

Flow sensors SFAH

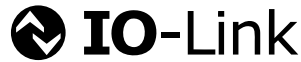
FESTO



Key features

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 run-in sections required
- Adjustable QS elbow connections
- L1 and M8 plug for fast commissioning



Practical design

- Compact design 20x58 mm
- Degree of protection IP40 or IP54

Easy operation

- Clear 2-line display
- Configurable red surround for the entire display
- Intuitive menu navigation

Switchable electrical outputs

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

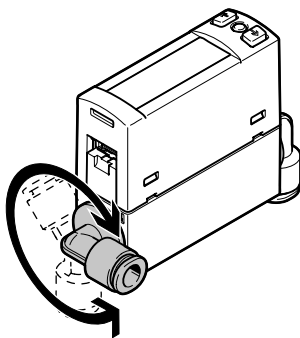
- Monitoring and setting a flow rate threshold, a flow rate range or a change in flow rate
- Monitoring using the teach-in function or by entering values
- Mass flow rate and volumetric flow rate are displayed in the common measurement units
- ECO function with option to switch off the display
- Optional 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 (replication) to other, identical sensors (devices)
- High pressure range –0.9 bar to 10 bar

IO-Link

- Serial communication integrated using IO-Link 1.1
- Cyclical transfer of two switching statuses and the measured pressure value
- The sensor can be parameterised remotely using an IO-Link® master
- Easy sensor replacement with automatic parameterisation
- Sensor identification, diagnostics and teach-in possible via IO-Link

Space-saving

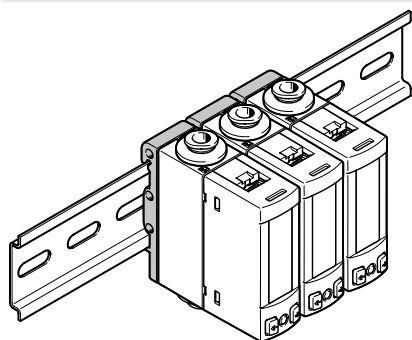
Adjustable QS elbow connections



Key features

Mounting options

H-rail mounting



Safety guard

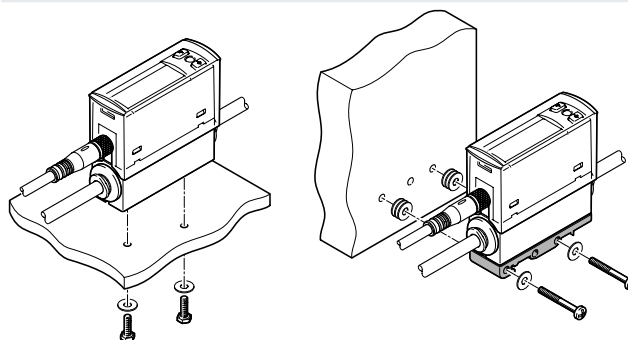


Plate mounting from beneath

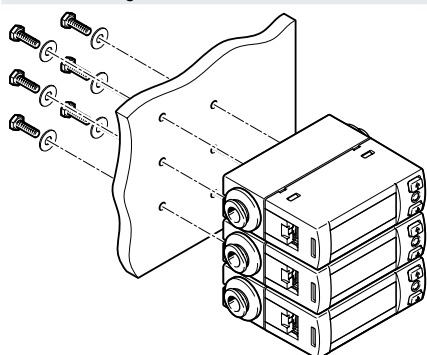
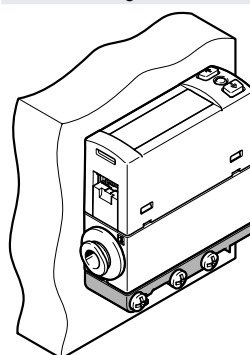
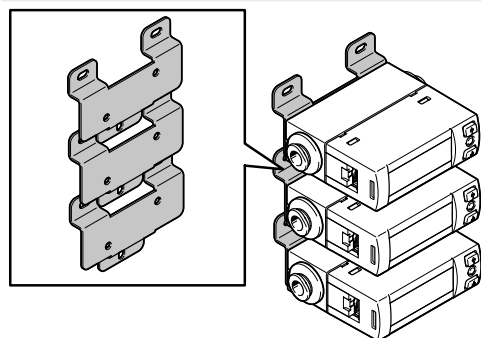


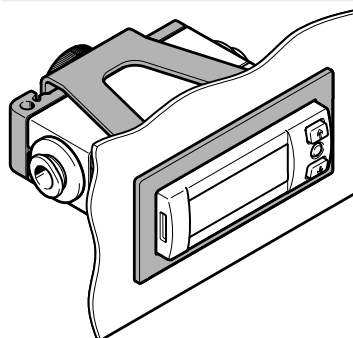
Plate mounting from the side



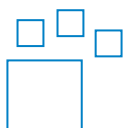
Wall mounting



Front panel mounting



Ordering data – Product options

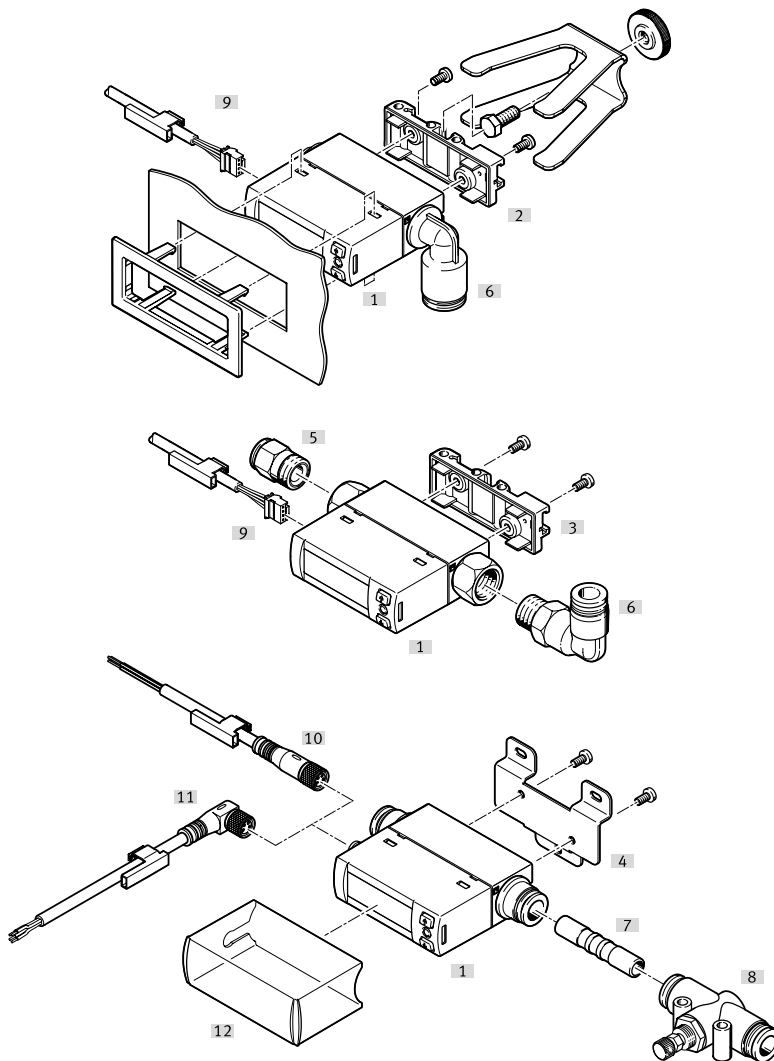


Configurable product
This product and all its product options can be ordered using the configurator.

The configurator can be found under Products on the DVD or at
→ www.festo.com/catalogue/...

| | |
|----------|------|
| Part no. | Type |
| 8035300 | SFAH |

Peripherals overview



| Accessories | | → Page/Internet |
|-------------|--|-----------------|
| [1] | Flow sensor SFAH | 6 |
| [2] | 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] | Push-in sleeve | - |
| [8] | One-way flow control valve GRO-QS-... | gro |
| [9] | Connecting cable NEBS-L1G4-... | 16 |
| [10] | Connecting cable NEBU-M8G4-... | 16 |
| [11] | Connecting cable NEBU-M8W4-... | 16 |
| [12] | Safety guard SACC-FH-G-S3, only in combination with electrical connection M8 | 15 |

Type codes

| | | |
|-------------|---------------|--|
| 001 | Series | |
| SFAH | Flow sensor | |

| | | |
|------------|-----------------------------|--|
| 002 | Flow measuring range | |
| 0.1 | 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 | |

| | | |
|------------|------------------------|--|
| 003 | Flow rate input | |
| B | Bidirectional | |
| U | Unidirectional | |

| | | |
|------------|-----------------------------|--|
| 004 | Pneumatic connection | |
| G18 | G1/8 | |
| G14 | G1/4 | |
| Q4 | Push-in connector 4 mm | |
| Q6 | Push-in connector 6 mm | |
| Q8 | Push-in connector 8 mm | |

| | | |
|------------|--------------------|--|
| 005 | Thread type | |
| | None | |
| F | Female | |

| | | |
|------------|---------------------------|--|
| 006 | Outlet orientation | |
| S | Straight | |
| AR | Angled, adjustable | |

| | | |
|-------------|----------------------------|--|
| 007 | Electrical output 1 | |
| PNLK | PNP/NPN/IO-Link | |

| | | |
|--------------|--|--|
| 008 | Electrical output 2 | |
| PNVBA | PNP or NPN or 0 ... 10 V or 1 ... 5 V or 4 ... 20 mA | |

| | | |
|------------|------------------------------|--|
| 009 | Electrical connection | |
| L1 | Plug type L1 | |
| M8 | Plug M8, A-coded | |

| | | |
|------------|-----------------------------|--|
| 010 | Mounting accessories | |
| H | H-rail mounting | |
| FP | Front panel mounting kit | |
| W | Wall mounting | |

| | | |
|-------------|-------------------------------|--|
| 011 | Electrical accessories | |
| | None | |
| 2.5A | Angled socket, cable 2.5 m | |
| 2.5S | Straight socket, cable 2.5 m | |
| 5A | Angled socket, cable 5 m | |
| 5S | Straight socket, cable 5 m | |

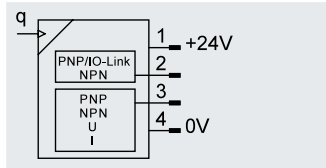
| | | |
|------------|---------------------------|--|
| 012 | Protective devices | |
| | None | |
| G | Protective hood | |

| | | |
|------------|--------------------|--|
| 013 | Certificate | |
| | None | |
| T | Test report | |

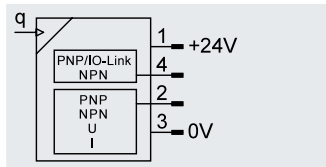
Data sheet

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 c UL us listed (OL) |
| CE marking (see declaration of conformity) | To EU EMC Directive To EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC To UK RoHS instructions |
| KC mark | KC EMC |
| Certificate issuing authority | UL E322346 |
| Note on materials | RoHS-compliant |
| PWIS conformity | VDMA24364-B2-L |

| 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 | | | | | | | |
| Measurement method | Heat transfer | | | | | | | |
| Flow measuring range start value [l/min] | 0.002 | 0.01 | 0.02 | 0.1 ²⁾ | 0.2 | 1 | 2 | 4 |
| Flow measuring range end value ¹⁾ [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.
- 2) For low leakage requirements in the lower measuring range, use G1/4 or G1/8 female thread in combination with pneumatic connection.

| Output, general | |
|---|--|
| Accuracy of flow rate | +/- (2% o.m.v. + 1% FS) |
| Repetition accuracy zero point [%FS] | ±0.2 |
| Repetition accuracy span [%FS] | ±0.8 |
| Temperature coefficient span [%FS/K] | Typ. ±0.15 (max. ±0.3) |
| Pressure influence span ¹⁾ [%FS] | Typically ±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 typically ±4% FS can be expected.

Data sheet

| 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, 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 | | |

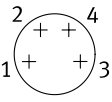

| Output, additional data | |
|------------------------------|----------|
| Short circuit current rating | Yes |
| Overload protection | Provided |

| 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 kBd) |
| 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) |
| Service data content IN | 32 bit PDV (measured volume value) |
| Minimum cycle time | 4 ms |
| 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 | |

Data sheet

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

| Terminal allocation | | |
|---|-----|--|
| | Pin | Meaning |
| M8 | | |
|  | 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) |
| L1 | | |
|  | 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 |

| Mechanics | | -Q4 | -Q6 | -Q8 | -G18F | -G14F |
|-------------------------------------|----------------------------|----------------------|----------------------|----------------------|----------------------|-------|
| Type of mounting | Via accessories | | | | | |
| Mounting position | Optional | | | | | |
| Pneumatic connection | For tubing O.D. 4 mm | For tubing O.D. 6 mm | For tubing O.D. 8 mm | Female thread Ø G1/8 | Female thread Ø G1/4 | |
| Outlet orientation | S | Straight | | | | |
| | AR | Angled, adjustable | | | - | |
| 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 | | | | | | |

Data sheet

| Display/operation | |
|-------------------|---|
| Display type | Multi-coloured, illuminated LCD |
| 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 pushbuttons |
| Tamper-proof | IO-Link |
| | PIN code |

| Immissions/emissions | 0.1 | 0.5 | 1 | 5 | 10 | 50 | 100 | 200 |
|--|------------------------|-----|---|---|----|----|-----|-----|
| Degree of protection ¹⁾ | IP40 | | | | | | | |
| Maximum permissible leakage [l/h] | 0.1 | | | | | | | |
| Pressure drop delta p ²⁾ [mbar] | < 5 | | | | | 12 | 15 | 56 |
| Protection class | III | | | | | | | |
| Corrosion resistance class CRC ³⁾ | 2 | | | | | | | |
| Cleanroom class | Class 4 to ISO 14644-1 | | | | | | | |
| Pollution degree | 3 | | | | | | | |

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

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

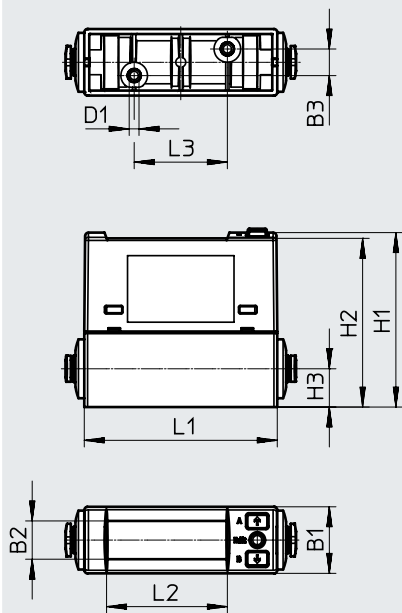
3) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Data sheet

Dimensions

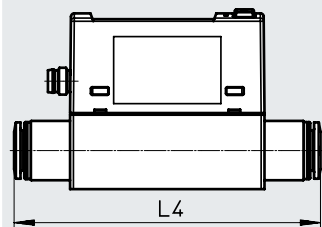
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| Type | B1 | B2 | B3 | D1 | H1 | H2 | H3 | L1 | L2 | L3 |
|-----------|----|------|----|----|-------|------|------|----|------|----|
| SFAH- ... | 20 | 11.5 | 8 | M3 | ~52.4 | 50.7 | 11.5 | 58 | 36.3 | 28 |

Dimensions

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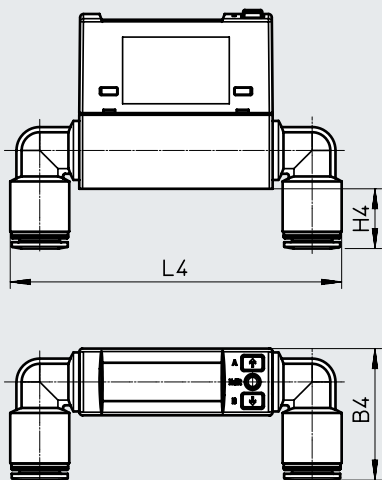


| Type | L4 max. |
|---------------------|---------|
| SFAH- ... -Q4S- ... | 70 |
| SFAH- ... -Q6S- ... | 70 |
| SFAH- ... -Q8S- ... | 85 |

Data sheet

Dimensions

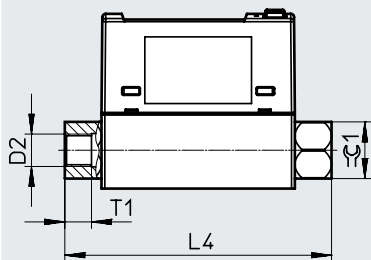
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| Type | B4 max. | H4 max. | L4 max. |
|----------------------|------------|------------|------------|
| SFAH- ... -Q4AR- ... | 30 | 8 | 83 |
| SFAH- ... -Q6AR- ... | 31 | 9 | 88 |
| SFAH- ... -Q8AR- ... | 38 | 17 | 98 |

Dimensions

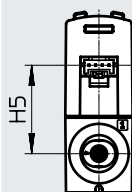
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| Type | D2 | L4 | T1 | ☉ 1 |
|-----------------------|------|----|----|-----|
| SFAH- ... -G14FS- ... | G1/4 | 80 | 12 | 17 |
| SFAH- ... -G18FS- ... | G1/8 | 80 | 8 | 17 |

Dimensions

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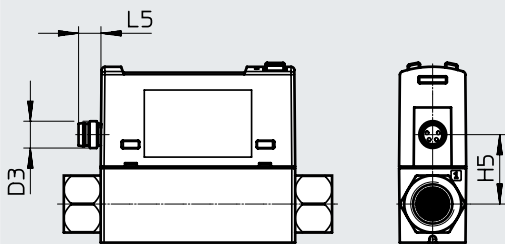


| Type | H5 |
|---------------|------|
| SFAH- ... -L1 | 26.3 |

Data sheet

Dimensions

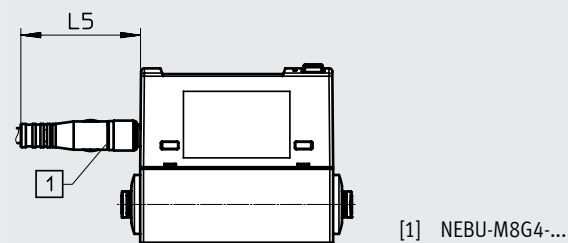
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| | | | |
|---------------|------|------|------|
| Type | D3 | H5 | L5 |
| SFAH- ... -M8 | M8x1 | 20.7 | ~6.6 |

Dimensions

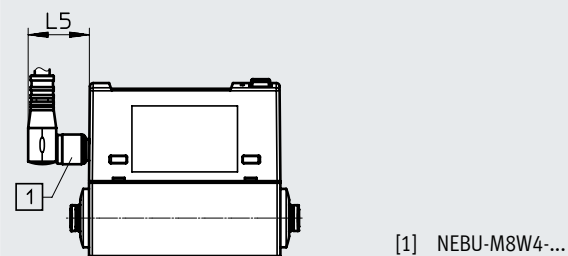
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| | |
|---------------|-------|
| Type | L5 |
| SFAH- ... -M8 | ~35.9 |

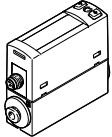
Dimensions

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

Data sheet

| Ordering data | | | | |
|---|------------------------------|---|---|---|
| Design | Flow measuring range [l/min] | Connection type | Part no. | Type |
|  | 0.1 l/min | Female thread G1/8 | 8158411 | SFAH-0.1U-G18FS-PNLK-PNVBA-M8 |
| | | | 8158427 | SFAH-0.1B-G18FS-PNLK-PNVBA-M8 |
| | | | 8159375 | SFAH-0.1U-G18FS-PNLK-PNVBA-L1 ¹⁾ |
| | 0.5 l/min | For tubing O.D. 6 mm | 610916 | SFAH-0.5U-Q6S-PNLK-PNVBA-M8 |
| | | For tubing O.D. 4 mm | 8158412 | SFAH-0.5B-Q4S-PNLK-PNVBA-M8 |
| | 0.1 l/min | For tubing O.D. 4 mm | 8058461 | SFAH-0.1U-Q4S-PNLK-PNVBA-L1 |
| | | | 8058462 | SFAH-0.1U-Q4S-PNLK-PNVBA-M8 |
| | 0.5 l/min | For tubing O.D. 4 mm | 8058463 | SFAH-0.5U-Q4S-PNLK-PNVBA-L1 |
| | | | 8058464 | SFAH-0.5U-Q4S-PNLK-PNVBA-M8 |
| | 1 l/min | For tubing O.D. 4 mm | 8058465 | SFAH-1U-Q4S-PNLK-PNVBA-L1 |
| | | | 8058466 | SFAH-1U-Q4S-PNLK-PNVBA-M8 |
| | | | For tubing O.D. 6 mm | 8158413 |
| | 5 l/min | For tubing O.D. 6 mm | 8158418 | SFAH-1U-Q6S-PNLK-PNVBA-M8 |
| | | | 8058467 | SFAH-5U-Q6S-PNLK-PNVBA-L1 |
| | | | 8058468 | SFAH-5U-Q6S-PNLK-PNVBA-M8 |
| | 10 l/min | For tubing O.D. 6 mm | 8158414 | SFAH-5B-Q6S-PNLK-PNVBA-M8 |
| | | | 8058469 | SFAH-10U-Q6S-PNLK-PNVBA-L1 |
| | | | 8058470 | SFAH-10U-Q6S-PNLK-PNVBA-M8 |
| | 50 l/min | For tubing O.D. 8 mm | 610783 | SFAH-10B-Q6S-PNLK-PNVBA-M8 |
| | | | 8158423 | SFAH-10U-Q6AR-PNLK-PNVBA-M8 |
| | | Female thread G1/8 | 8058471 | SFAH-50U-Q8S-PNLK-PNVBA-L1 |
| | | | 8058472 | SFAH-50U-Q8S-PNLK-PNVBA-M8 |
| | | | 8058473 | SFAH-50U-G18FS-PNLK-PNVBA-M8 |
| | | | 8158415 | SFAH-50B-Q6S-PNLK-PNVBA-M8 |
| | | | 8158419 | SFAH-50U-Q6S-PNLK-PNVBA-M8 |
| | For tubing O.D. 6 mm | 8158424 | SFAH-50U-Q6AR-PNLK-PNVBA-M8 | |
| | | 8158426 | SFAH-50U-Q6AR-PNLK-PNVBA-L1 | |
| 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 | |
| | | 8158416 | SFAH-100B-G14FS-PNLK-PNVBA-M8 | |
| | | 8158420 | SFAH-100U-Q6S-PNLK-PNVBA-M8 | |
| For tubing O.D. 6 mm | 8158422 | SFAH-100U-G14FS-PNLK-PNVBA-L1 ¹⁾ | | |
| 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 | |
| | | 609555 | SFAH-200U-G14FS-PNLK-PNVBA-L1 ¹⁾ | |
| | | 8158417 | SFAH-200B-G14FS-PNLK-PNVBA-M8 | |
| For tubing O.D. 6 mm | 8158421 | SFAH-200U-Q6S-PNLK-PNVBA-M8 | | |

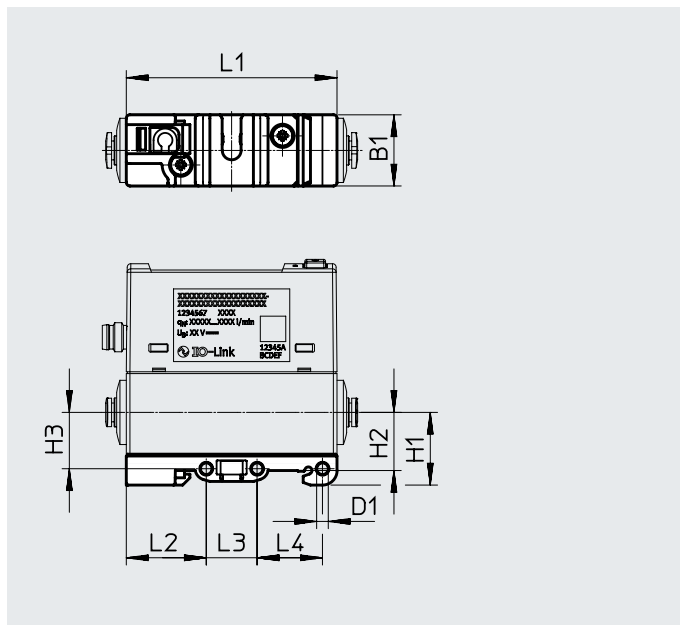
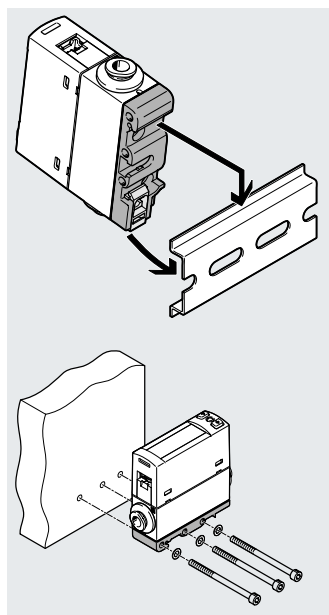
1) Suitable for the production of lithium-ion batteries:

Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.

Accessories

H-rail mounting SAMH-FH-H ...

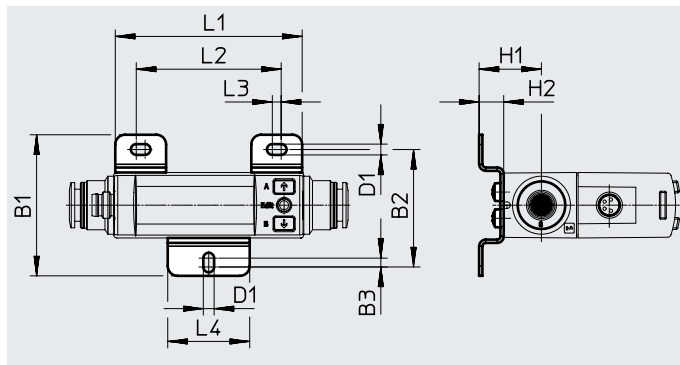
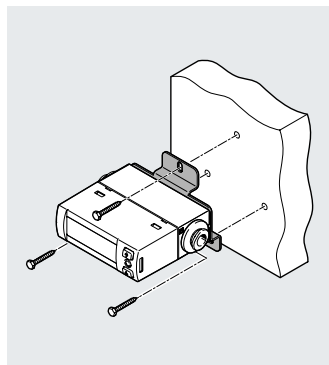
Material: PA, POM, steel
RoHS-compliant



| Dimensions and ordering data | | | | | | | | | | | |
|------------------------------|------|---------|----|----|------|----|----|----|----|----------|-----------|
| Type | B1 | D1 ∅ | 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



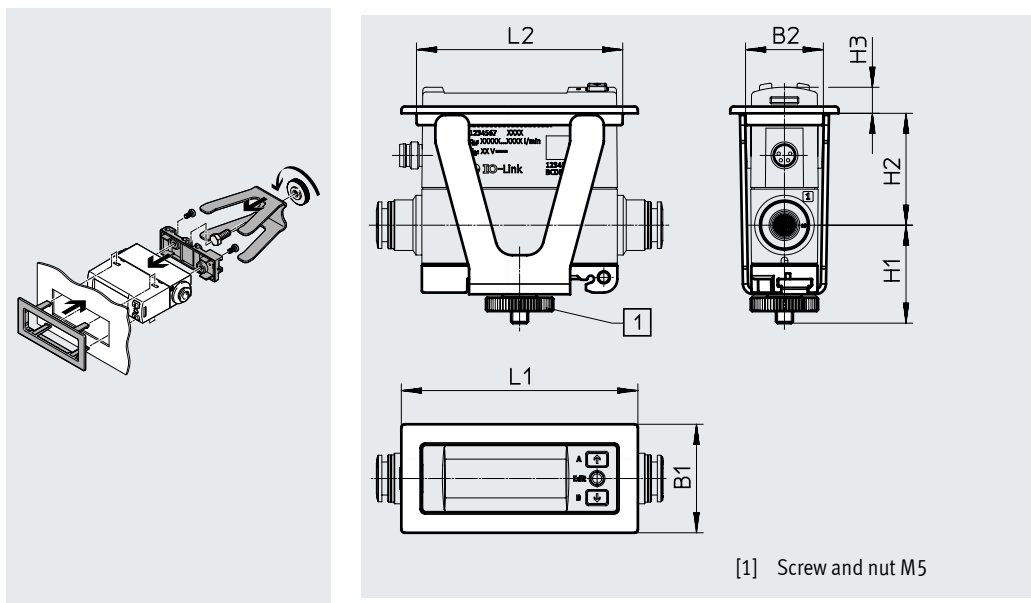
| Dimensions and ordering data | | | | | | | | | | | | | |
|------------------------------|------|------|-----|-----|------|-----|----|------|-----|----|-------------------|----------|-----------|
| Type | B1 | B2 | B3 | D1 | H1 | H2 | L1 | L2 | L3 | L4 | CRC ¹⁾ | Part no. | Type |
| SAMH-FH-W | 43.1 | 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 can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Accessories

Panel mounting kit SAMH-FH-F ...

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

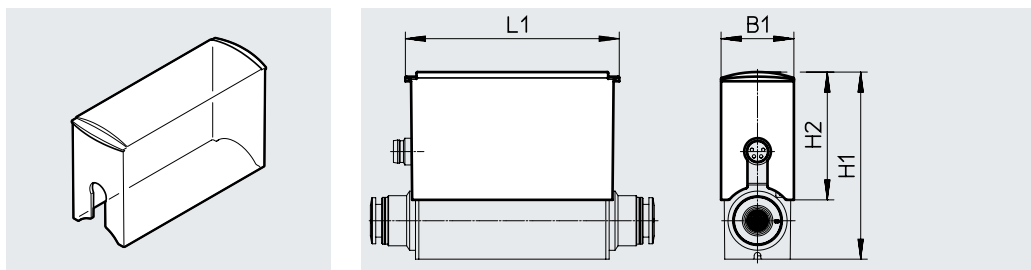


| Dimensions | | | | | | | | | | |
|------------|------|------|---------|------|-----|------|------|-------------------|----------|-----------|
| Type | B1 | B2 | H1 max. | H2 | H3 | L1 | L2 | CRC ¹⁾ | Part no. | Type |
| SAMH-FH-F | 32.2 | 23.1 | 30 | 33.2 | 7.7 | 70.2 | 61.2 | 2 | 8058459 | SAMH-FH-F |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

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 mounting as illustrated on page 3.

Accessories

| Ordering data – Connecting cables | | | | |
|--|------------------------------|------------------|----------|---------------------|
| | Number of wires | Cable length [m] | Part no. | Type |
| Socket, rectangular design L1 Data sheets → Internet: nebs | | | | |
|  | 4 | 2.5 | 572576 | NEBS-L1G4-K-2.5-LE4 |
| M8x1, straight socket Data sheets → Internet: nebu | | | | |
|  | 4 | 2.5 | 541342 | NEBU-M8G4-K-2.5-LE4 |
| M8x1, angled socket | | | | |
|  | 4 | 2.5 | 541344 | NEBU-M8W4-K-2.5-LE4 |
| Ordering data – Push-in fittings | | | | |
| | Pneumatic connection O.D. | For tubing O.D. | Part no. | Type |
| Straight connection | | | | |
|  | G1/8 | 4 mm | 186095 | QS-G1/8-4 |
| | | 6 mm | 186096 | QS-G1/8-6 |
| | | 8 mm | 186098 | QS-G1/8-8 |
| | G1/4 | 6 mm | 186097 | QS-G1/4-6 |
| | | 8 mm | 186099 | QS-G1/4-8 |
| | | 10 mm | 186101 | QS-G1/4-10 |
| 90° connection | | | | |
|  | G1/8 | 4 mm | 186116 | QSL-G1/8-4 |
| | | 6 mm | 186117 | QSL-G1/8-6 |
| | | 8 mm | 186119 | QSL-G1/8-8 |
| | G1/4 | 6 mm | 186118 | QSL-G1/4-6 |
| | | 8 mm | 186120 | QSL-G1/4-8 |
| | | 10 mm | 186122 | QSL-G1/4-10 |
| Ordering data – Vacuum filter | | | | |
| | Connection | For tubing O.D. | Part no. | Type |
|  | PK-3 | 4 | 535883 | VAF-PK-3 |
| | PK-4 | 6 | 15889 | VAF-PK-4 |
| | PK-6 | 8 | 160239 | VAF-PK-6 |