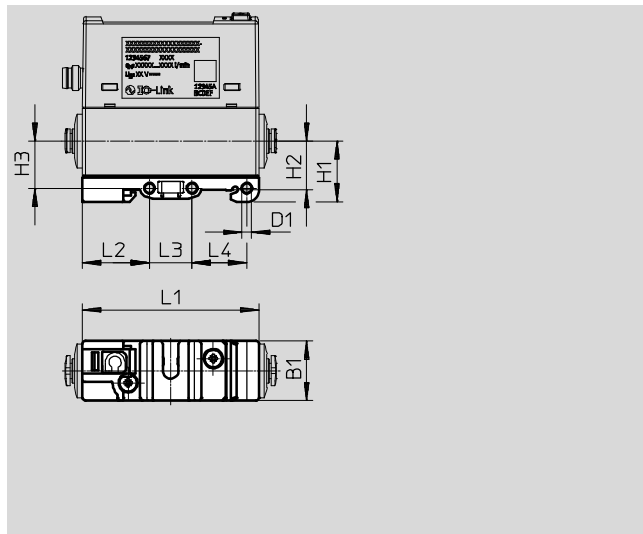
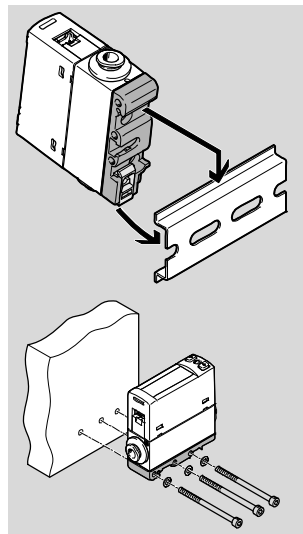
FESTO

## H-rail mounting

SAMH-FH-H- ...

Material: PA, POM, steel

RoHS-compliant



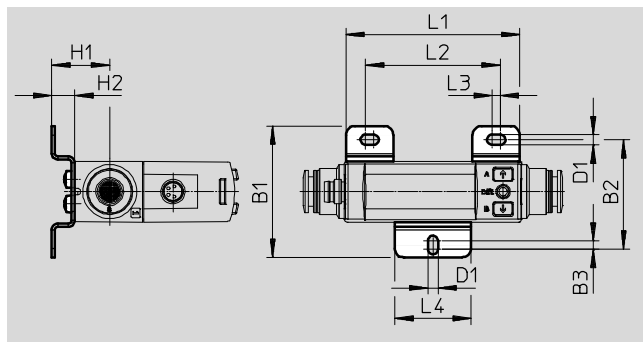
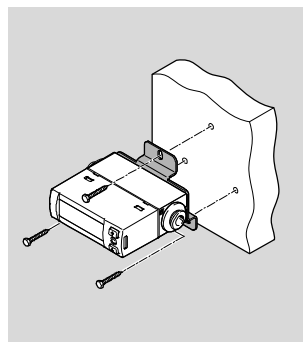
| Dimensions and ordering data |      |         |    |    |      |    |    |    |    |          |           |
|------------------------------|------|---------|----|----|------|----|----|----|----|----------|-----------|
| Type                         | B1   | D1<br>Ø | H1 | H2 | H3   | L1 | L2 | L3 | L4 | Part No. | Type      |
| SAMH-FH-H                    | 19.6 | 3.2     | 20 | 16 | 15.5 | 58 | 22 | 14 | 18 | 8058460  | SAMH-FH-H |

## Wall mounting

SAMH-FH-W ...

Material: Steel, high-alloy stainless

steel, RoHS-compliant



| Dimensions and ordering data |      |      |     |     |      |     |    |      |     |    |                   |          |           |
|------------------------------|------|------|-----|-----|------|-----|----|------|-----|----|-------------------|----------|-----------|
| Type                         | B1   | B2   | B3  | D1  | H1   | H2  | L1 | L2   | L3  | L4 | CRC <sup>1)</sup> | Part No. | Type      |
| SAMH-FH-W                    | 43.1 | 35.9 | 2.7 | 3.3 | 18.5 | 7.5 | 57 | 44.2 | 2.7 | 25 | 2                 | 8036910  | SAMH-FH-W |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

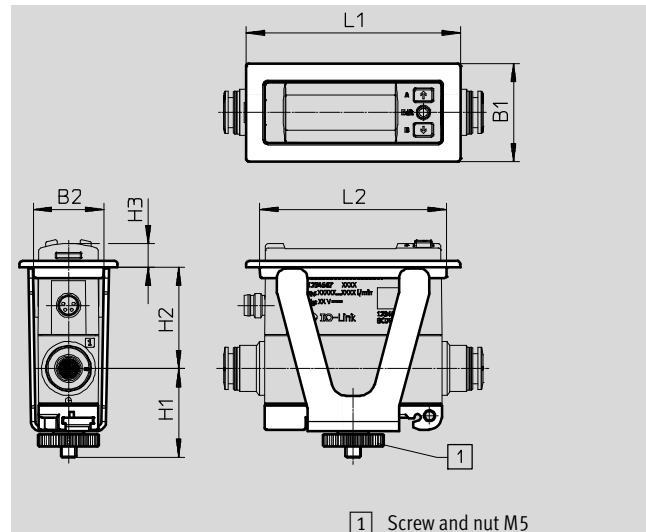
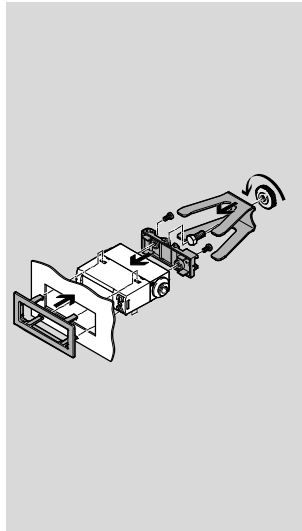
## Flow sensors SFAH

Accessories

FESTO

### Front panel mounting kit SAMH-FH-F- ...

Material: PA, steel, high-alloy  
stainless steel  
RoHS-compliant



1 Screw and nut M5

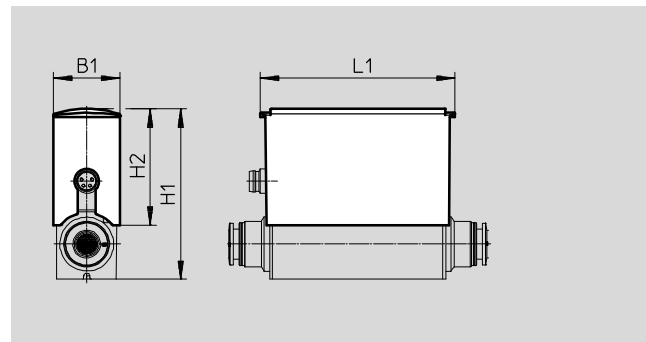
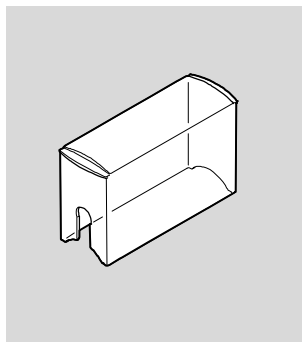
| Dimensions and ordering data |      |      |            |      |     |      |      |                   |          |           |
|------------------------------|------|------|------------|------|-----|------|------|-------------------|----------|-----------|
| Type                         | B1   | B2   | H1<br>Max. | H2   | H3  | L1   | L2   | CRC <sup>1)</sup> | Part No. | Type      |
| SAMH-FH-F                    | 32.2 | 23.1 | 30         | 33.2 | 7.7 | 70.2 | 61.2 | 2                 | 8058459  | SAMH-FH-F |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

### Safety guard SACC-FH-G-S3

Material: PA, RoHS-compliant



| Dimensions and ordering data |      |     |      |    |          |              |
|------------------------------|------|-----|------|----|----------|--------------|
| Type                         | B1   | H1  | H2   | L1 | Part No. | Type         |
| SACC-FH-G-S3                 | 22.2 | ~56 | 38.3 | 64 | 8069031  | SACC-FH-G-S3 |

Only in combination with electrical connection M8.

For degree of protection IP54, protection against splashing water from every direction to ISO 20653/DIN EN 60529 with horizontal assembly as illustrated on page 3.

## Flow sensors SFAH

Accessories

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| Ordering data – Connecting cables                                                                |                 |                  |          |                     |
|--------------------------------------------------------------------------------------------------|-----------------|------------------|----------|---------------------|
|                                                                                                  | Number of wires | Cable length [m] | Part No. | Type                |
| Socket, rectangular design L1 <span style="float: right;">Technical data → Internet: nebs</span> |                 |                  |          |                     |
|                 | 4               | 2.5              | 572576   | NEBS-L1G4-K-2.5-LE4 |
| M8x1, straight socket <span style="float: right;">Technical data → Internet: nebu</span>         |                 |                  |          |                     |
|                 | 4               | 2.5              | 541342   | NEBU-M8G4-K-2.5-LE4 |
|                 | 4               | 2.5              | 541344   | NEBU-M8W4-K-2.5-LE4 |

| Ordering data – Push-in fittings                                                    |                              |                 | Technical data ➔ Internet: qs |                    |
|-------------------------------------------------------------------------------------|------------------------------|-----------------|-------------------------------|--------------------|
|                                                                                     | Pneumatic connection<br>O.D. | For tubing O.D. | Part No.                      | Type               |
| Straight connection                                                                 |                              |                 |                               |                    |
|    | G1/8                         | 4 mm            | <b>186095</b>                 | <b>QS-G1/8-4</b>   |
|                                                                                     |                              | 6 mm            | <b>186096</b>                 | <b>QS-G1/8-6</b>   |
|                                                                                     |                              | 8 mm            | <b>186098</b>                 | <b>QS-G1/8-8</b>   |
|                                                                                     | G1/4                         | 6 mm            | <b>186097</b>                 | <b>QS-G1/4-6</b>   |
|                                                                                     |                              | 8 mm            | <b>186099</b>                 | <b>QS-G1/4-8</b>   |
|                                                                                     |                              | 10 mm           | <b>186101</b>                 | <b>QS-G1/4-10</b>  |
| 90° connection                                                                      |                              |                 |                               |                    |
|  | G1/8                         | 4 mm            | <b>186116</b>                 | <b>QSL-G1/8-4</b>  |
|                                                                                     |                              | 6 mm            | <b>186117</b>                 | <b>QSL-G1/8-6</b>  |
|                                                                                     |                              | 8 mm            | <b>186119</b>                 | <b>QSL-G1/8-8</b>  |
|                                                                                     | G1/4                         | 6 mm            | <b>186118</b>                 | <b>QSL-G1/4-6</b>  |
|                                                                                     |                              | 8 mm            | <b>186120</b>                 | <b>QSL-G1/4-8</b>  |
|                                                                                     |                              | 10 mm           | <b>186122</b>                 | <b>QSL-G1/4-10</b> |

| Ordering data – Vacuum filters                                                      |            |                 |          |          |
|-------------------------------------------------------------------------------------|------------|-----------------|----------|----------|
|                                                                                     | Connection | For tubing O.D. | Part No. | Type     |
| Technical data → Internet: vaf                                                      |            |                 |          |          |
|  | PK-3       | 4               | 535883   | VAF-PK-3 |
|                                                                                     | PK-4       | 6               | 15889    | VAF-PK-4 |
|                                                                                     | PK-6       | 8               | 160239   | VAF-PK-6 |

## Festo - Your Partner in Automation



**1 Festo Inc.**  
5300 Explorer Drive  
Mississauga, ON L4W 5G4  
Canada

### Festo Customer Interaction Center

Tel: 1 877 463 3786  
Fax: 1 877 393 3786  
Email: [customer.service.ca@festo.com](mailto:customer.service.ca@festo.com)



**2 Festo Pneumatic**  
Av. Ceylán 3,  
Col. Tequesquináhuac  
54020 Tlalneapantla,  
Estado de México

### Multinational Contact Center

01 800 337 8669  
[ventas.mexico@festo.com](mailto:ventas.mexico@festo.com)



**3 Festo Corporation**  
1377 Motor Parkway  
Suite 310  
Islandia, NY 11749

### Festo Customer Interaction Center

1 800 993 3786  
1 800 963 3786  
[customer.service.us@festo.com](mailto:customer.service.us@festo.com)



**4 Regional Service Center**  
7777 Columbia Road  
Mason, OH 45040

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