

Active Carbon Filters MS4N-LFX – Inch Series



Active carbon filters remove liquid and gaseous oil particles as well as odor and taste from compressed air. Pre-filtration with a grade of 0.01 micron is required.

- Pneumatic connection: 1/8 NPT, 1/4 NPT, 3/8 NPT
- Supply pressure 0 ... 235 psi
- Flow rate: 8.8 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			
MS4N		AG...	A	B	C	E	R	U	M	DA	Z
LFX	1/8 NPT, 1/4 NPT	3/8 NPT, 1/4 NPT, 3/8 NPT	-	-	-	-	■	■	■	-	■

Features

- Removal of liquid and gaseous oil particles from compressed air using active carbon
- Eliminates odors and vapors
- Prefiltration with micro filter MS4-LFM-A, filtration grade 0.01 µm, is required.

Contents

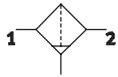
Technical Data	→ 292
Dimensional Drawings	→ 294
Ordering Data	→ 294
Accessories	→ 296
Replacement Parts	→ 304

→ www.festo.com/catalog/ms4n-lfx

Active Carbon Filters MS4N-LFX – Inch Series

Technical Data

ISO Symbol



Manual bowl drain



General Technical Data		
Pneumatic connection 1, 2	1/8 NPT	1/4 NPT
Air purity class at the output ¹⁾	1.7.1 to DIN ISO 8573-1	
Supply pressure [psi]	0 ... 206	

1) It is recommended to replace filter cartridges after 1,000 operating hours.

Standard Nominal Flow Rate qnN ²⁾ and Standard Flow Rate qn [scfm]		
Pneumatic connection 1, 2	1/8 NPT	1/4 NPT
qnN 1 → 2	8.8	8.8
qn max	12.7	12.7

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

Operating and Environmental Conditions		
Operating medium	Compressed air, filtered, unlubricated, filtration grade 0.01 μm	
Bowl guard	Plastic bowl guard	
	Metal bowl	
Ambient temperature [°F]	14 ... 140	
Temperature of medium [°F]	41 ... 86	
Storage temperature [°F]	14 ... 140	
Assembly position	Vertical ±5°	
Corrosion resistance CRC ³⁾	2	

3) 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

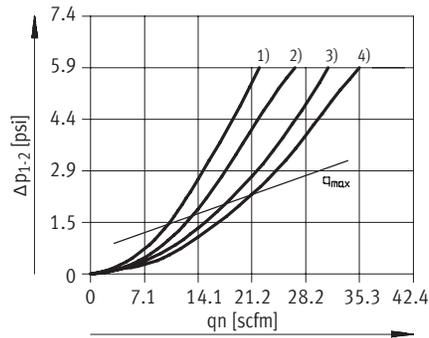
- Filter cartridges → 304
- For spare parts go to: www.festo.com/en/spare_parts_service

Active Carbon Filters MS4N-LFX – Inch Series

Technical Data

Standard Flow Rate q_n as a Function of the Differential Pressure Δp_{1-2}

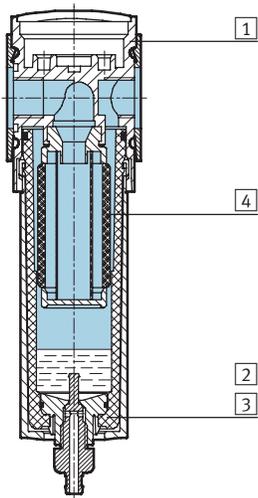
MS4N-LFX-1/8 and MS4N-LFX-1/4



- 1) 59 psi
- 2) 88 psi
- 3) 147 psi
- 4) 206 psi

Materials

Sectional view



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

Active Carbon Filters MS4N-LFX – Inch Series

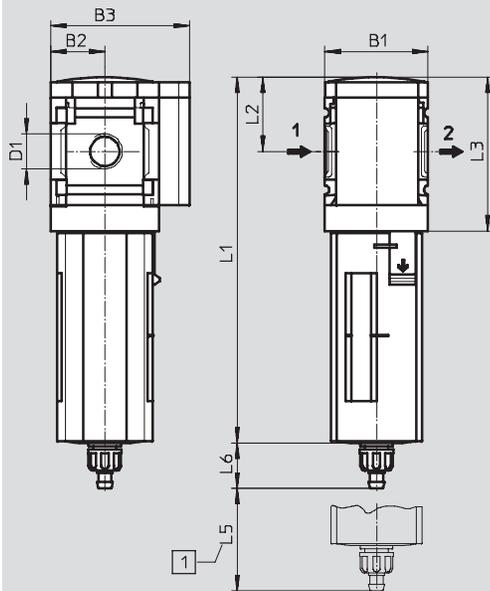


Dimensional Drawings, Ordering Data – Pre-configured Products

Dimensions¹⁾ – Standard

Download CAD Data → 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-LFX-1/8	1.58	0.83	2.13	1/8 NPT	5.62	6.31	1.14	2.36	2.95	0.70	0.71
MS4N-LFX-1/4				1/4 NPT							

1) Dimensions are in inches, unless otherwise noted.

Ordering Data

Bowl drain	Connection	Plastic bowl guard			Metal bowl		
		Part No.	Type	LT	Part No.	Type	LT
Manual	1/8 NPT	536715	MS4N-LFX-1/8-R	1D	536717	MS4N-LFX-1/8-U	Q
	1/4 NPT	531764	MS4N-LFX-1/4-R	1D	535786	MS4N-LFX-1/4-U	Q

LT = Lead time

1D typically ships same day/next day

1W typically ships within 1 week

Q request a quote for lead time

Active Carbon Filters MS4N-LFX – Inch Series



Ordering Data – Configurable Products

M Mandatory Data						O Options		
Part No.	Series	Size	Thread	Function	Connection size	Bowl	Type of mounting	Reverse flow direction
527700	MS	4	N	LFX	1/8, 1/4, AQK, AQN, AQP	R U	WP WPM WB WBM	Z
Order example								
527700	MS	4	N	- LFX	- AQK	- R	- WP	- Z

Ordering Table		Grid dimension [mm]	40	Conditions	Code	Enter code
M	Part No.	527700				
	Series	Standard			MS	MS
	Size	4			4	4
	Thread	NPT thread			N	N
	Function	Activated carbon filter			-LFX	-LFX
	Connection size	Body thread 1/8 NPT			-1/8	
		Body thread 1/4 NPT			-1/4	
		Port plate 1/8 NPT (dimensions → 300)			-AQK	
		Port plate 1/4 NPT (dimensions → 300)			-AQN	
		Port plate 3/8 NPT (dimensions → 300)			-AQP	
	Bowl	Plastic bowl with plastic bowl guard			-R	
		Metal bowl			-U	
O	Type of mounting	Mounting bracket (dimensions → 301)		1	-WP	
		Mounting bracket (dimensions → 301)		1	-WPM	
		Mounting bracket (dimensions → 298)			-WB	
		Mounting bracket (dimensions → 298)			-WBM	
	Reverse flow direction	Flow direction from right to left			-Z	

1 WP, WPM Only with port plate AQK, AQN or AQP

Transfer order code

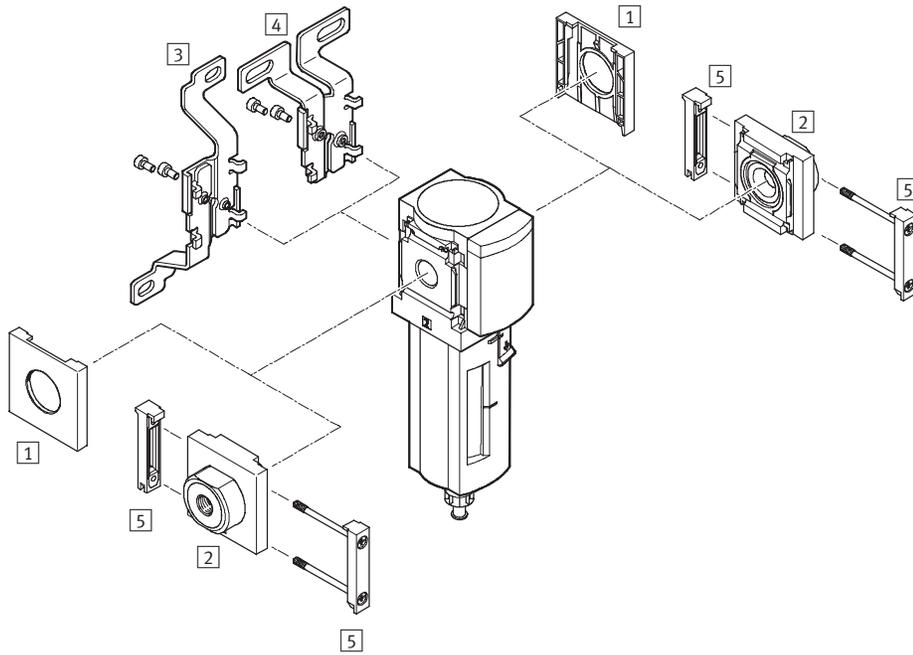
527700	MS	4	N	- LFX	-		-		-	
--------	----	---	---	-------	---	--	---	--	---	--

Active Carbon Filters MS4N-LFX – Inch Series

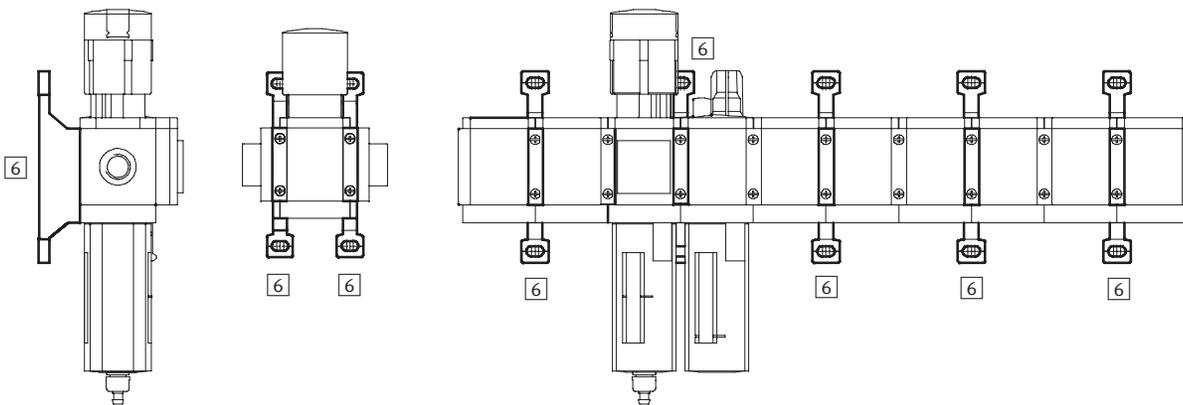
Accessories Overview



Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Active Carbon Filters MS4N-LFX – Inch Series

Accessories Overview

FESTO

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	■	-	■	-	299
2	Port plate MS4N-AQ..	-	■	-	■	300
3	Mounting bracket MS4-WB	■	■	-	-	298
4	Mounting bracket MS4-WBM	■	■	-	-	298
5	Body connector MS4-MV	-	■	■	■	300
6	Mounting bracket MS4-WP/WPB/WPM	-	■	■	■	301

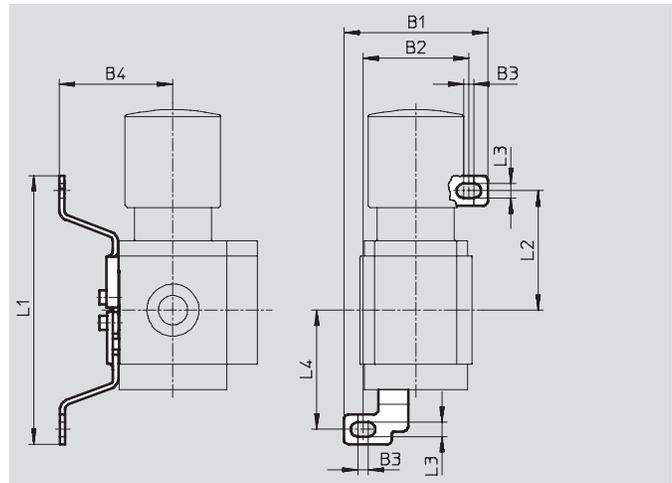
Active Carbon Filters MS4N-LFX – Inch Series

Accessories

3 Mounting bracket MS4-WB

- For wall mounting

Material:
Steel

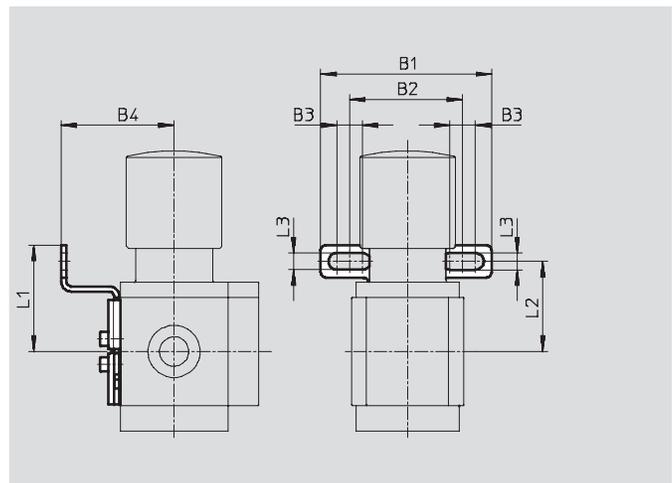


Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.21	1.62	0.16	1.74	4.12	1.83	0.22	1.79	0.09	532185	MS4-WB

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

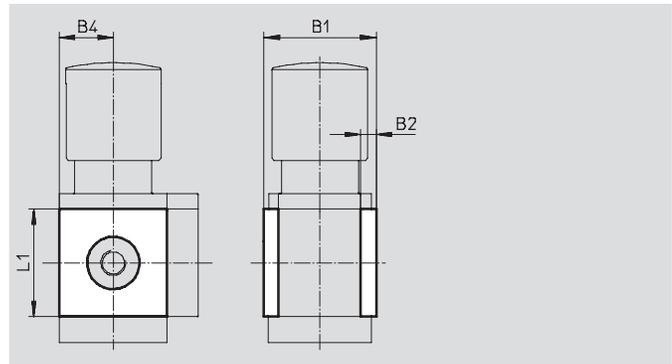
Active Carbon Filters MS4N-LFX – Inch Series

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

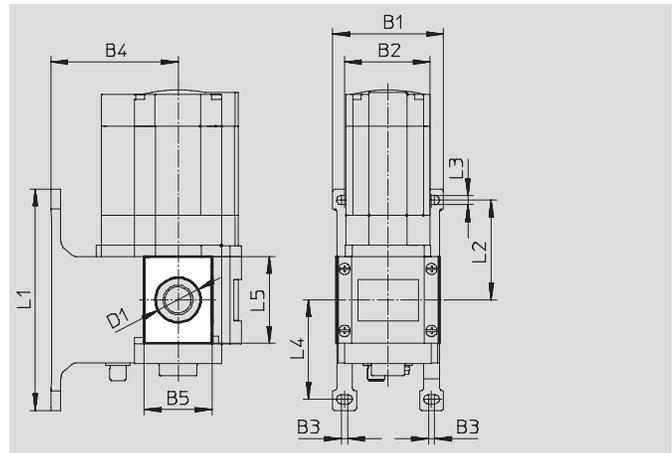


Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
1.72	0.24	0.83	1.65	538779	MS4-END	

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 ¹⁾	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.

Active Carbon Filters MS4N-LFX – Inch Series

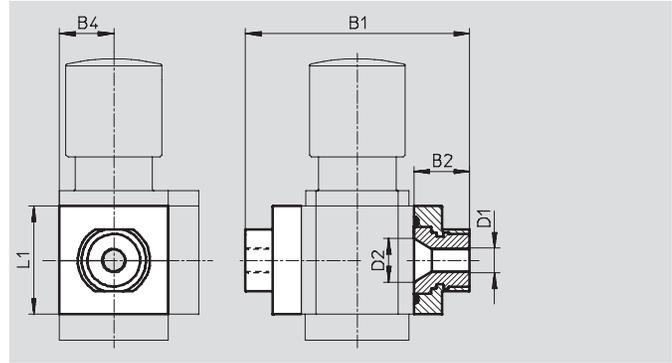
Accessories

FESTO

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

Active Carbon Filters MS4N-LFX – Inch Series

Accessories



6 Mounting Bracket MS4-WP...

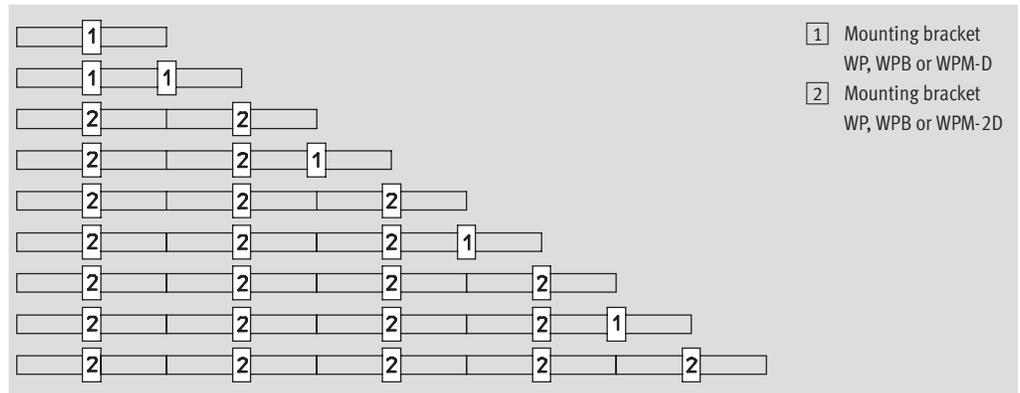
Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 1.575 in

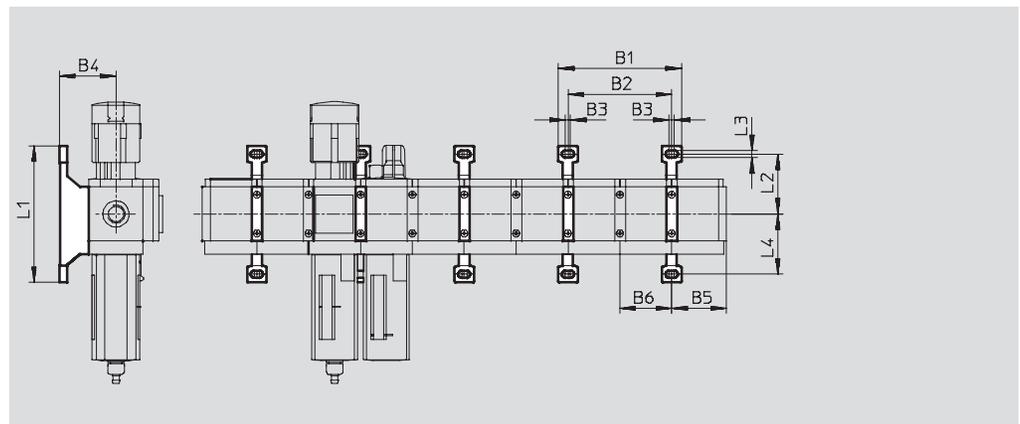
2 units: 3.15 in

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						
MS4-WPM-...D				1.73						

Active Carbon Filters MS4N-LFX – Inch Series

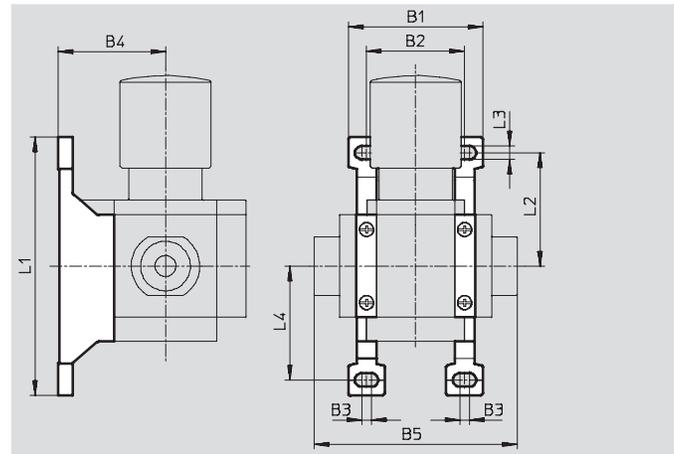


Accessories

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

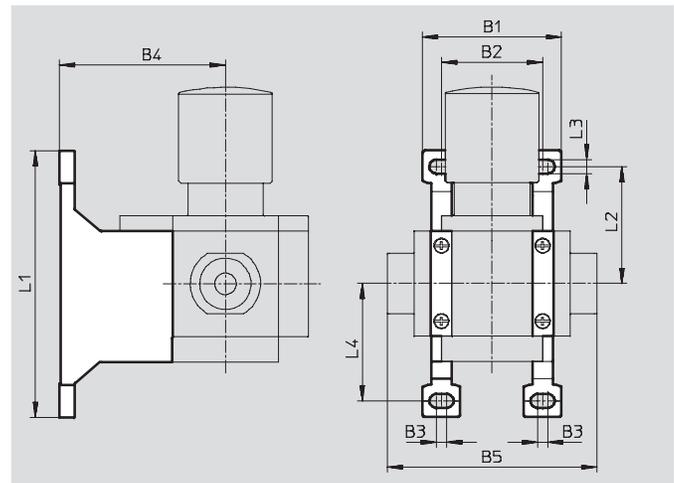


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.17	1.58	0.16	1.73	3.28	4.17	1.83	0.22	1.84	0.08	532184	MS4-WP

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

Active Carbon Filters MS4N-LFX – Inch Series

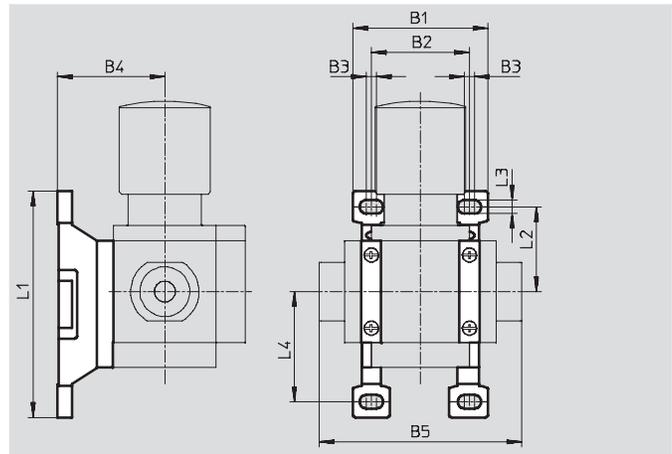
Accessories

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

Active Carbon Filters MS4N-LFX – Inch Series

Replacement Parts

FESTO



Ordering Data – Filter Cartridges			
Size	Filtration grade [µm]	Part No.	Type
MS4	Residual oil content $\leq 0.003 \text{ mg/m}^3$	532912	MS4/D-MINI-LFX

- For spare parts go to: 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 12,000 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 and ISO 14001 Certifications

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

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

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

For technical support,

Call: 1.866.GO.FESTO

Fax: 1.800.96.FESTO

Email: product.support@us.festo.com

Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788
www.festo.com/us

Sales Offices

Appleton

N. 922 Tower View Drive, Suite N
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

4935 Southfront Road, Suite F
Livermore, CA 94550

Design and Manufacturing Operations



East: 395 Moreland Road, Hauppauge, NY 11788



Central: 1441 East Business Center Drive, Mt. Prospect, IL 60056



West: 4935 Southfront Road, Suite F, Livermore, CA 94550

Mexico

Headquarters

Festo Pneumatic, S.A.
Av. Ceylán 3, Col. Tequesquahuac
54020 Tlalnepantla, Edo. de México
Call: 011 52 [55] 53 21 66 00
Fax: 011 52 [55] 53 21 66 65
Email: festo.mexico@mx.festo.com
www.festo.com/mx



Canada

Headquarters

Festo Inc.
5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Call: 1.905.624.9000
Fax: 1.905.624.9001
Email: info.ca@ca.festo.com
www.festo.com/ca



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark
Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan
Latvia Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore
Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com