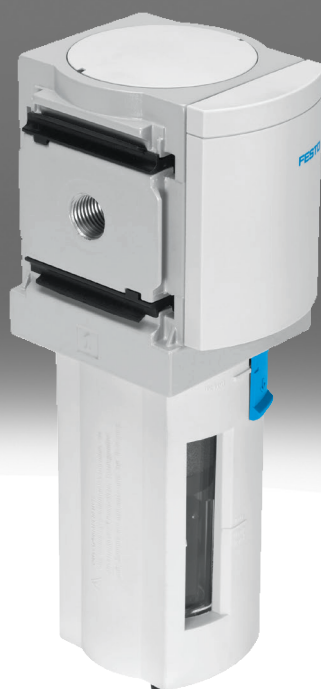


## Micro filter MS6N-LFM-A

**FESTO**



## Characteristics

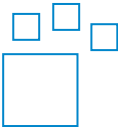
### At a glance

High-efficiency filter for exceptionally clean compressed air.

- Removal of oil aerosols from compressed air
- Air quality according to ISO 8573-1:2010

### Ordering data - modular system

Link [ms6n-lfm-a](#)



Configurable product

This product and all its product options can be ordered online via the configurator.

### Size

Width dimension: 62 mm

Standard nominal flow rate:

- 13.4 ... 16.9 scfm

### Pneumatic connection

The installation of connection plates makes it easier to replace the module if necessary (e.g., when using piping).

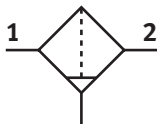
### Bowl type

Shell guard selectable either as plastic bowl guard or integrated as metal shell.

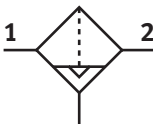
### Condensate drains

- Fully automatic condensate drain with independent electrical controller

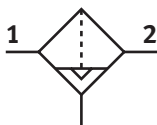
[M] Manual



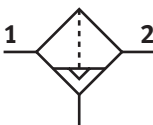
[H] Semi-automatic



[V] Automatic



[VC] Fully automatic, normally closed



The following functions can be selected:

- Manual
- Semi-automatic
- Fully automatic

### Filter change sensing

Optionally with differential pressure display for filter contamination or with electronic filter contamination indicator.

## Characteristics

### Type of mounting

[WB] Mounting centrally at rear (wall mounting top and bottom), sub-bases not required



- For wall mounting an individual device
- For size 4 or 6

[WP] Mounting bracket standard design



- For connecting the modules for wall mounting
- In conjunction with sub-base MS6-AQ... for mounting an individual device on a wall
- In conjunction with mounting plate MS4-AEND for wall mounting of a single device
- With equal wall distance for mixing combination with series MS4 and MS6

[WPM] Mounting bracket for hooking in air preparation units



- Mounting attachment and connector for air preparation unit combination
- Mount and dismount the service unit combination quickly
- Spacer for maintaining the mounting gap
- For size 4, 6, or 9

### Flow direction

Available with opposite flow direction.

## Type code

|     |                            |  |
|-----|----------------------------|--|
| 001 | Series                     |  |
| MS  | MS series                  |  |
| 002 | Size                       |  |
| 6   | Width dimension 62 mm      |  |
| 003 | Thread type                |  |
| N   | NPT thread                 |  |
| 004 | Function                   |  |
| LFM | Fine and micro filters     |  |
| 005 | Pneumatic connection, inch |  |
| 1/4 | Internal thread NPT 1/4    |  |
| 3/8 | Internal thread NPT 3/8    |  |
| 1/2 | Internal thread NPT 1/2    |  |
| 006 | Filter design              |  |
| A   | 0.01 µm                    |  |

|     |                                       |  |
|-----|---------------------------------------|--|
| 007 | Bowl type                             |  |
| R   | Plastic bowl with plastic bowl guard  |  |
| U   | Aluminum                              |  |
| 008 | Condensate drains                     |  |
| M   | Manual                                |  |
| V   | Automatic                             |  |
| 009 | Filter change sensing                 |  |
|     | Without                               |  |
| DA  | Differential pressure display, visual |  |
| 010 | Type of mounting                      |  |
|     | Without mounting bracket              |  |
| 011 | Flow direction                        |  |
|     | Flow direction from left to right     |  |
| Z   | Flow direction from right to left     |  |

# Datasheet

| General technical data            |                                                            |         |         |
|-----------------------------------|------------------------------------------------------------|---------|---------|
| Pneumatic connection 1            | 1/4 NPT                                                    | 3/8 NPT | 1/2 NPT |
| Pneumatic connection 2            | 1/4 NPT                                                    | 3/8 NPT | 1/2 NPT |
| Size                              | 6                                                          |         |         |
| Structural design                 | Fiber filter                                               |         |         |
| Grade of filtration               | 0.01 µm                                                    |         |         |
| Type of mounting                  | Alternatively:<br>In-line installation<br>With accessories |         |         |
| Mounting position                 | Vertical ±5°                                               |         |         |
| Air quality class at the output   | Compressed air as per ISO 8573-1:2010 [3:4:2]              |         |         |
| Filter efficiency                 | 99.9999%                                                   |         |         |
| Bowl guard                        | Plastic bowl guard, Integrated as metal bowl               |         |         |
| Condensate drain                  | Fully automatic, Manual, non-detenting, Manual, rotating   |         |         |
| Max. condensate volume            | 38 cm³                                                     |         |         |
| Differential pressure display     | Visual display                                             |         |         |
| Filter efficiency, fine particles | 99.995%                                                    |         |         |
| Filter efficiency, oil aerosol    | 99%                                                        |         |         |
| MPPS                              | 0.05 µm                                                    |         |         |
| MPPS filter efficiency            | 99.95%                                                     |         |         |

| Standard nominal flow rate qnN                              |           |
|-------------------------------------------------------------|-----------|
| Min. standard flow rate for air quality class               | 135 l/min |
| Max. standard flow rate for air quality class <sup>1)</sup> | 900 l/min |

1) High flow rate HF: 2500 l/min

| Operating and environmental conditions         |                                                              |                  |
|------------------------------------------------|--------------------------------------------------------------|------------------|
| Condensate drain                               | Fully automatic, Manual, non-detenting                       | Manual, rotating |
| Operating pressure                             | 2 ... 12 bar                                                 | 0 ... 20 bar     |
| Operating medium <sup>1)</sup>                 | Compressed air as per ISO 8573-1:2010 [6:4:4]<br>Inert gases |                  |
| Ambient temperature                            | -10 ... 60°C                                                 |                  |
| Temperature of medium                          | -10 ... 60°C                                                 |                  |
| Storage temperature                            | -10 ... 60°C                                                 |                  |
| Corrosion resistance class (CRC) <sup>2)</sup> | 2 - Moderate corrosion stress                                |                  |
| For use in the food industry <sup>3)</sup>     | See supplementary material information                       |                  |

1) It is recommended to pre-filter the compressed air for the Micro filter MS-LFM-A with a Micro filter MS-LFM-B (filter fineness 1 µm).

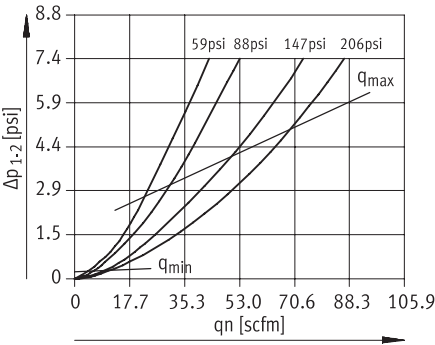
2) For more information, visit [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

3) More information: [www.festo.com/catalogue/ms6n-lr](http://www.festo.com/catalogue/ms6n-lr) → Support/Downloads.

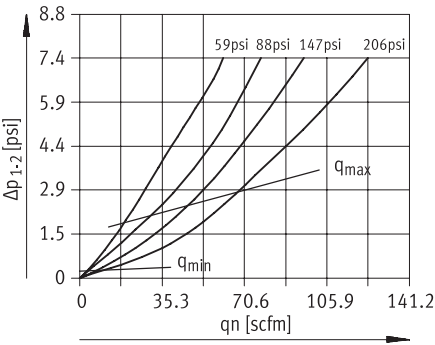
| Materials                      |                            |
|--------------------------------|----------------------------|
| Housing material               | Die-cast aluminum          |
| Material of bowl               | Wrought aluminum alloy, PC |
| Compressed air filter material | Borosilicate glass fiber   |
| Seals material                 | NBR                        |
| Note on materials              | RoHS compliant             |
| LABS (PWIS) conformity         | VDMA24364-B1/B2-L          |

Datasheet

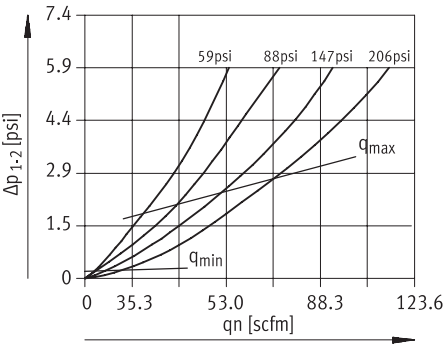
Normal flow rate qn as a function of the differential pressure Δp1-2 (M6N-LFM-1/4)



Normal flow rate qn as a function of the differential pressure Δp1-2 (M6N-LFM-3/8)



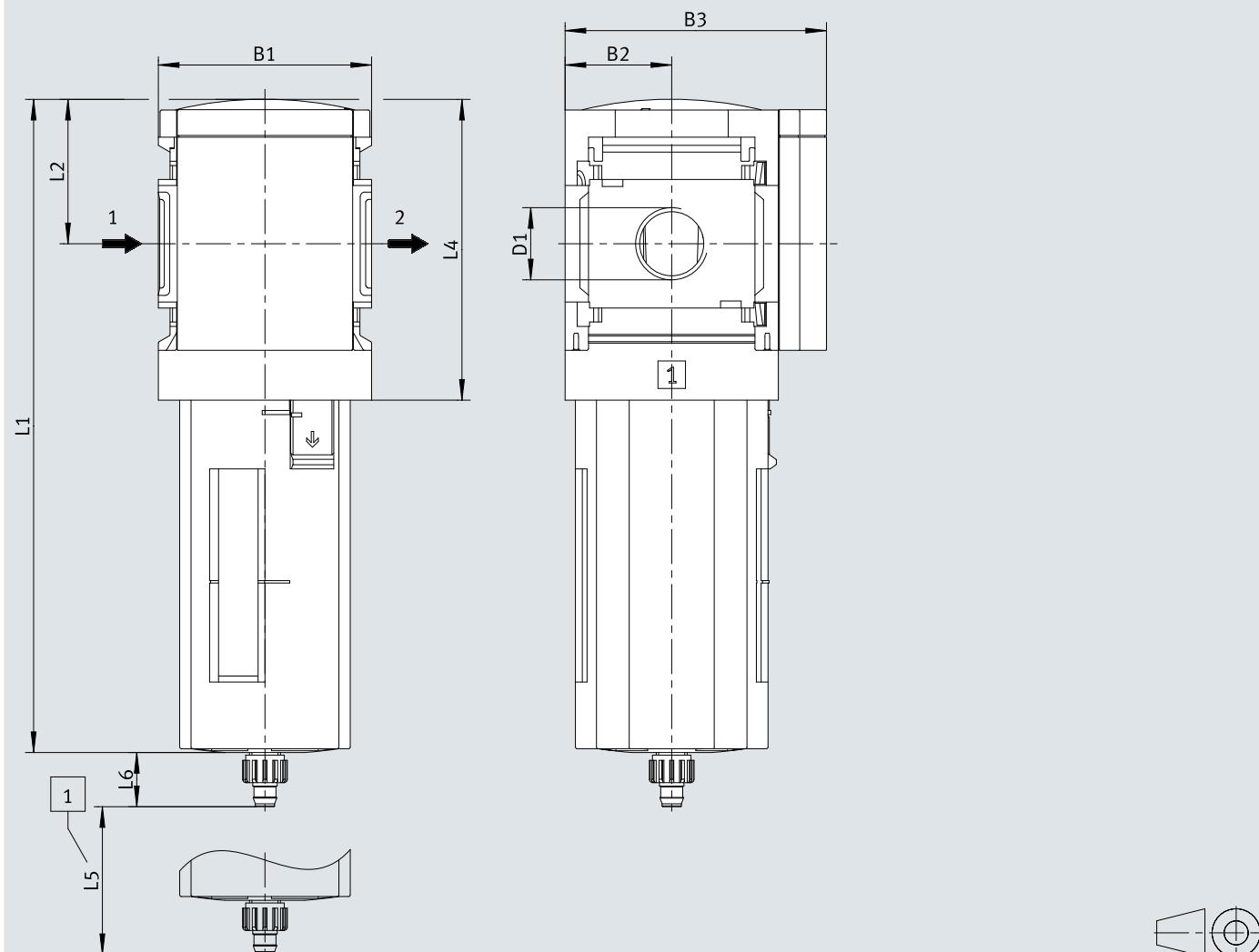
Normal flow rate qn as a function of the differential pressure Δp1-2 (M6N-LFM-1/2)



## Dimensions

Dimensions – Condensate drain, manual rotary, with plastic bowl guard R

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

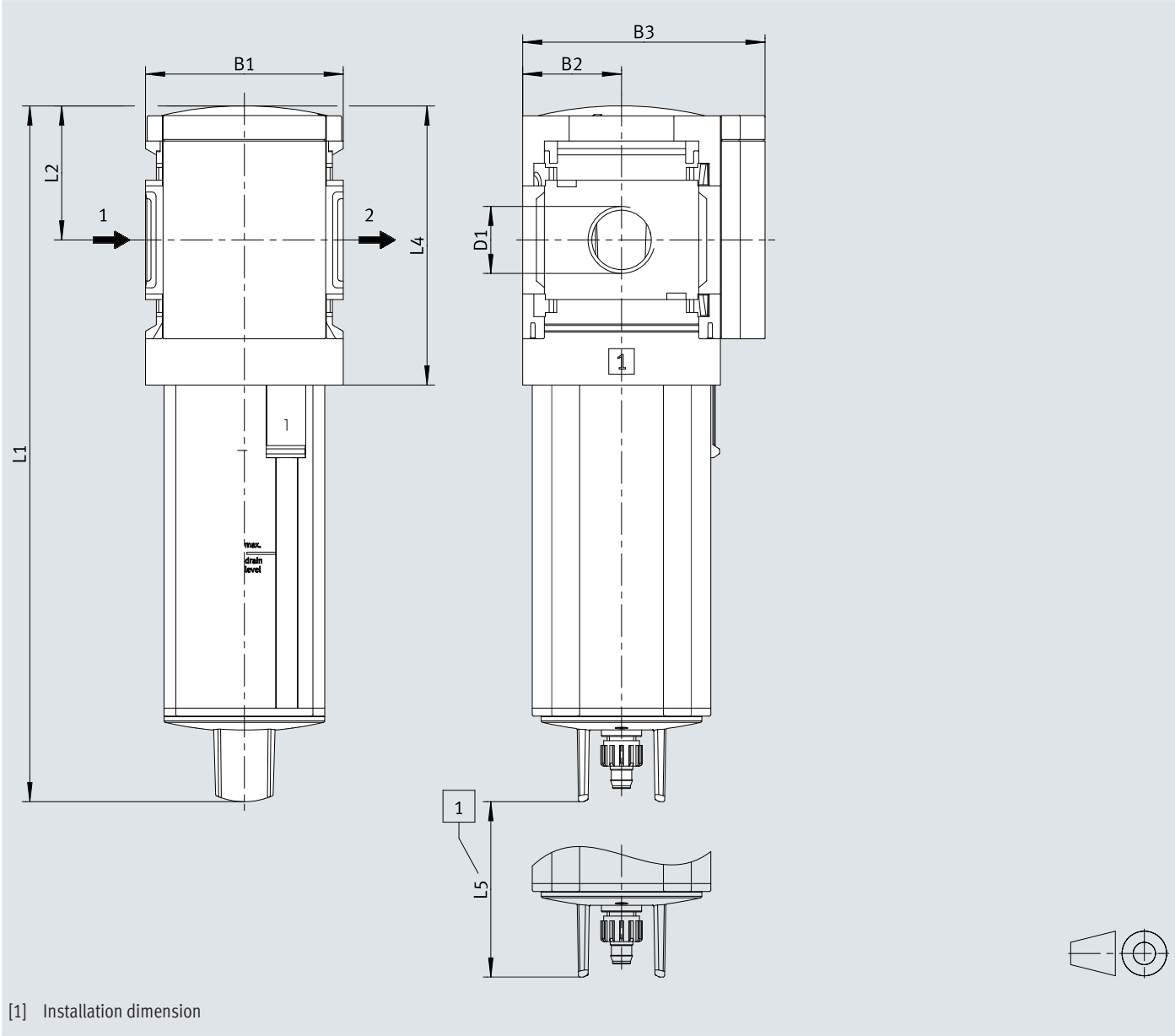


[1] Installation dimension

|              | B1<br>[inch] | B2<br>[inch] | B3<br>[inch] | D1      | L1<br>[inch] | L2<br>[inch] | L4<br>[inch] | L5<br>[inch] | L5<br>[inch] |
|--------------|--------------|--------------|--------------|---------|--------------|--------------|--------------|--------------|--------------|
| MS6N-LFM-1/4 | 2,44         | 1,22         | 2,99         | 1/4 NPT | 7,44         | 1,65         | 3,43         | 3,15         | 0,62         |
| MS6N-LFM-3/8 |              |              |              | 3/8 NPT |              |              |              |              |              |
| MS6N-LFM-1/2 |              |              |              | 1/2 NPT |              |              |              |              |              |

Dimensions

Dimensions – Condensate drain, manual rotary, with metal bowl U Download CAD data [www.festo.com](http://www.festo.com)



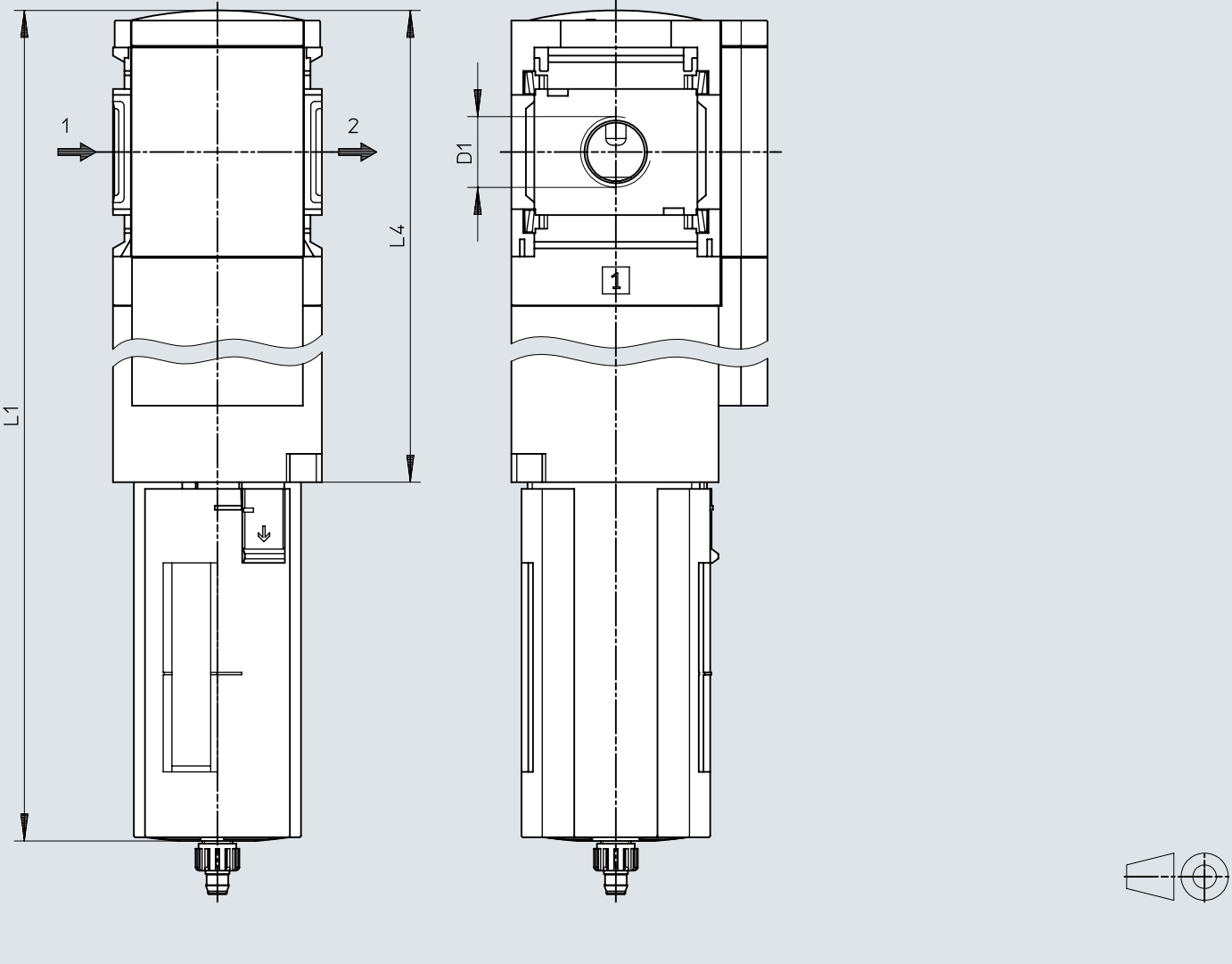
[1] Installation dimension

|              | B1<br>[inch] | B2<br>[inch] | B3<br>[inch] | D1      | L1<br>[inch] | L2<br>[inch] | L4<br>[inch] | L5<br>[inch] |
|--------------|--------------|--------------|--------------|---------|--------------|--------------|--------------|--------------|
| MS6N-LFM-1/4 | 2,44         | 1,22         | 2,99         | 1/4 NPT | 7,80         | 1,65         | 3,43         | 3,15         |
| MS6N-LFM-3/8 |              |              |              | 3/8 NPT |              |              |              |              |
| MS6N-LFM-1/2 |              |              |              | 1/2 NPT |              |              |              |              |

Dimensions

Dimensions – High flow rate HF, with plastic bowl guard R

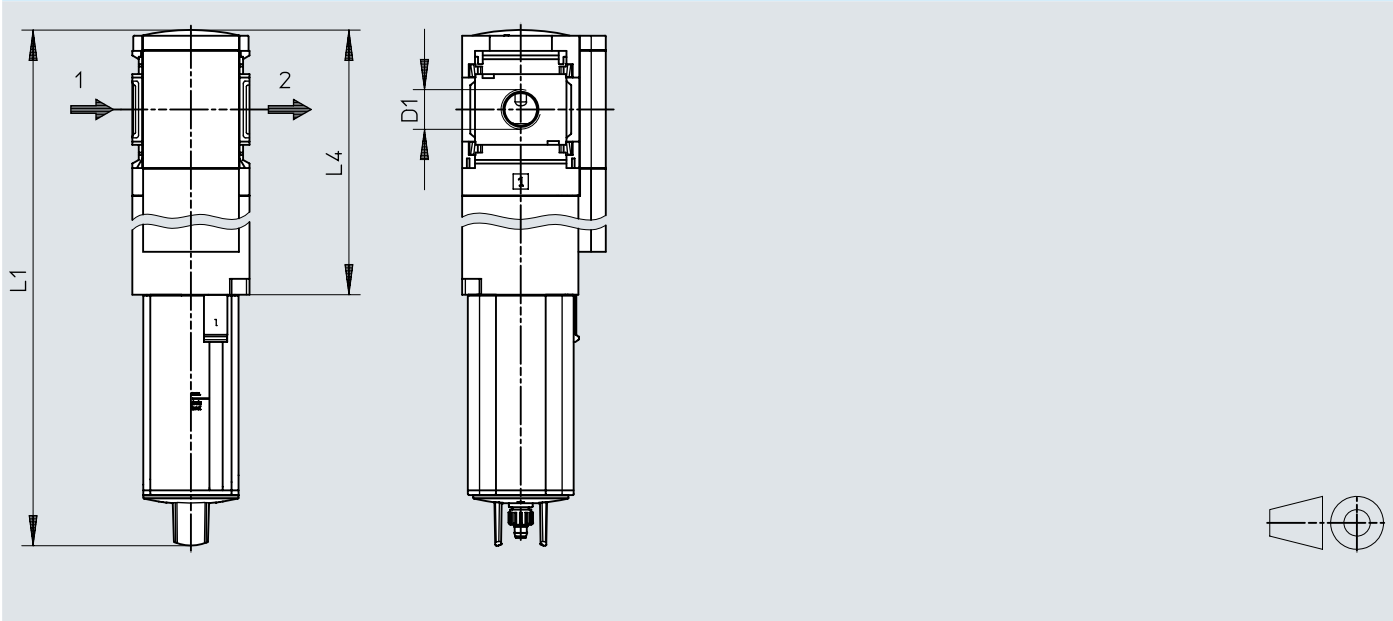
Download CAD data [www.festo.com](http://www.festo.com)



|                     | D1      | L1<br>[inch] | L4<br>[inch] |
|---------------------|---------|--------------|--------------|
| MS6N-LFM-1/4-...-HF | 1/4 NPT | 12,32        | 8,15         |
| MS6N-LFM-3/8-...-HF | 3/8 NPT |              |              |
| MS6N-LFM-1/2-...-HF | 1/2 NPT |              |              |

Dimensions

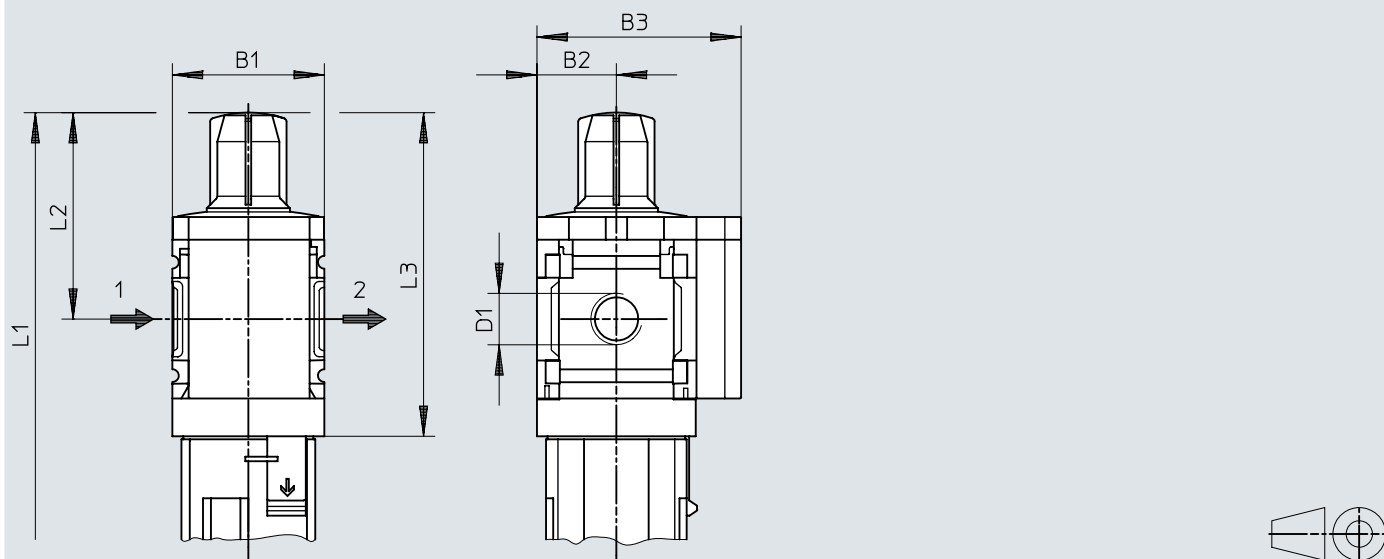
Dimensions – High flow rate HF, with metal bowl U Download CAD data [www.festo.com](http://www.festo.com)



|                     | D1      | L1<br>[inch] | L4<br>[inch] |
|---------------------|---------|--------------|--------------|
| MS6N-LFM-1/4-...-HF | 1/4 NPT | 13,39        | 8,15         |
| MS6N-LFM-3/8-...-HF | 3/8 NPT |              |              |
| MS6N-LFM-1/2-...-HF | 1/2 NPT |              |              |

## Dimensions

### Dimensions – Differential pressure display DA

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


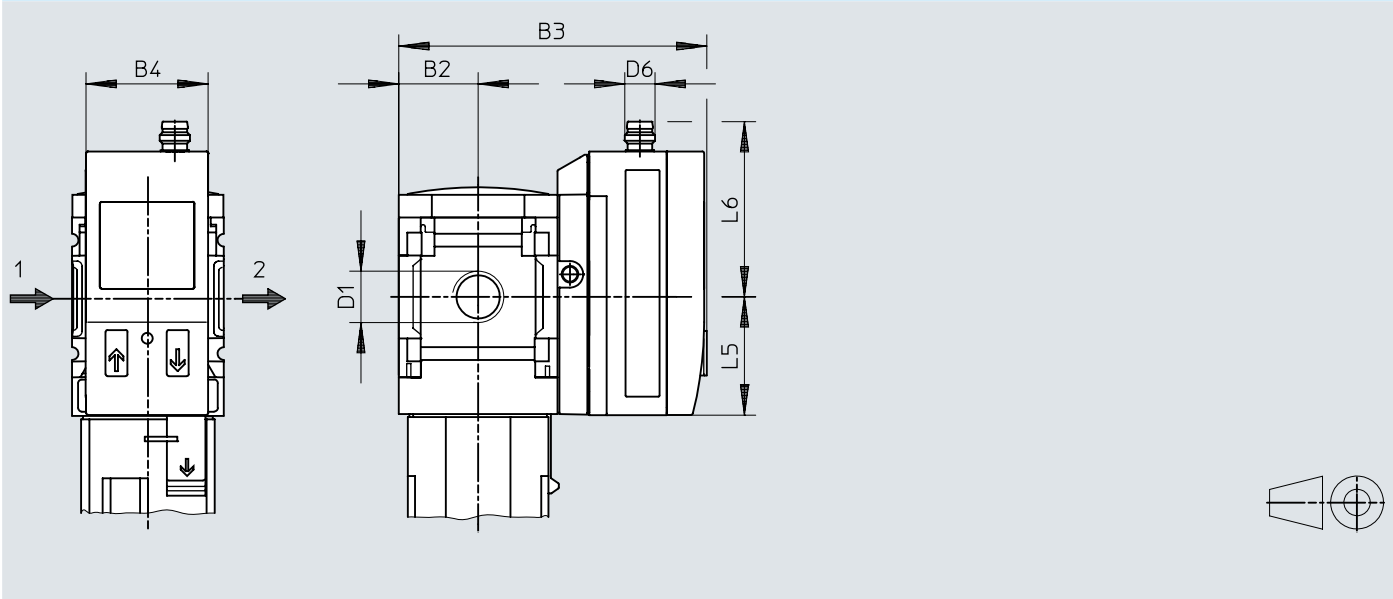
|                        | B1<br>[inch] | B2<br>[inch] | B3<br>[inch] | D1      | L1<br>[inch] |       | L2<br>[inch] | L3<br>[inch] |
|------------------------|--------------|--------------|--------------|---------|--------------|-------|--------------|--------------|
|                        |              |              |              |         | 1)           | 2)    |              |              |
| MS6N-LFM-1/4-...-DA    | 2,44         | 1,22         | 2,99         | 1/4 NPT | 9,02         | 10,12 | 2,68         | 4,45         |
| MS6N-LFM-3/8-...-DA    |              |              |              | 3/8 NPT |              |       |              |              |
| MS6N-LFM-1/2-...-DA    |              |              |              | 1/2 NPT |              |       |              |              |
| MS6N-LFM-1/4-...-HF-DA | 2,44         | 1,22         | 2,99         | 1/4 NPT | 13,74        | 14,80 | 2,68         | 4,45         |
| MS6N-LFM-3/8-...-HF-DA |              |              |              | 3/8 NPT |              |       |              |              |
| MS6N-LFM-1/2-...-HF-DA |              |              |              | 1/2 NPT |              |       |              |              |

1) Bowl guard, polymer

2) Bowl guard, metal

Dimensions

Dimensions – Filter contamination indicator DP, DN, DPI, DNI Download CAD data [www.festo.com](http://www.festo.com)



|                          | B2<br>[inch] | B3<br>[inch] | B4<br>[inch] | D1      | D6    | L5<br>[inch] | L6<br>[inch] |
|--------------------------|--------------|--------------|--------------|---------|-------|--------------|--------------|
| MS6N-LFM-1/4-...-DP/DN   | 1,22         | 4,06         | 1,27         | 1/4 NPT | M8x1  | 1,38         | 1,84         |
| MS6N-LFM-3/8-...-DP/DN   |              |              |              | 3/8 NPT |       |              |              |
| MS6N-LFM-1/2-...-DP/DN   |              |              |              | 1/2 NPT |       |              |              |
| MS6N-LFM-1/4-...-DPI/DNI | 1,22         | 4,06         | 1,27         | 1/4 NPT | M12x1 | 1,38         | 2,20         |
| MS6N-LFM-3/8-...-DPI/DNI |              |              |              | 3/8 NPT |       |              |              |
| MS6N-LFM-1/2-...-DPI/DNI |              |              |              | 1/2 NPT |       |              |              |

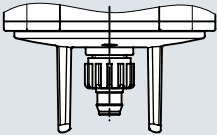
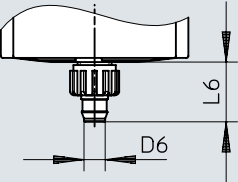
Dimensions

Dimensions – Condensate drain, manual rotary

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

MS6 – . . . -R-M

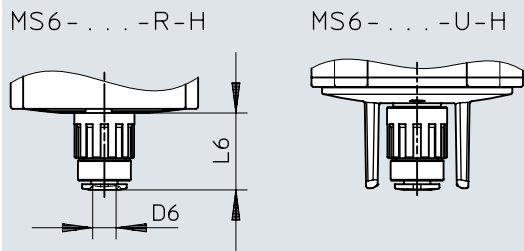
MS6 – . . . -U-M



|                  | D6<br>Ø<br>[inch] | L6<br>[inch] |
|------------------|-------------------|--------------|
| MS6N-LFM-...-R-M | 0,197             | 0,62         |
| MS6N-LFM-...-U-M | 0,197             | 0,75         |

Dimensions

Dimensions – Condensate drain, semiautomatic Download CAD data [www.festo.com](http://www.festo.com)



|                  | D6<br>Ø<br>[inch] | L6<br>[inch] |
|------------------|-------------------|--------------|
| MS6N-LFM-...-R-H | 0,236             | 0,80         |
| MS6N-LFM-...-U-H | 0,236             | 0,90         |

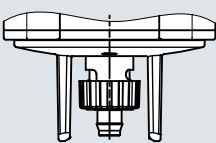
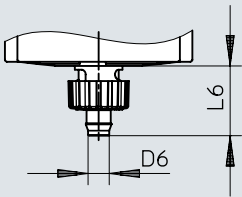
Dimensions

Dimensions – Condensate drain, fully automatic

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

MS6-...-R-V

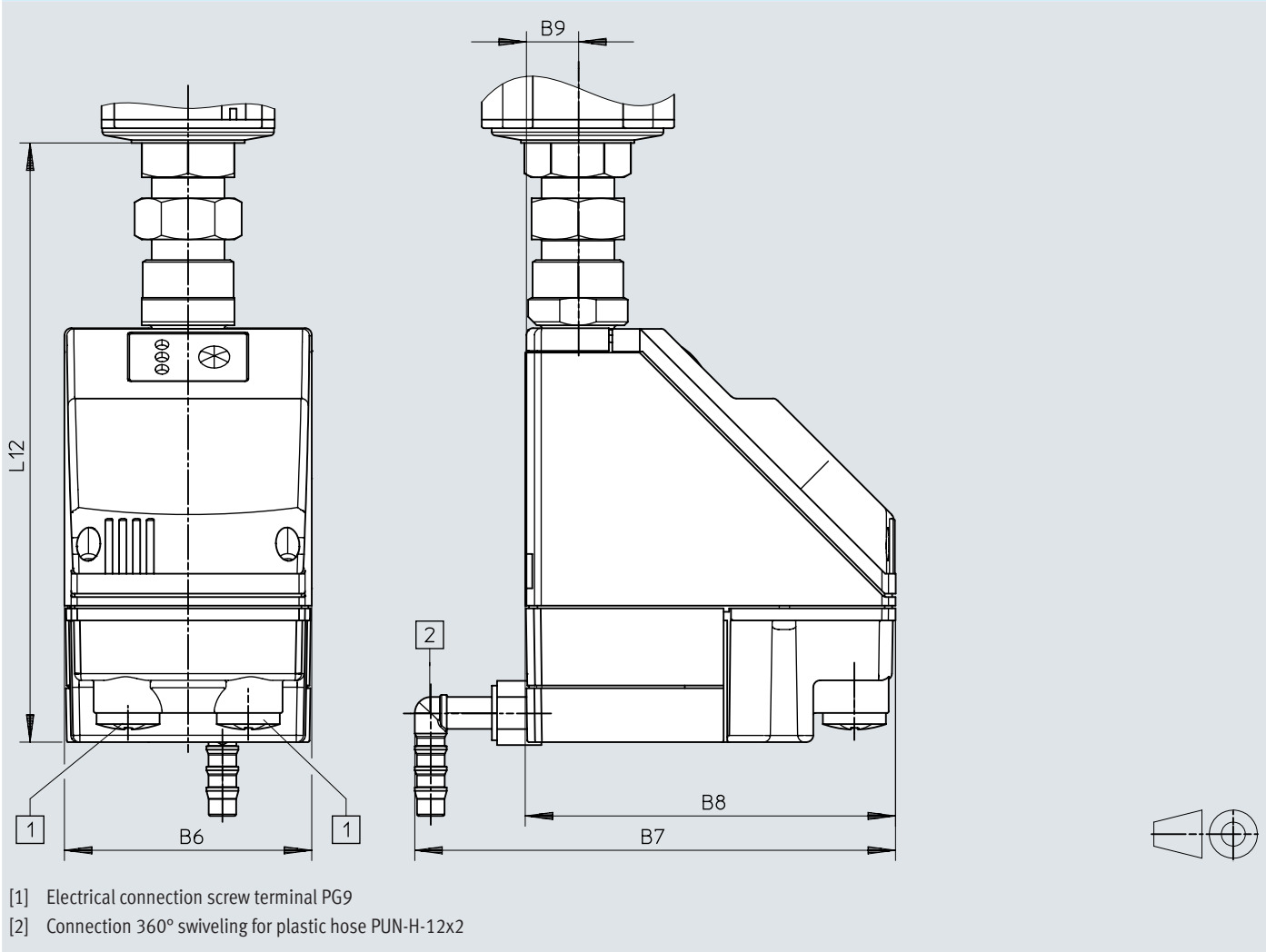
MS6-...-U-V



|                  | D6<br>Ø<br>[inch] | L6<br>[inch] |
|------------------|-------------------|--------------|
| MS6N-LFM-...-R-V | 0,197             | 0,73         |
| MS6N-LFM-...-U-V | 0,197             | 0,87         |

Dimensions

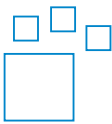
Dimensions – Condensate drain fully automatic, electrically controlled Download CAD data [www.festo.com](http://www.festo.com)



|                        | B6<br>[inch] | B7<br>[inch] | B8<br>[inch] | B9<br>[inch] | L12<br>[inch] |
|------------------------|--------------|--------------|--------------|--------------|---------------|
| MS6N-LF-...-E2, E3, E4 | 2,835        | 5,512        | 4,252        | 0,591        | 6,868         |

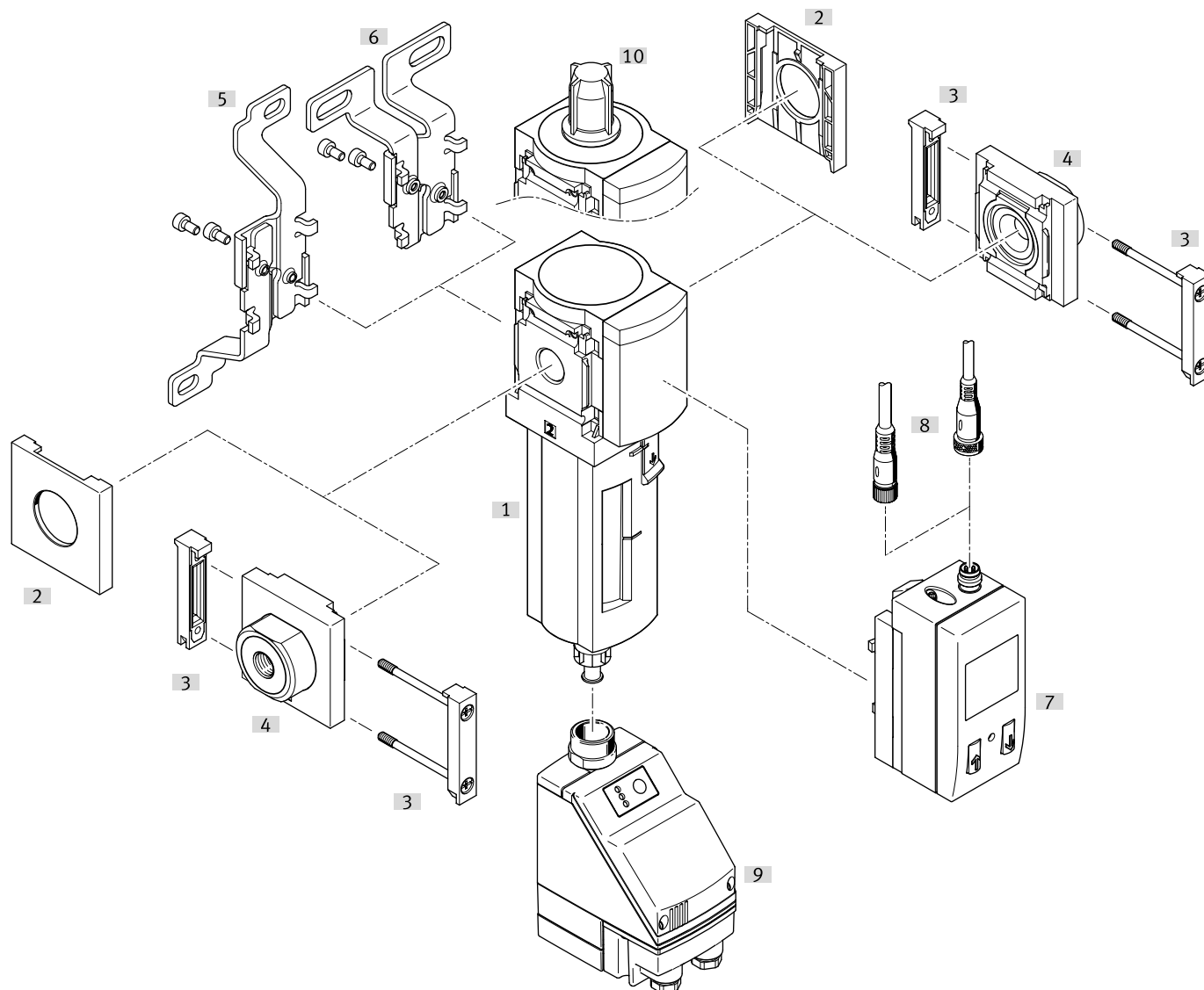
## Ordering data

| Ordering data                                                                     |                        |                     |                                         |                  |                  |                       |
|-----------------------------------------------------------------------------------|------------------------|---------------------|-----------------------------------------|------------------|------------------|-----------------------|
|                                                                                   | Pneumatic connection 1 | Grade of filtration | Condensate drain                        | Product weight   | Part no.         | Type                  |
|  | 1/4 NPT                | 0.01 µm             | Fully automatic, Manual, non-de-tenting | 600 g            | 531866           | MS6N-LFM-1/4-ARV      |
|                                                                                   |                        |                     |                                         |                  | 536893           | MS6N-LFM-1/4-ARV-DA   |
|                                                                                   |                        |                     | 820 g                                   | 531878           | MS6N-LFM-1/4-AUV |                       |
|                                                                                   | 3/8 NPT                |                     | Manual, rotating                        | 600 g            | 531860           | MS6N-LFM-1/4-ARM      |
|                                                                                   |                        |                     | Fully automatic, Manual, non-de-tenting |                  | 531868           | MS6N-LFM-3/8-ARV      |
|                                                                                   |                        |                     |                                         |                  | 536894           | MS6N-LFM-3/8-ARV-DA   |
|                                                                                   |                        |                     |                                         | 820 g            | 531880           | MS6N-LFM-3/8-AUV      |
|                                                                                   |                        |                     | Manual, rotating                        | 600 g            | 531862           | MS6N-LFM-3/8-ARM      |
|                                                                                   |                        |                     |                                         |                  | 536888           | MS6N-LFM-3/8-ARM-DA   |
|                                                                                   | 1/2 NPT                |                     | Fully automatic, Manual, non-de-tenting |                  | 536895           | MS6N-LFM-1/2-ARV-DA   |
|                                                                                   |                        |                     |                                         |                  | 536898           | MS6N-LFM-1/2-ARV-DA-Z |
|                                                                                   |                        |                     |                                         |                  | 531867           | MS6N-LFM-1/2-ARV      |
|                                                                                   |                        |                     |                                         | 820 g            | 536901           | MS6N-LFM-1/2-AUV-DA   |
|                                                                                   |                        |                     |                                         | 531879           | MS6N-LFM-1/2-AUV |                       |
|                                                                                   |                        |                     | Manual, rotating                        | 600 g            | 536889           | MS6N-LFM-1/2-ARM-DA   |
|                                                                                   |                        | 531861              |                                         | MS6N-LFM-1/2-ARM |                  |                       |

| Ordering data– Modular product system                                              |           |          |          |
|------------------------------------------------------------------------------------|-----------|----------|----------|
|                                                                                    | Type code | Part no. | Type     |
|  | MS6N-LFM  | 527671   | MS6N-LFM |

## Peripherals overview

## Peripherals overview



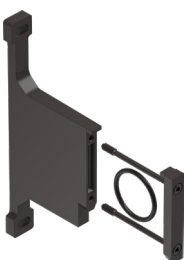
| Accessories                                          |                                                              | → Page/Internet            |
|------------------------------------------------------|--------------------------------------------------------------|----------------------------|
| Type/order code                                      | Description                                                  |                            |
| [1] Fine filter M6N-LFM-A                            |                                                              | <a href="#">ms6n-lfm-a</a> |
| [2] Cover cap MS6-END                                | For devices without sub-base                                 | 20                         |
| [3] Module connector MS6-MV1                         | For device combinations and individual devices with sub-base | 19                         |
| [4] Sub-base-SET MS6-AQ...                           | Order code [AQ...]; for device combinations                  | 20                         |
| [5] Mounting bracket MS6-WB                          | for single device                                            | 19                         |
| [6] Mounting bracket MS...-WBM                       | Only available for size 4                                    | <a href="#">-</a>          |
| [7] Filter contamination indicator DP/DN/DPI/DNI     | Order code [DP], [DN], [DPI], [DNI]                          | <a href="#">ms6n-lfm-a</a> |
| [8] Connecting cable NEBA-M8...-LE3, NEBA-M12...-LE4 |                                                              | 20                         |
| [9] Condensate drain PWEA                            | Order code [E2], [E3], [E4]                                  | <a href="#">pwea</a>       |
| [10] Differential pressure display DA                | Order code [DA]                                              | <a href="#">ms6n-lfm-a</a> |
| [11] Micro filter cartridge                          | Not shown                                                    | 19                         |

## Accessories

| Micro-filter cartridges                                                           |                     |                                |                                 |          |              |
|-----------------------------------------------------------------------------------|---------------------|--------------------------------|---------------------------------|----------|--------------|
|                                                                                   | Grade of filtration | Compressed air filter material | Note on materials <sup>1)</sup> | Part no. | Type         |
|  | 0.01 µm             | Borosilicate glass fiber       | RoHS compliant                  | 532909   | MS6-LFM-A    |
|                                                                                   |                     |                                |                                 | 552093   | MS6-LFM-A-HF |
|                                                                                   |                     |                                |                                 | 547922   | MS6-LFM-AI   |

1) ...-HF: High flow rate; M...-...I: Application area HP, suitable for sealing air and purge air

| Module connector MS6-MV1                                                          |                                 |                        |                |          |         |
|-----------------------------------------------------------------------------------|---------------------------------|------------------------|----------------|----------|---------|
|                                                                                   | Module connector material       | LABS (PWIS) conformity | Product weight | Part no. | Type    |
|  | POM, high-alloy stainless steel | VDMA24364-B1/B2-L      | 33 g           | 8119204  | MS6-MV1 |

| Mounting bracket MS6-WP...                                                          |                   |                        |                |          |            |
|-------------------------------------------------------------------------------------|-------------------|------------------------|----------------|----------|------------|
|                                                                                     | Bracket material  | LABS (PWIS) conformity | Product weight | Part no. | Type       |
|  | Die-cast aluminum | VDMA24364-B1/B2-L      |                | 1025936  | MS6-WPE    |
|                                                                                     |                   |                        | 76 g           | 532195   | MS6-WP     |
|                                                                                     |                   |                        |                | 541544   | MS6-WP-EX  |
|                                                                                     |                   |                        | 115 g          | 526074   | MS6-WPB    |
|                                                                                     |                   |                        |                | 541542   | MS6-WPB-EX |
|                                                                                     |                   |                        | 144 g          | 526073   | MS6-WPM-D  |
|                                                                                     |                   |                        | 154 g          | 532186   | MS6-WPM-2D |

| Mounting bracket MS6-WB                                                             |                  |                        |                |          |        |
|-------------------------------------------------------------------------------------|------------------|------------------------|----------------|----------|--------|
|                                                                                     | Bracket material | LABS (PWIS) conformity | Product weight | Part no. | Type   |
|  | Steel            | VDMA24364-B1/B2-L      | 121 g          | 532196   | MS6-WB |

## Accessories

## Connecting cables NEBA, straight

|                                                                                  | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/wires | Cable length | Part no. | Type                   |
|----------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------|----------|------------------------|
|  | M12x1 A-coded as per EN 61076-2-101            | Open end                                       | 4                                             | 2.5 m        | 8078239  | NEBA-M12G5-U-2.5-N-LE4 |
|                                                                                  |                                                |                                                |                                               | 5 m          | 8078240  | NEBA-M12G5-U-5-N-LE4   |
|                                                                                  | M8x1 A-coded as per EN 61076-2-104             |                                                | 3                                             | 2.5 m        | 8078223  | NEBA-M8G3-U-2.5-N-LE3  |
|                                                                                  |                                                |                                                |                                               | 5 m          | 8078224  | NEBA-M8G3-U-5-N-LE3    |

## Connecting cables NEBA, angled

| Connecting cables NEBA, angled                                                    | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/wires | Cable length | Part no. | Type                   |
|-----------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------|----------|------------------------|
|  | M12x1 A-coded as per EN 61076-2-101            | Open end                                       | 4                                             | 2.5 m        | 8078248  | NEBA-M12W5-U-2.5-N-LE4 |
|                                                                                   |                                                |                                                |                                               | 5 m          | 8078249  | NEBA-M12W5-U-5-N-LE4   |
|                                                                                   | M8x1 A-coded as per EN 61076-2-104             |                                                | 3                                             | 2.5 m        | 8078230  | NEBA-M8W3-U-2.5-N-LE3  |
|                                                                                   |                                                |                                                |                                               | 5 m          | 8078231  | NEBA-M8W3-U-5-N-LE3    |

## Sub-base-SET MS6-AQ...

|                                                                                    | Pneumatic connection 1 | Material of sub-base | LABS (PWIS) conformity | Product weight | Part no. | Type     |
|------------------------------------------------------------------------------------|------------------------|----------------------|------------------------|----------------|----------|----------|
|  | 1/4 NPT                | Die-cast aluminum    | VDMA24364-B1/B2-L      | 300 g          | 526076   | MS6N-AQN |
|                                                                                    | 3/8 NPT                |                      |                        |                | 526077   | MS6N-AQP |
|                                                                                    | 1/2 NPT                |                      |                        |                | 526078   | MS6N-AQR |
|                                                                                    | 3/4 NPT                |                      |                        |                | 526079   | MS6N-AQS |

## Cover cap MS6-END

|                                                                                    | Housing material | LABS (PWIS) conformity | Part no. | Type    |
|------------------------------------------------------------------------------------|------------------|------------------------|----------|---------|
|  | PA-reinforced    | VDMA24364-B1/B2-L      | 538780   | MS6-END |