

## Fine and Micro Filters MS4-LFM – Metric Series

FESTO



Fine and micro filters, with 1 micron or 0.01 micron filtration grades, remove submicronic water or oil droplets and dirt particles for exceptionally clean compressed air.

- Pneumatic connection: G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$
- Supply pressure
  - For manual drain: 0 ... 14 bar
  - For semiautomatic drain: 1.5 ... 12 bar
  - For fully automatic drain: 2 ... 12 bar
- Flow rate: 120 ... 180 l/min

Product Range Overview													
Type	Pneumatic connections		Filtration grade [µm]				Bowl guard		Bowl drain			Contamination control	Reverse flow
	Body thread	Port plate	0.01	1	5	40	Plastic bowl guard	Metal bowl	Manual	Semiautomatic	Fully automatic	Differential pressure indicator	Flow direction from right to left
MS4		AG...	A	B	C	E	R	U	M	H	V	DA	Z
LFM	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	■	■	-	-	■	■	■	■	■	■	■

### Features

- High-performance filter for exceptionally clean compressed air
- Air quality to DIN ISO 8573-1
- Available with differential pressure indicator for optical indication of filter contamination
- LFM-A:
  - ISO class 1 for particles: max. particle density 0.1 mg/m $^3$
  - ISO class 2 for oil aerosols: max. oil concentration 0.1 mg/m $^3$
  - Filter efficiency 99.9999%
- LFM-B:
  - ISO class 2 for particles: max. particle density 1 mg/m $^3$
  - ISO class 3 for oil aerosols: max. oil concentration 1 mg/m $^3$
  - Filter efficiency 99.99%

### Contents

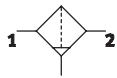
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→ [www.festo.com/catalog/ms4-lfm](http://www.festo.com/catalog/ms4-lfm)

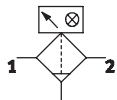
# Fine and Micro Filters MS4-LFM – Metric Series

Technical Data

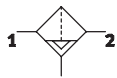
ISO Symbol



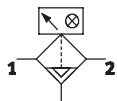
Manual bowl drain  
without differential pressure indicator



With differential pressure indicator



Semi or fully automatic bowl drain  
without differential pressure indicator



With differential pressure indicator



General Technical Data			
Pneumatic connection 1, 2		G1/8	G1/4
Filtration grade	[μm]	0.01 (micro filter LFM-A, air purity class at the output 1.7.2 to DIN ISO 8573-1) 1 (fine filter LFM-B, air purity class at the output 2.7.3 to DIN ISO 8573-1)	
Supply pressure	M [bar]	0 ... 14 (manual drain)	
	H [bar]	1.5 ... 12 (semiautomatic drain)	
	V [bar]	2 ... 12 (fully automatic drain)	

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard Nominal Flow Rate qnN <sup>1)</sup> and Standard Flow Rate qn [l/min]			
Pneumatic connection 1, 2		G1/8	G1/4
Micro filter LFM-A			
qnN 1 → 2	120	120	
qn min	54	54	
qn max	360	360	
Fine filter LFM-B			
qnN 1 → 2	180	180	
qn min	54	54	
qn max	360	360	

1) Measured at p1 = 6 bar and Δp = 70 mbar

## Fine and Micro Filters MS4-LFM – Metric Series

Technical Data

**FESTO**

Operating and Environmental Conditions			
Bowl drain	Manual M	Semiautomatic H	Fully automatic V
Operating medium micro filter LFM-A	Compressed air, filtered, unlubricated, filtration grade 1 µm		
Operating medium fine filter LFM-B	Compressed air, filtered, unlubricated, filtration grade 5 µm		
Max. condensate volume [cm <sup>3</sup> ]	19 (with plastic bowl guard) 25 (with metal bowl)		
Bowl guard	Plastic bowl guard		
	Metal bowl		
Ambient temperature [°C]	-10 ... +60	+5 ... +60	+5 ... +60
Temperature of medium [°C]	-10 ... +60	+5 ... +60	+5 ... +60
Storage temperature [°C]	-10 ... +60	-10 ... +60	-10 ... +60
Assembly position	Vertical ±5°		
Corrosion resistance CRC <sup>1)</sup>	2		

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weights [g]	
With plastic bowl guard	190
With metal bowl	350

- Wearing parts kits → 258
- Filter cartridges → 258
- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

# Fine and Micro Filters MS4-LFM – Metric Series

Technical Data

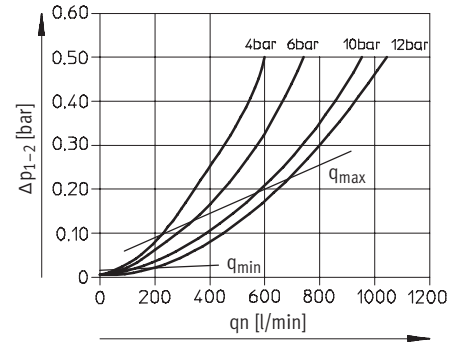
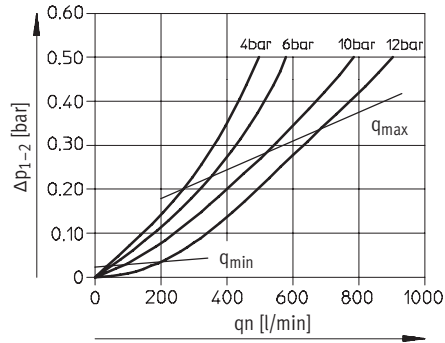


## Standard Flow Rate $q_n$ as a Function of the Differential Pressure $\Delta p_{1-2}$

Filtration grade 0.01  $\mu\text{m}$

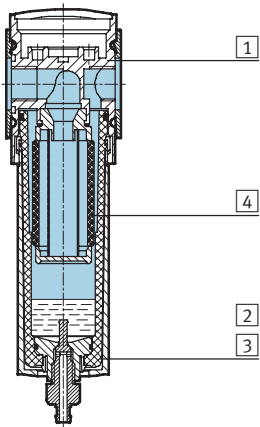
Filtration grade 1  $\mu\text{m}$

MS4-LFM-1/8 and MS4-LFM-1/4



## Materials

Sectional view



Fine and micro filter		
1	Body	Die-cast aluminum
2	Plastic bowl guard	Polycarbonate/polyamide
3	Metal bowl	Aluminum
	Viewing window	Polyamide
4	Filters	Borosilicate fiber
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE

# Fine and Micro Filters MS4-LFM – Metric Series

Dimensional Drawings



**Dimensions<sup>1)</sup> – Standard** Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Manual bowl drain

1 Installation dimensions  
→ Flow direction

Type	B1	B2	B3	D1	L1		L2	L3	L5	L6	
					Bowl guard					Plastic	Metal
					Plastic	Metal					
MS4-LFM-1/8	40	21	54	G1/8	142	160	29	60	25	17.7	17.7
MS4-LFM-1/4				G1/4							

1) Dimensions are in millimeters, unless otherwise noted.

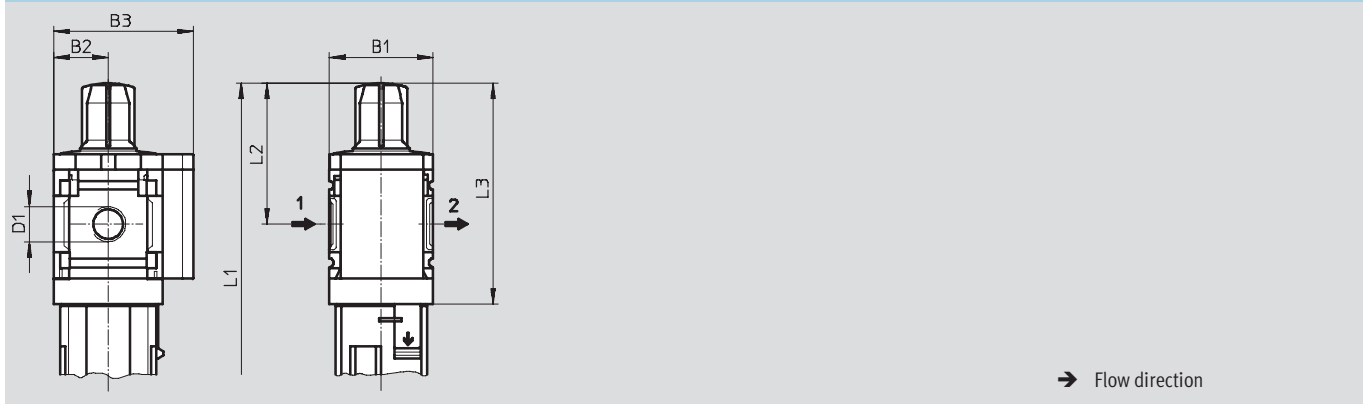
Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

# Fine and Micro Filters MS4-LFM – Metric Series

Dimensional Drawings



**Dimensions<sup>1)</sup> – Differential Pressure Indicator** Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



Type	B1	B2	B3	D1	L1 Bowl guard		L2	L3
					Plastic	Metal		
MS4-LFM-1/8-...-DA	40	21	54	G1/8	168	186	55	86
MS4-LFM-1/4-...-DA				G1/4				

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

**Dimensions<sup>1)</sup> – Bowl Drain** Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Manual M		Semiautomatic H		Fully automatic V	
	Barbed fitting for plastic tubing PCN-4		QS fitting for plastic tubing PUN-6/PAN-6		Barbed fitting for plastic tubing PCN-4

Type	L6
Plastic bowl guard	
MS4-LFM-...-M	17.7
Metal bowl	
MS4-LFM-...-M	17.7

Type	L6
Plastic bowl guard	
MS4-LFM-...-H	22.1
Metal bowl	
MS4-LFM-...-H	22.1

Type	L6
Plastic bowl guard	
MS4-LFM-...-V	20.4
Metal bowl	
MS4-LFM-...-V	20.4

1) Dimensions are in millimeters, unless otherwise noted.

## Fine and Micro Filters MS4-LFM – Metric Series

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Ordering Data – Pre-configured Products

Ordering Data									
Without differential pressure indicator									
Bowl drain	Connection	Micro filter				Fine filter			
		Filtration grade 0.01 µm				Filtration grade 1 µm			
		Part No.	Type	LT	Part No.	Type	LT		
Plastic bowl guard									
Manual	G <sup>1</sup> / <sub>8</sub>	529463	MS4-LFM-1/8-ARM	1D	529465	MS4-LFM-1/8-BRM	1D		
	G <sup>1</sup> / <sub>4</sub>	529459	MS4-LFM-1/4-ARM	1D	529461	MS4-LFM-1/4-BRM	1D		
Metal bowl									
Fully automatic	G <sup>1</sup> / <sub>8</sub>	539208	MS4-LFM-1/8-AUV	Q	539204	MS4-LFM-1/8-BUV	Q		
	G <sup>1</sup> / <sub>4</sub>	535768	MS4-LFM-1/4-AUV	Q	535766	MS4-LFM-1/4-BUV	Q		

Ordering Data									
With differential pressure indicator									
Bowl drain	Connection	Micro filter				Fine filter			
		Filtration grade 0.01 µm				Filtration grade 1 µm			
		Part No.	Type	LT	Part No.	Type	LT		
Plastic bowl guard									
Manual	G <sup>1</sup> / <sub>8</sub>	536821	MS4-LFM-1/8-ARM-DA	1D	536817	MS4-LFM-1/8-BRM-DA	1D		
	G <sup>1</sup> / <sub>4</sub>	536822	MS4-LFM-1/4-ARM-DA	1D	536818	MS4-LFM-1/4-BRM-DA	1D		
Metal bowl									
Fully automatic	G <sup>1</sup> / <sub>8</sub>	537213	MS4-LFM-1/8-AUV-DA	Q	537209	MS4-LFM-1/8-BUV-DA	Q		
	G <sup>1</sup> / <sub>4</sub>	537214	MS4-LFM-1/4-AUV-DA	Q	537210	MS4-LFM-1/4-BUV-DA	Q		

LT = Lead time      1D typically ships same day/next day      1W typically ships within 1 week      Q request a quote for lead time

# Fine and Micro Filters MS4-LFM – Metric Series



Ordering Data – Configurable Products

**M** Mandatory Data →

Part No.	Series	Size	Function	Connection size	Filtration grade	Bowl
527697	MS	4	LFM	1/8, 1/4, AGA, AGB, AGC	B A	R U
<b>Order example</b>						
<b>527697</b>	<b>MS</b>	<b>4</b>	<b>- LFM</b>	<b>- AGB</b>	<b>- B</b>	<b>- R</b>

**Ordering Table**

Grid dimension	[mm]	40	Conditions	Code	Enter code
<b>M</b> Part No.		<b>527697</b>			
Series		Standard		<b>MS</b>	MS
Size		4		<b>4</b>	4
Function		Fine and micro filter		<b>-LFM</b>	-LFM
Connection size		Body thread G1/8		<b>-1/8</b>	
		Body thread G1/4		<b>-1/4</b>	
		Port plate G1/8 (dimensions → 254)		<b>-AGA</b>	
		Port plate G1/4 (dimensions → 254)		<b>-AGB</b>	
		Port plate G3/8 (dimensions → 254)		<b>-AGC</b>	
Filtration grade		1 µm		<b>-B</b>	
		0.01 µm		<b>-A</b>	
Bowl		Plastic bowl with plastic bowl guard		<b>-R</b>	
		Metal bowl		<b>-U</b>	

Transfer order code

<b>527697</b>	<b>MS</b>	<b>4</b>	<b>- LFM</b>			
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# Fine and Micro Filters MS4-LFM – Metric Series



Ordering Data – Configurable Products

Mandatory Data		Options	
<b>Bowl drain</b>	<b>Filter change sensor</b>	<b>Type of mounting</b>	<b>Reverse flow direction</b>
M H V	DA	WP WPM WB WBM	Z
- <b>M</b>	-	- <b>WP</b>	- <b>Z</b>

Ordering Table					
Grid dimension	[mm]	40	Conditions Code Enter code		
M	Bowl drain	Manual	-M		
		Semiautomatic (P1 max. 12 bar)	-H		
		Fully automatic (P1 max. 12 bar)	<sup>1</sup> -V		
O	Filter change sensor	Differential pressure indicator, optical	-DA		
		Type of mounting	Mounting bracket (dimensions → 255)		<sup>2</sup> -WP
			Mounting bracket (dimensions → 255)		<sup>2</sup> -WPM
			Mounting bracket (dimensions → 252)		-WB
	Mounting bracket (dimensions → 252)		-WBM		
Reverse flow direction	Flow direction from right to left	-Z			

- <sup>1</sup> **V** Only with bowl U
- <sup>2</sup> **WP, WPM** Only with port plate AGA, AGB or AGC

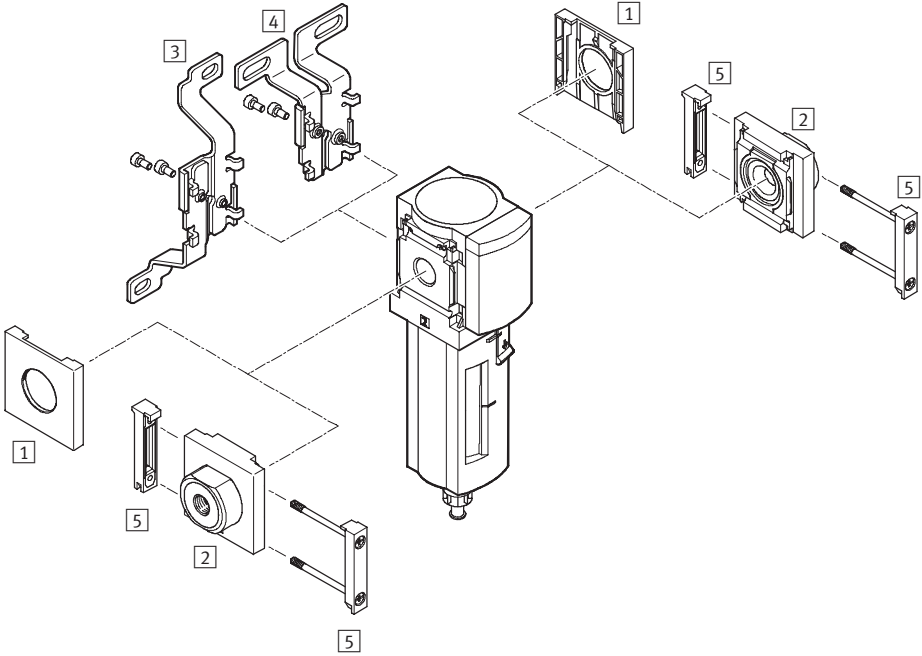
Transfer order code

- [ ] - [ ] - [ ] - [ ]

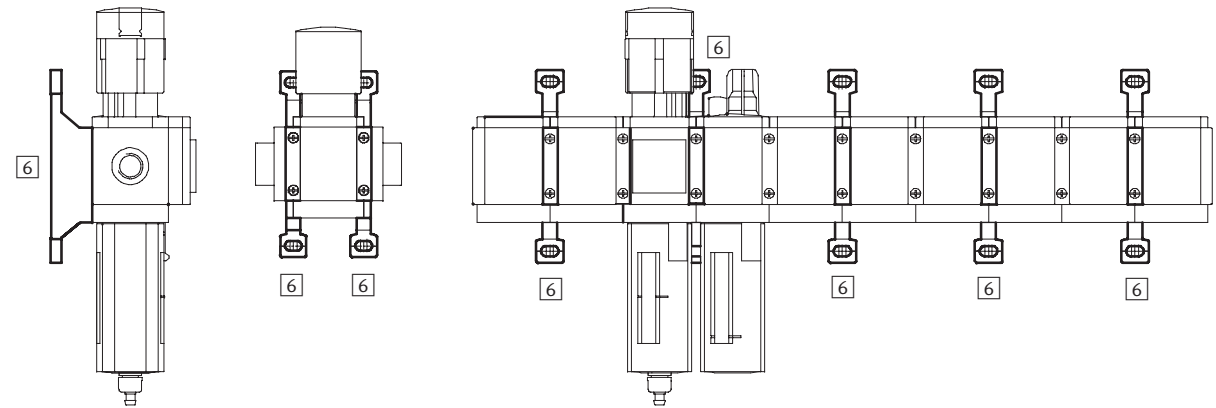
# Fine and Micro Filters MS4-LFM – Metric Series

Accessories Overview

## Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



## Fine and Micro Filters MS4-LFM – Metric Series

Accessories Overview

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Mounting Attachments and Accessories						
		Single unit		Combination unit → 2.1-1		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS4-END	■	-	■	-	253
2	Port plate MS4-AG...	-	■	-	■	254
3	Mounting bracket MS4-WB	■	■	-	-	252
4	Mounting bracket MS4-WBM	■	■	-	-	252
5	Body connector MS4-MV	-	■	■	■	254
6	Mounting bracket MS4-WP/WPB/WPM	-	■	■	■	255

# Fine and Micro Filters MS4-LFM – Metric Series

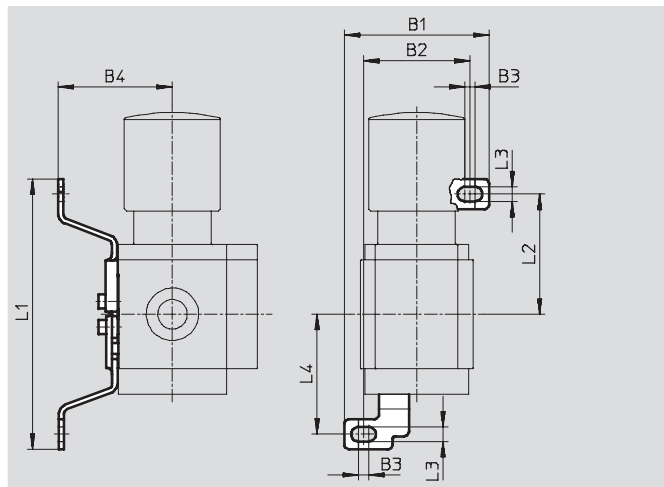


Accessories

## 3 Mounting bracket MS4-WB

- For wall mounting

Material:  
Steel

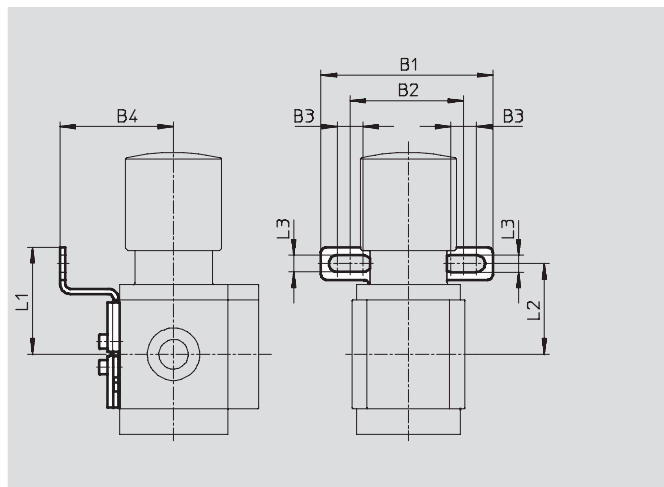


Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [g]	Part No.	Type
56.2	41.2	4	44.2	104.6	46.6	5.6	46.5	46	532185	MS4-WB

## 4 Mounting bracket MS4-WBM

- For wall mounting

Material:  
Steel



Dimensions and Ordering Data									
B1	B2	B3	B4	L1	L2	L3	Weight [g]	Part No.	Type
66.5	44	10	44	41.3	35	6.5	48	526062	MS4-WBM

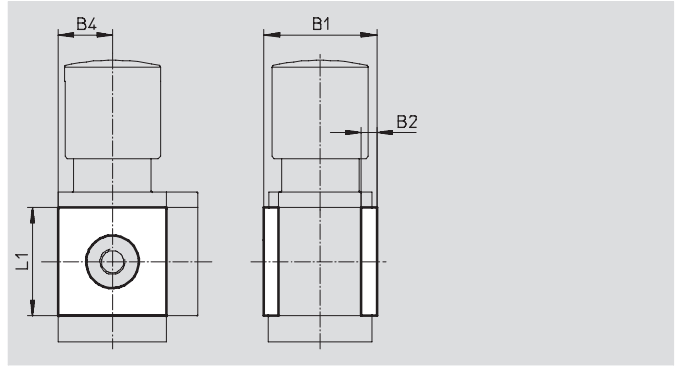
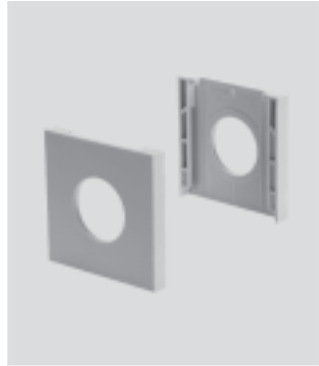
# Fine and Micro Filters MS4-LFM – Metric Series

Accessories

## 1 Cover cap MS4-END

- Can be used to cover the body sides of the first and last module if port plates are not used.

Material:  
Reinforced polyamide  
Free of copper and PTFE

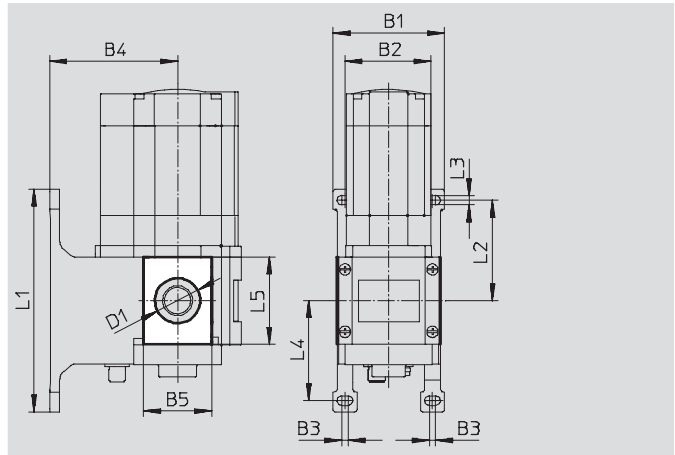


Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
43.6	6	21	42	538779	MS4-END	

## Mounting plate MS4-AEND

- In combination with mounting bracket MS-WP or MS-WPB for mounting an individual unit with body thread on a wall

Material:  
Reinforced polyamide  
Conforms to RoHS  
Free of copper and PTFE



Dimensions and Ordering Data															
B1	B2	B3	B4		B5	D1 ∅	L1	L2	L3	L4	L5	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
			WP	WPB											
55.2	40.2	4	44	66	30.4	20.3	106	46.5	5.6	46.7	42	2	4	542966	MS4-AEND

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

## Fine and Micro Filters MS4-LFM – Metric Series

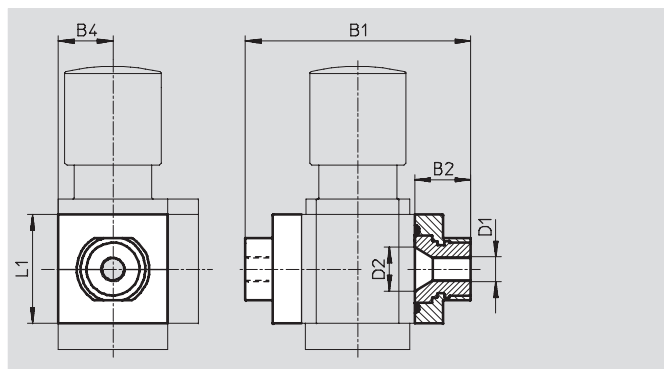
Accessories

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### 2 Port plate MS4-AG...

- Adapter for pneumatic connection

Material:  
Aluminum



Dimensions and Ordering Data							
B1	B2	B4	D1	D2	L1	Weight [g]	Part No. Type
83.5	21.5	21	G $\frac{1}{8}$	16.8	42	128	526068 MS4-AGA
			G $\frac{1}{4}$				526069 MS4-AGB
			G $\frac{3}{8}$				526070 MS4-AGC

### 5 Body connector MS4-MV

- For connecting modules

Material:  
Stainless steel/polyacetate



Ordering Data		
Weight [g]	Part No.	Type
36	532798	MS4-MV

# Fine and Micro Filters MS4-LFM – Metric Series

Accessories

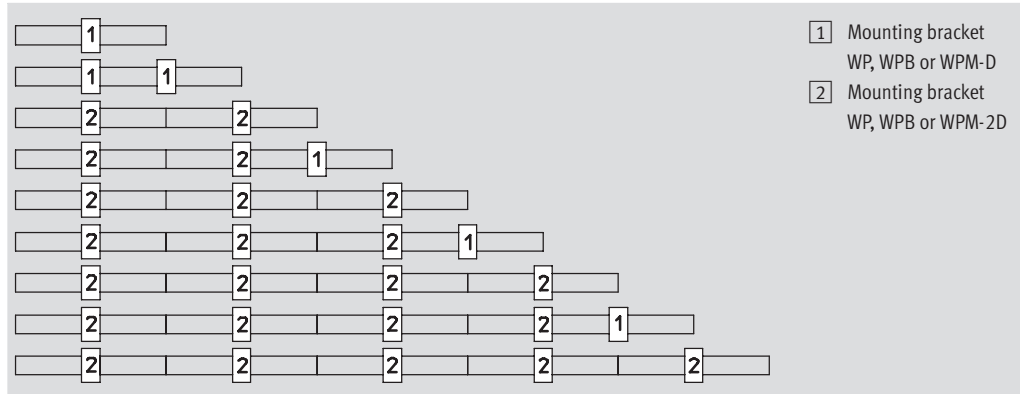
## 6 Mounting Bracket MS4-WP... Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 40 mm

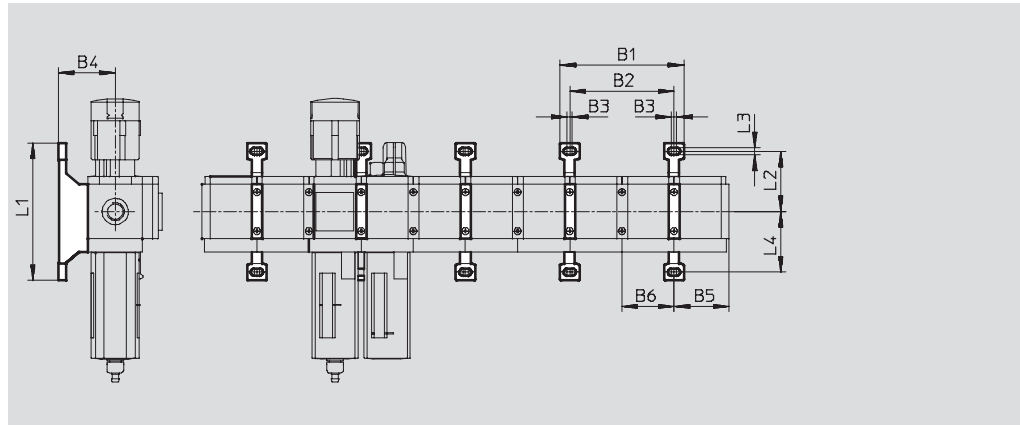
2 units: 80 mm

Number of units

1 2 3 4 5 6 7 8 9 10



## Mounting dimensions



Type	B1	B2	B3	B4	B5	B6	L1	L2	L3	L4
MS4-WP	95.2	80	4	44	41.9	40	106	46.5	5.6	46.7
MS4-WPB				66						
MS4-WPM-...D				44						

# Fine and Micro Filters MS4-LFM – Metric Series

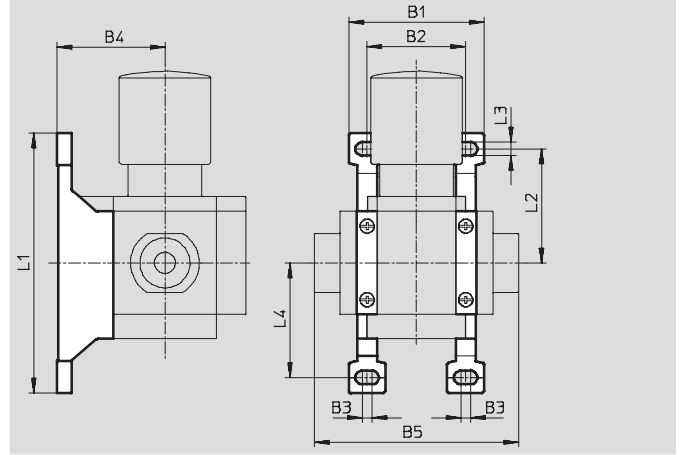


Accessories

## Mounting bracket MS4-WP

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with body thread on a wall
- For pressure regulator LRB with angled outlet block B... at rear

Material:  
Die-cast aluminum

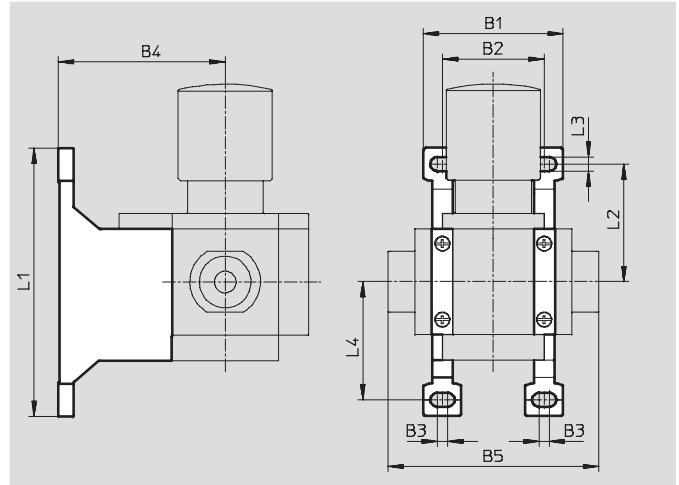


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [g]	Part No.	Type
55.2	40.2	4	44	83.4	106	46.5	5.6	46.7	39	532184	MS4-WP

## Mounting bracket MS4-WPB

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with direct thread on a wall
- Provides large wall gap for pressure regulator

Material:  
Die-cast aluminum



Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [g]	Part No.	Type
55.2	40.2	4	66	83.4	106	46.5	5.6	46.7	55	526063	MS4-WPB



## Fine and Micro Filters MS4-LFM – Metric Series

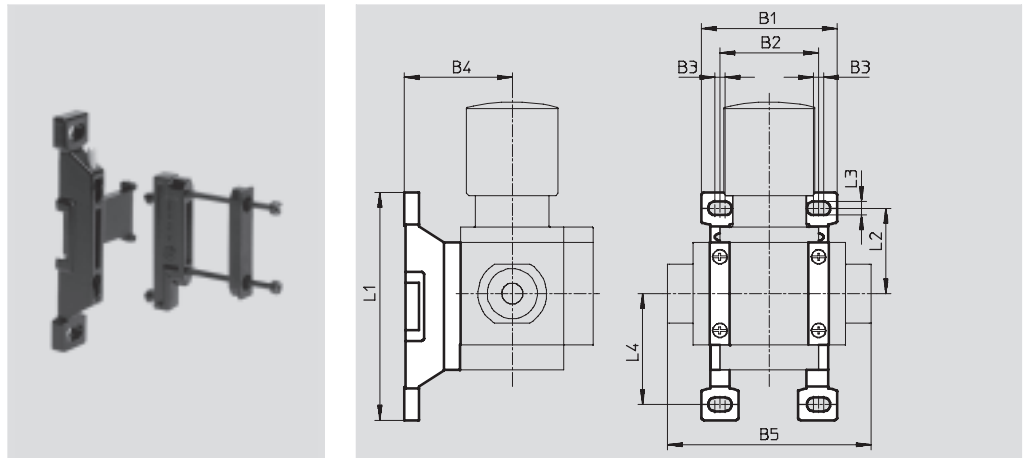
Accessories

### Mounting bracket MS4-WPM

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- Speedy attachment and detachment
- For installation of modules with regulating knob pointing downwards

The distance piece D or 2D (designated in the type code) is included in the scope of delivery and ensures the correct clearance

Material:  
Die-cast aluminum



Dimensions and Ordering Data												
B1	B2	B3	B4	B5	L1	L2	L3	L4	Clearance	Weight [g]	Part No.	Type
55.2	40	4	44	83.4	92.8	34.8	5.6	45.2	40	45	526060	MS4-WPM-D
95.2	80			123.4					80	55	526061	MS4-WPM-2D

### Body connector MS4-MVM

- For installation of modules with regulating knob pointing downwards

Material:  
Die-cast aluminum



Ordering Data			
Size	Part No.	Type	
MS4	532800	MS4-MVM	

## Fine and Micro Filters MS4-LFM – Metric Series

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Replacement Parts

Ordering Data – Wearing Parts Kits			
Size	Description	Part No.	Type
MS4	Flat seal, O-rings, screws	673641	MS4-LFM



Ordering Data – Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Type
MS4	0.01	162674	MS4/D-MINI-LFM-A
	1	162677	MS4/D-MINI-LFM-B

- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

## Fine and Micro Filters MS4N-LFM – Inch Series



Fine and micro filters, with 1 micron or 0.01 micron filtration grades, remove submicronic water or oil droplets and dirt particles for exceptionally clean compressed air.

- Pneumatic connection: 1/8 NPT, 1/4 NPT, 3/8 NPT
- Supply pressure
  - For manual drain: 0 ... 235 psi
  - For semiautomatic drain: 22 ... 176 psi
  - For fully automatic drain: 29 ... 176 psi
- Flow rate: 4.2 ... 6.4 scfm

Product Range Overview													
Type	Pneumatic connections		Filtration grade [µm]				Bowl guard		Bowl drain			Contamination control	Reverse flow
	Body thread	Port plate	0.01	1	5	40	Plastic bowl guard	Metal bowl	Manual	Semiautomatic	Fully automatic	Differential pressure indicator	Flow direction from right to left
MS4N		AG...	A	B	C	E	R	U	M	H	V	DA	Z
LFM	1/8 NPT, 1/4 NPT	1/8 NPT, 1/4 NPT, 3/8 NPT	■	■	-	-	■	■	■	■	■	■	■

### Features

- High-performance filter for exceptionally clean compressed air
- Air quality to DIN ISO 8573-1
- Available with differential pressure indicator for optical indication of filter contamination
- LFM-A:
  - ISO class 1 for particles: max. particle density 0.1 mg/m<sup>3</sup>
  - ISO class 2 for oil aerosols: max. oil concentration 0.1 mg/m<sup>3</sup>
  - Filter efficiency 99.9999%
- LFM-B:
  - ISO class 2 for particles: max. particle density 1 mg/m<sup>3</sup>
  - ISO class 3 for oil aerosols: max. oil concentration 1 mg/m<sup>3</sup>
  - Filter efficiency 99.99%

### Contents

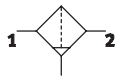
Technical Data	➔ 260
Dimensional Drawings	➔ 264
Ordering Data	➔ 265
Accessories	➔ 268
Replacement Parts	➔ 276

➔ [www.festo.com/catalog/ms4n-lfm](http://www.festo.com/catalog/ms4n-lfm)

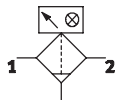
# Fine and Micro Filters MS4N-LFM – Inch Series

Technical Data

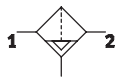
ISO Symbol



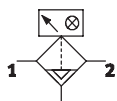
Manual bowl drain  
without differential pressure indicator



With differential pressure indicator



Semi or fully automatic bowl drain  
without differential pressure indicator



With differential pressure indicator



General Technical Data			
Pneumatic connection 1, 2		1/8 NPT	1/4 NPT
Filtration grade	[µm]	0.01 (micro filter LFM-A, air purity class at the output 1.7.2 to DIN ISO 8573-1) 1 (fine filter LFM-B, air purity class at the output 2.7.3 to DIN ISO 8573-1)	
Supply pressure	M [psi]	0 ... 206 (manual drain)	
	H [psi]	22 ... 17 (semiautomatic drain)	
	V [psi]	29 ... 176 (fully automatic drain)	

Standard Nominal Flow Rate qnN <sup>1)</sup> and Standard Flow Rate qn [scfm]			
Pneumatic connection 1, 2		1/8 NPT	1/4 NPT
Micro filter LFM-A			
qnN 1 → 2		4.2	4.2
qn min		1.9	1.9
qn max		12.7	12.7
Fine filter LFM-B			
qnN 1 → 2		6.4	6.4
qn min		1.9	1.9
qn max		12.7	12.7

1) Measured at p1 = 88 psi and Δp = 1.0 psi

## Fine and Micro Filters MS4N-LFM – Inch Series

Technical Data

**FESTO**

Operating and Environmental Conditions			
Bowl drain	Manual M	Semiautomatic H	Fully automatic V
Operating medium micro filter LFM-A	Compressed air, filtered, unlubricated, filtration grade 1 µm		
Operating medium fine filter LFM-B	Compressed air, filtered, unlubricated, filtration grade 5 µm		
Max. condensate volume [in <sup>3</sup> ]	1.16 (with plastic bowl guard) 1.53 (with metal bowl)		
Bowl guard	Plastic bowl guard		
	Metal bowl		
Ambient temperature [°F]	14 ... 140	41 ... 140	41 ... 140
Temperature of medium [°F]	14 ... 140	41 ... 140	41 ... 140
Storage temperature [°F]	14 ... 140	14 ... 140	14 ... 140
Assembly position	Vertical ±5°		
Corrosion resistance CRC <sup>1)</sup>	2		

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weights [lb]	
With plastic bowl guard	0.38
With metal bowl	0.70

- Wearing parts kits → 276
- Filter cartridges → 276
- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

# Fine and Micro Filters MS4N-LFM – Inch Series

Technical Data

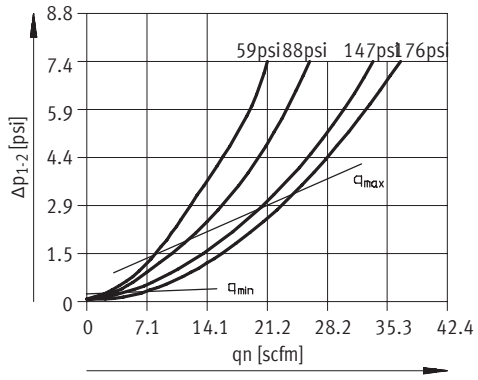
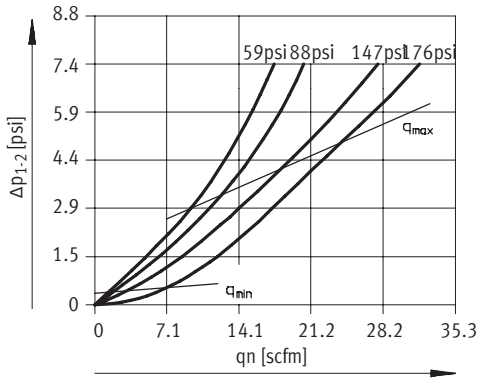


**Standard Flow Rate  $q_n$  as a Function of the Differential Pressure  $\Delta p_{1,2}$**

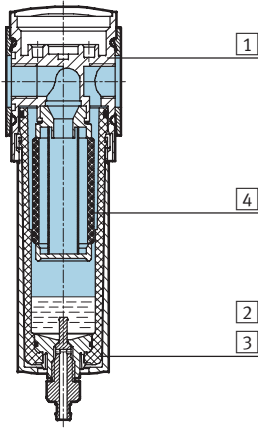
MS4N-LFM-1/8 and MS4N-LFM-1/4

Filtration grade 0.01  $\mu\text{m}$

Filtration grade 1  $\mu\text{m}$



**Materials**  
Sectional view



Fine and micro filter		
1	Body	Die-cast aluminum
2	Plastic bowl guard	Polycarbonate/polyamide
3	Metal bowl	Aluminum
	Viewing window	Polyamide
4	Filters	Borosilicate fiber
-	Seals	Nitrile rubber
	Note on materials	Free of copper and PTFE

# Fine and Micro Filters MS4N-LFM – Inch Series

Dimensional Drawings



**Dimensions<sup>1)</sup> – Standard** Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Manual bowl drain

1 Installation dimensions  
→ Flow direction

Type	B1	B2	B3	D1	L1		L2	L3	L5	L6	
					Bowl guard					Plastic	Metal
					Plastic	Metal					
MS4N-LFM-1/8	1.57	0.83	2.13	1/8 NPT	5.59	6.30	1.14	2.36	0.98	0.70	0.70
MS4N-LFM-1/4				1/4 NPT							

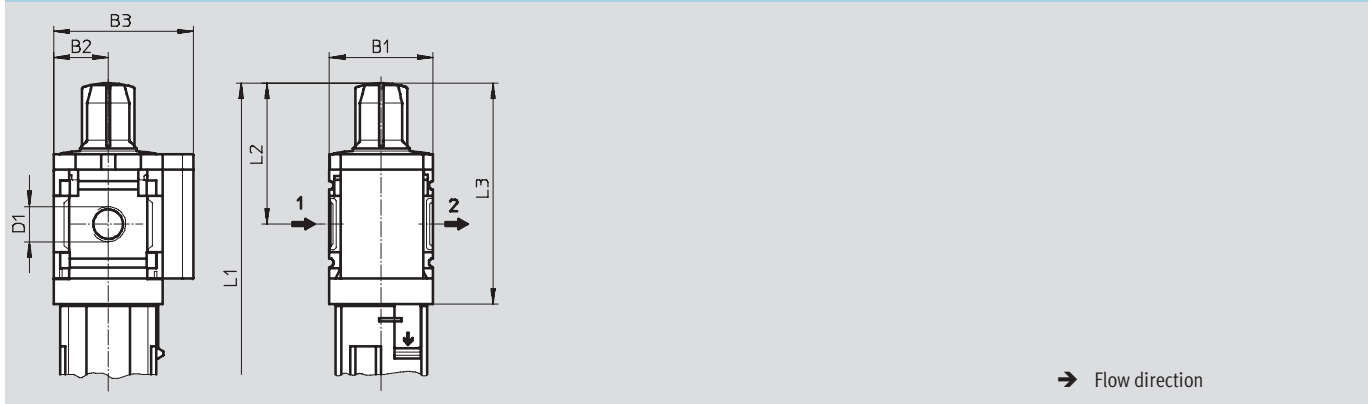
1) Dimensions are in inches, unless otherwise noted.

# Fine and Micro Filters MS4N-LFM – Inch Series



Dimensional Drawings

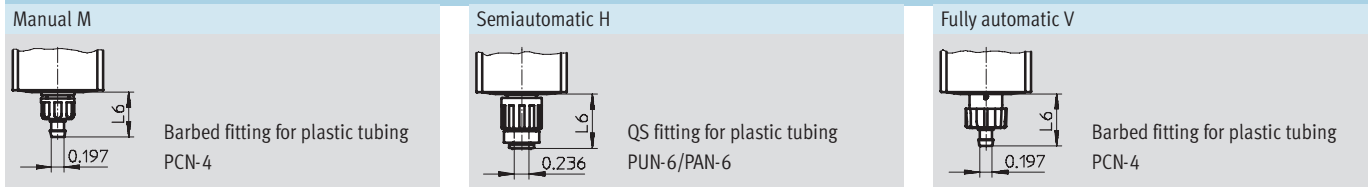
## Dimensions<sup>1)</sup> – Differential Pressure Indicator Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



Type	B1	B2	B3	D1	L1 Bowl guard		L2	L3
					Plastic	Metal		
MS4N-LFM-1/8-...-DA	1.57	0.83	2.13	1/8 NPT	6.61	7.32	2.17	3.39
MS4N-LFM-1/4-...-DA				1/4 NPT				

1) Dimensions are in inches, unless otherwise noted.

## Dimensions<sup>1)</sup> – Bowl Drain Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



Type	L6
Plastic bowl guard	
MS4N-LFM-...-M	0.70
Metal bowl	
MS4N-LFM-...-M	0.70

Type	L6
Plastic bowl guard	
MS4N-LFM-...-H	0.87
Metal bowl	
MS4N-LFM-...-H	0.87

Type	L6
Plastic bowl guard	
MS4N-LFM-...-V	0.80
Metal bowl	
MS4N-LFM-...-V	0.80

1) Dimensions are in inches, unless otherwise noted.



## Fine and Micro Filters MS4N-LFM – Inch Series

FESTO

Ordering Data – Pre-configured Products

Ordering Data									
Without differential pressure indicator									
Bowl drain	Connection	Micro filter				Fine filter			
		Filtration grade 0.01 µm				Filtration grade 1 µm			
		Part No.	Type	LT	Part No.	Type	LT		
Plastic bowl guard									
Manual	1/8 NPT	536701	MS4N-LFM-1/8-ARM	1D	536699	MS4N-LFM-1/8-BRM	1D		
	1/4 NPT	531812	MS4N-LFM-1/4-ARM	1D	531810	MS4N-LFM-1/4-BRM	1D		
Metal bowl									
Fully automatic	1/8 NPT	539210	MS4N-LFM-1/8-AUV	Q	539206	MS4N-LFM-1/8-BUV	Q		
	1/4 NPT	535776	MS4N-LFM-1/4-AUV	Q	535774	MS4N-LFM-1/4-BUV	Q		

Ordering Data									
With differential pressure indicator									
Bowl drain	Connection	Micro filter				Fine filter			
		Filtration grade 0.01 µm				Filtration grade 1 µm			
		Part No.	Type	LT	Part No.	Type	LT		
Plastic bowl guard									
Manual	1/8 NPT	536829	MS4N-LFM-1/8-ARM-DA	1D	536825	MS4N-LFM-1/8-BRM-DA	1D		
	1/4 NPT	536830	MS4N-LFM-1/4-ARM-DA	1D	536826	MS4N-LFM-1/4-BRM-DA	1D		
Metal bowl									
Fully automatic	1/8 NPT	537221	MS4N-LFM-1/8-AUV-DA	Q	537217	MS4N-LFM-1/8-BUV-DA	Q		
	1/4 NPT	537222	MS4N-LFM-1/4-AUV-DA	Q	537218	MS4N-LFM-1/4-BUV-DA	Q		

LT = Lead time      1D typically ships same day/next day      1W typically ships within 1 week      Q request a quote for lead time

# Fine and Micro Filters MS4N-LFM – Inch Series

Ordering Data – Configurable Products



**M** Mandatory Data →

Part No.	Series	Size	Thread	Function	Connection size	Filtration grade	Bowl
527698	MS	4	N	LFM	1/8, 1/4, AQK, AQN, AQP	B A	R U
<b>Order example</b>							
<b>527698</b>	<b>MS</b>	<b>4</b>	<b>N</b>	<b>- LFM</b>	<b>- AQK</b>	<b>- B</b>	<b>- U</b>

**Ordering Table**

Grid dimension	[mm]	40	Conditions	Code	Enter code
<b>M</b> Part No.	<b>527698</b>				
Series	Standard			<b>MS</b>	MS
Size	4			<b>4</b>	4
Thread	NPT thread			<b>N</b>	N
Function	Fine and micro filter			<b>-LFM</b>	- LFM
Connection size	Body thread 1/8 NPT			<b>-1/8</b>	
	Body thread 1/4 NPT			<b>-1/4</b>	
	Port plate 1/8 NPT (dimensions → 272)			<b>-AQK</b>	
	Port plate 1/4 NPT (dimensions → 272)			<b>-AQN</b>	
	Port plate 3/8 NPT (dimensions → 272)			<b>-AQP</b>	
Filtration grade	1 µm			<b>-B</b>	
	0.01 µm			<b>-A</b>	
Bowl	Plastic bowl with plastic bowl guard			<b>-R</b>	
	Metal bowl			<b>-U</b>	

Transfer order code

<b>527698</b>	<b>MS</b>	<b>4</b>	<b>N</b>	<b>- LFM</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
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# Fine and Micro Filters MS4N-LFM – Inch Series



Ordering Data – Configurable Products

Mandatory Data		Options	
<b>Bowl drain</b>	<b>Filter change sensor</b>	<b>Type of mounting</b>	<b>Reverse flow direction</b>
M H V	DA	WP WPM WB WBM	Z
- V	-	- WP	- Z

Ordering Table				
Grid dimension	[mm]	40	Conditions   Code   Enter code	
Mandatory Data	Bowl drain	Manual	-M	
		Semiautomatic (P1 max. 176 psi)	-H	
		Fully automatic (P1 max. 176 psi)	<sup>1</sup> -V	
Options	Filter change sensor	Differential pressure indicator, optical	-DA	
		Type of mounting	Mounting bracket (dimensions → 273)	<sup>2</sup> -WP
			Mounting bracket (dimensions → 273)	<sup>2</sup> -WPM
			Mounting bracket (dimensions → 270)	-WB
			Mounting bracket (dimensions → 270)	-WBM
Reverse flow direction	Flow direction from right to left	-Z		

- <sup>1</sup> **V** Only with bowl U
- <sup>2</sup> **WP, WPM** Only with port plate AQQ, AQN or AQP

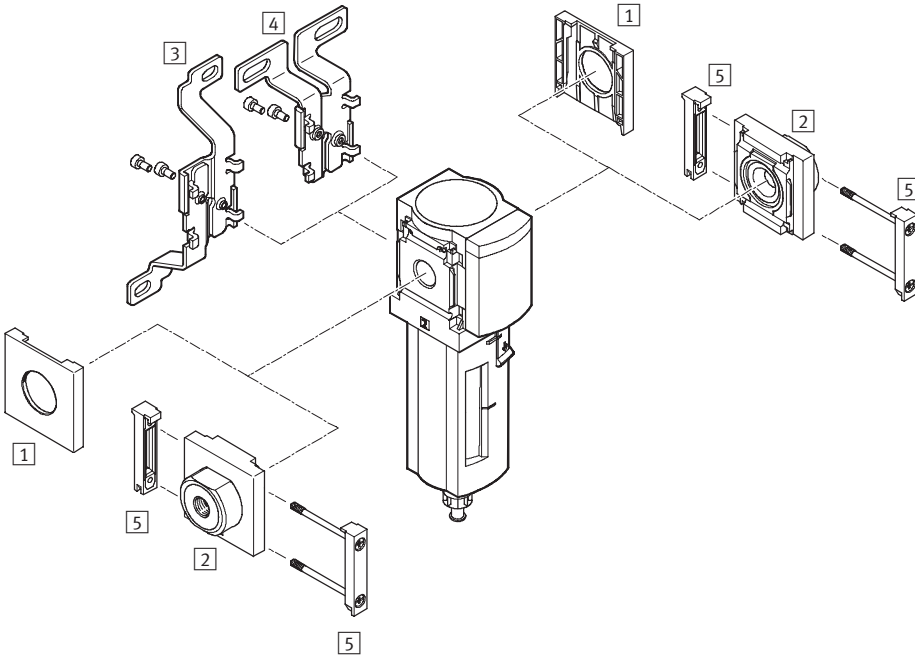
Transfer order code

- [ ] - [ ] - [ ] - [ ]

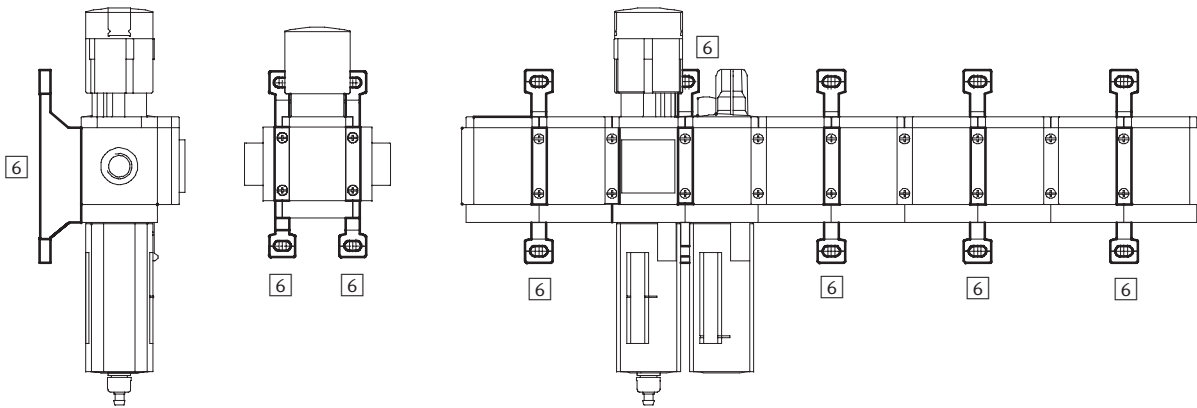
# Fine and Micro Filters MS4N-LFM – Inch Series

Accessories Overview

## Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



## Fine and Micro Filters MS4N-LFM – Inch Series

Accessories Overview



Mounting Attachments and Accessories						
		Single unit		Combination unit → 2.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS4-END	■	-	■	-	271
2	Port plate MS4N-AQ..	-	■	-	■	272
3	Mounting bracket MS4-WB	■	■	-	-	270
4	Mounting bracket MS4-WBM	■	■	-	-	270
5	Body connector MS4-MV	-	■	■	■	272
6	Mounting bracket MS4-WP/WPB/WPM	-	■	■	■	273

# Fine and Micro Filters MS4N-LFM – Inch Series



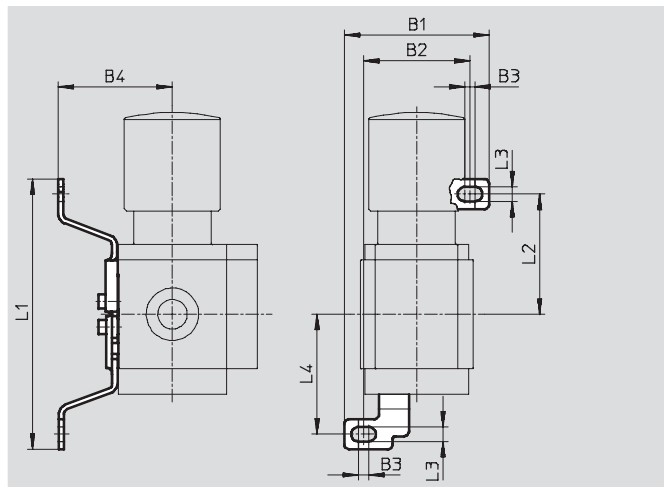
Accessories

## 3 Mounting bracket MS4-WB

- For wall mounting

Material:

Steel



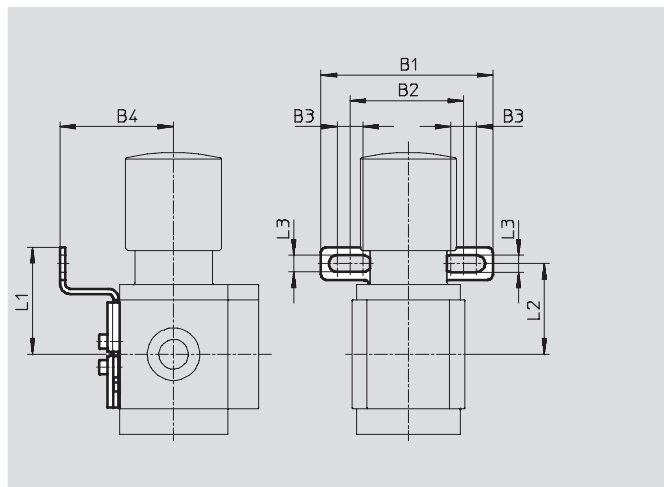
Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.21	1.62	0.16	1.74	4.12	1.83	0.22	1.79	0.09	532185	MS4-WB

## 4 Mounting bracket MS4-WBM

- For wall mounting

Material:

Steel



Dimensions and Ordering Data									
B1	B2	B3	B4	L1	L2	L3	Weight [lb]	Part No.	Type
2.62	1.73	0.39	1.73	1.63	1.38	0.26	0.10	526062	MS4-WBM

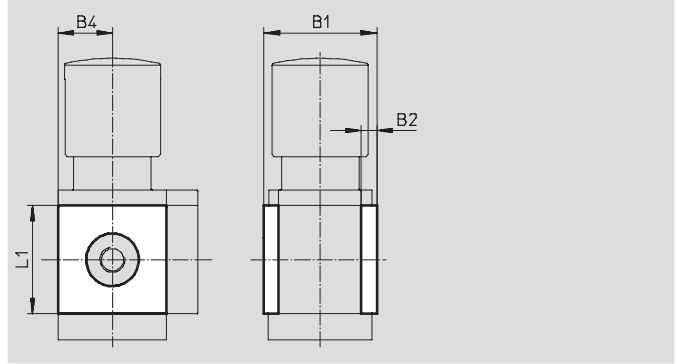
# Fine and Micro Filters MS4N-LFM – Inch Series

Accessories

## 1 Cover cap MS4-END

- Can be used to cover the body sides of the first and last module if port plates are not used.

Material:  
Reinforced polyamide  
Free of copper and PTFE

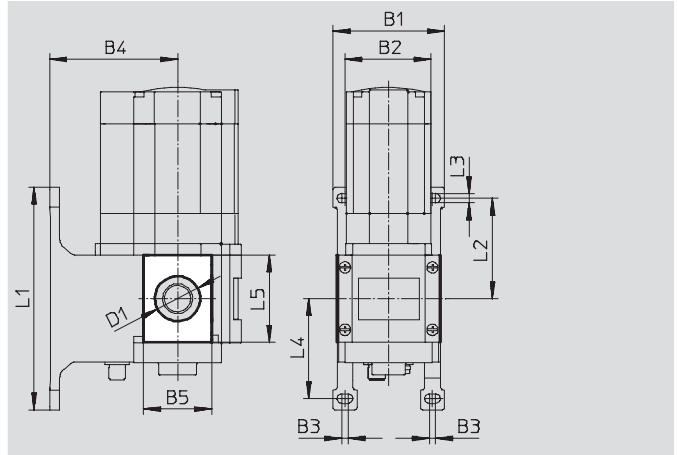


Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
1.72	0.24	0.83	1.65	538779	MS4-END	

## Mounting plate MS4-AEND

- In combination with mounting bracket MS-WP or MS-WPB for mounting an individual unit with body thread on a wall

Material:  
Reinforced polyamide  
Conforms to RoHS  
Free of copper and PTFE



Dimensions and Ordering Data															
B1	B2	B3	B4		B5	D1 ∅	L1	L2	L3	L4	L5	CRC <sup>1)</sup>	Weight [lb]	Part No.	Type
			WP	WPB											
2.17	1.58	0.16	1.73	2.60	1.20	0.80	4.17	1.83	0.22	1.84	1.65	2	0.01	542966	MS4-AEND

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

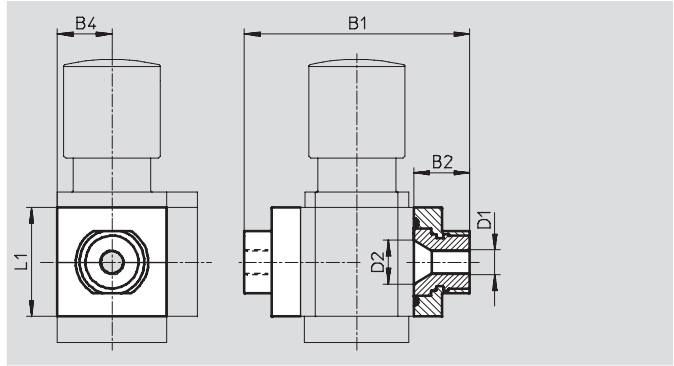
# Fine and Micro Filters MS4N-LFM – Inch Series

Accessories

## 2 Port plate MS4N-AQ...

- Adapter for pneumatic connection

Material:  
Aluminum



Dimensions and Ordering Data								
B1	B2	B4	D1	D2	L1	Weight [lb]	Part No.	Type
3.29	0.85	0.83	1/8 NPT	0.66	1.65	0.26	526065	MS4N-AQK
			1/4 NPT				526066	MS4N-AQN
			3/8 NPT				526067	MS4N-AQP

## 5 Body connector MS4-MV

- For connecting modules

Material:  
Stainless steel/polyacetate



Ordering Data		
Weight [lb]	Part No.	Type
0.07	532798	MS4-MV



# Fine and Micro Filters MS4N-LFM – Inch Series

Accessories

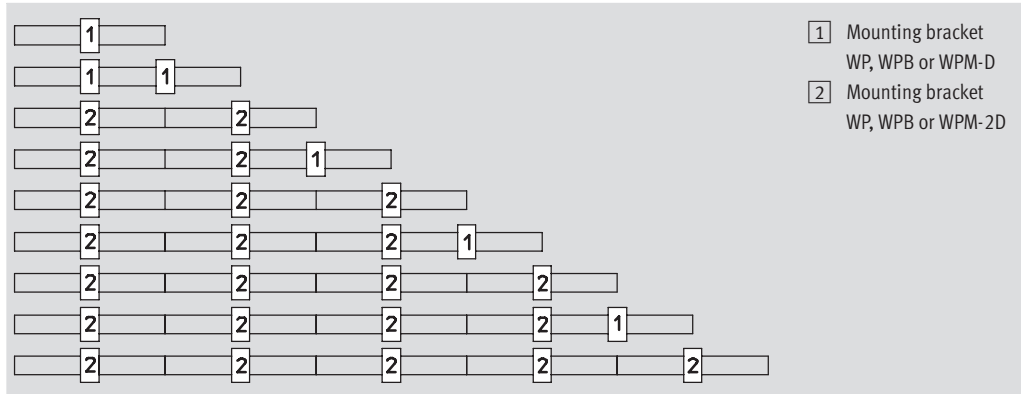
## 6 Mounting Bracket MS4-WP... Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 1.575 in

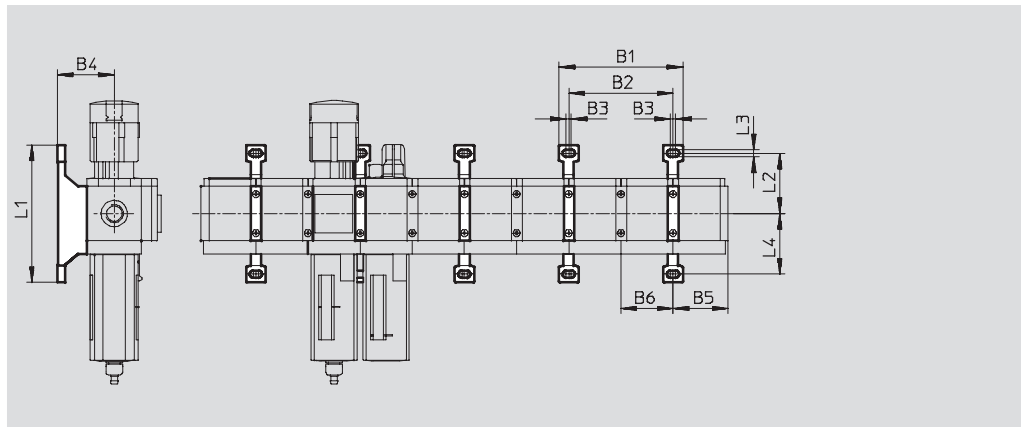
2 units: 3.15 in

Number of units

1 2 3 4 5 6 7 8 9 10



## Mounting dimensions



Type	B1	B2	B3	B4	B5	B6	L1	L2	L3	L4
MS4-WP	3.75	3.15	0.16	1.73	1.65	1.57	4.17	1.83	0.22	1.84
MS4-WPB				2.60						1.57
MS4-WPM-...D				1.73						1.57

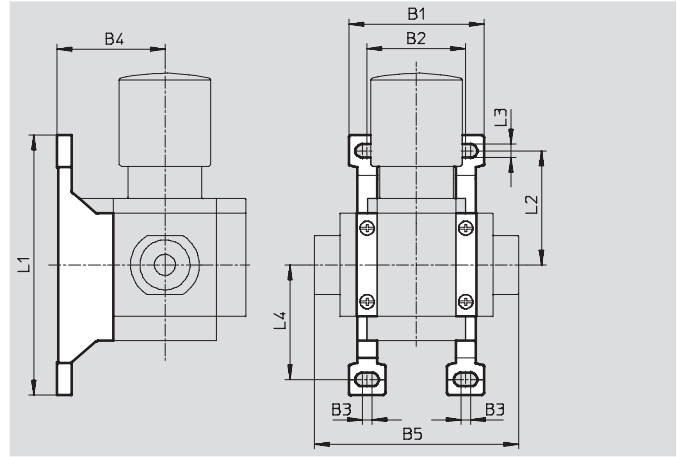
## Fine and Micro Filters MS4N-LFM – Inch Series

Accessories

### Mounting bracket MS4-WP

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with body thread on a wall
- For pressure regulator LRB with angled outlet block B... at rear

Material:  
Die-cast aluminum

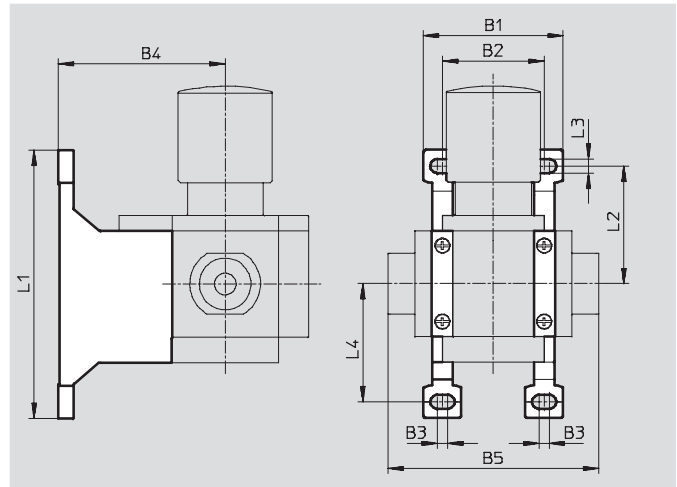


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.17	1.58	0.16	1.73	3.28	4.17	1.83	0.22	1.84	0.08	532184	MS4-WP

### Mounting bracket MS4-WPB

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with direct thread on a wall
- Provides large wall gap for pressure regulator

Material:  
Die-cast aluminum



Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.17	1.58	0.16	2.60	3.28	4.17	1.83	0.22	1.84	0.11	526063	MS4-WPB

## Fine and Micro Filters MS4N-LFM – Inch Series

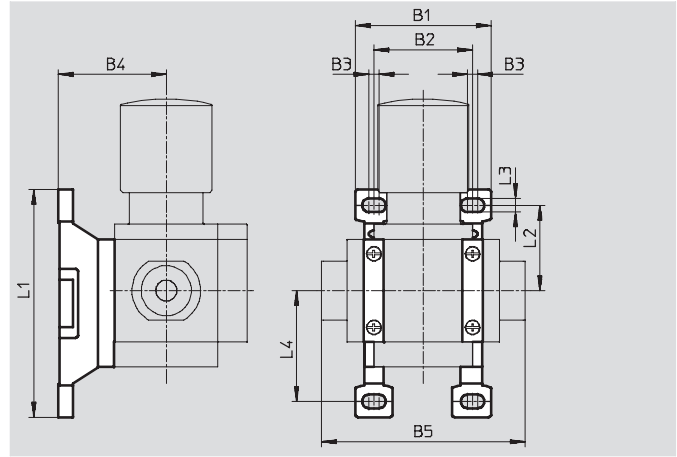
Accessories

### Mounting bracket MS4-WPM

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- Speedy attachment and detachment
- For installation of modules with regulating knob pointing downwards

The distance piece D or 2D (designated in the type code) is included in the scope of delivery and ensures the correct clearance

Material:  
Die-cast aluminum



Dimensions and Ordering Data												
B1	B2	B3	B4	B5	L1	L2	L3	L4	Clearance	Weight [lb]	Part No.	Type
2.17	1.57	0.16	1.73	3.28	3.65	1.37	0.22	1.78	1.57	0.09	526060	MS4-WPM-D
3.75	3.15			4.86					3.15	0.11	526061	MS4-WPM-2D

### Body connector MS4-MVM

- For installation of modules with regulating knob pointing downwards

Material:  
Die-cast aluminum



Ordering Data		
Size	Part No.	Type
MS4	532800	MS4-MVM

## Fine and Micro Filters MS4N-LFM – Inch Series

FESTO

Replacement Parts

Ordering Data – Wearing Parts Kits			
Size	Description	Part No.	Type
MS4	Flat seal, O-rings, screws	673641	MS4-LFM



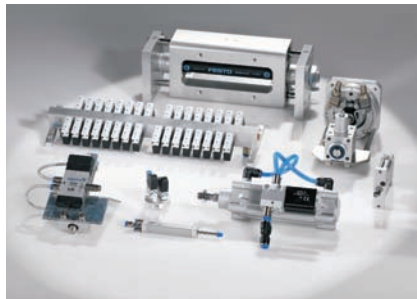
Ordering Data – Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Type
MS4	0.01	162674	MS4/D-MINI-LFM-A
	1	162677	MS4/D-MINI-LFM-B

- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

## Product Range and Company Overview

### A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



**Custom Automation Components**  
Complete custom engineered solutions



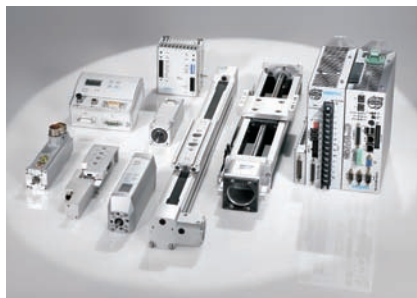
**Custom Control Cabinets**  
Comprehensive engineering support  
and on-site services



**Complete Systems**  
Shipment, stocking and storage services

### The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



**Electromechanical**  
Electromechanical actuators, motors,  
controllers & drives



**Pneumatics**  
Pneumatic linear and rotary actuators,  
valves, and air supply



**PLCs and I/O Devices**  
PLC's, operator interfaces, sensors  
and I/O devices

### Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 11,500 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

### Quality Assurance, ISO 9001 Certification

Festo Corporation is committed to provide Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

All Festo locations within the United States are registered to ISO 9001.



# Festo North America

## United States

### Customer Resource Center

502 Earth City Expy., Suite 125  
Earth City, MO 63045

For ordering assistance, or to find  
your nearest Festo Distributor,

**Call:** 1.800.99.FESTO

**Fax:** 1.800.96.FESTO

**Email:** [customer.service@us.festo.com](mailto:customer.service@us.festo.com)

For technical support,

**Call:** 1.866.GO.FESTO

**Fax:** 1.800.96.FESTO

**Email:** [product.support@us.festo.com](mailto:product.support@us.festo.com)

### Headquarters

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### Sales Offices

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Greenville, WI 54942

#### Boston

120 Presidential Way, Suite 330  
Woburn, MA 01801

#### Chicago

1441 East Business Center Drive  
Mt. Prospect, IL 60056

#### Dallas

1825 Lakeway Drive, Suite 600  
Lewisville, TX 75057

#### Detroit - Automotive Engineering Center

2601 Cambridge Court, Suite 320  
Auburn Hills, MI 48326

#### New York

395 Moreland Road  
Hauppauge, NY 11788

#### Silicon Valley

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