

## Lubricators MS4N-LOE – Inch Series



The proportional lubricator adds a precision adjustable quantity of oil to the compressed air stream. The pressure drop that occurs when air flows through a Venturi nozzle is used to convey oil from the container to the drip cap. From here, the oil drips into the air duct directly behind the proportional valve, where it is atomized. The oil mist component is proportional to the compressed air flow rate.

- Pneumatic connection: 1/8 NPT, 1/4 NPT, 3/8 NPT
- Supply pressure: 15 ... 176 psi
- Flow rate: 38.8 ... 77.7 scfm

Product Range Overview						
Type	Flow rate [scfm]	Pneumatic connections		Bowl guard		Reverse flow
		Body thread	Port plate	Plastic bowl guard	Metal bowl	Flow direction from right to left
<b>MS4N</b>			<b>AG...</b>	<b>R</b>	<b>U</b>	<b>Z</b>
LOE	38.8 ... 77.7	1/8 NPT, 1/4 NPT	1/8 NPT, 1/4 NPT, 3/8 NPT	■	■	■

### Features

- Proportional lubricator with precision oil metering
- Reduces wear on drive units subject to high loading
- High flow rate
- Quick and easy oil top-up even during operation (under pressure)

The following oils are recommended for Festo components:  
 Viscosity range to ISO 3448, ISO class VG 32  
 32 mm<sup>2</sup>/s (= cSt) at 40°C

- Festo special oil OFSW-32 → 360
- ARAL Vitam GF 32
- BP Energol HLP 32
- Esso Nuto H 32
- Mobil DTE 24
- Shell Tellus Oil DO 32

### Contents

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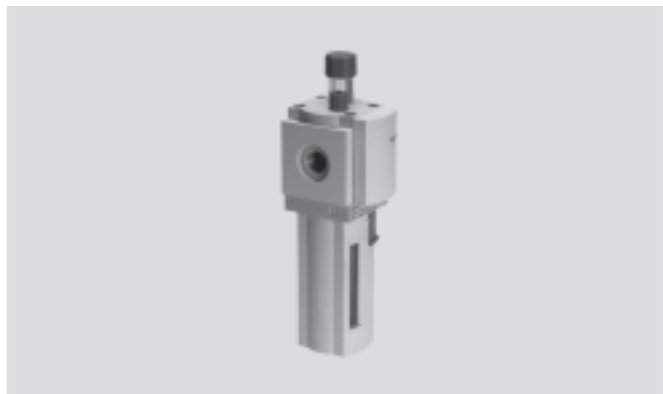
→ [www.festo.com/catalog/ms4n-loe](http://www.festo.com/catalog/ms4n-loe)

# Lubricators MS4N-LOE – Inch Series

Technical Data

FESTO

ISO Symbol



General Technical Data		
Pneumatic connection 1, 2	1/8 NPT	1/4 NPT
Supply pressure [psi]	15 ... 176	

Standard Nominal Flow Rate qnN [scfm]		
Pneumatic connection 1, 2	1/8 NPT	1/4 NPT
In main flow direction 1 → 2	38.8	77.7

Operating and Environmental Conditions		
Minimum flow for lubricator operation [scfm]	1.4	
Operating medium	Compressed air	
Max. oil capacity [in <sup>3</sup> ]	1.83 (with plastic bowl guard) 2.20 (with metal bowl)	
Bowl guard	Plastic bowl guard	
	Metal bowl	
Ambient temperature [°F]	14 ... 140	
Temperature of medium [°F]	14 ... 140	
Storage temperature [°F]	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	0.39
With metal bowl	0.71

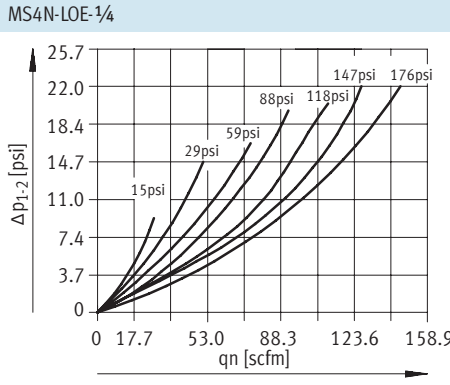
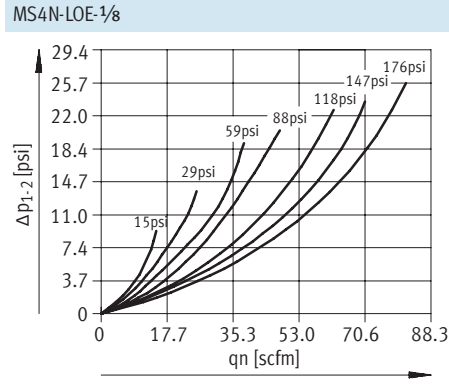
- For spare parts go to: [www.festo.com/en/spare\\_parts\\_service](http://www.festo.com/en/spare_parts_service)

# Lubricators MS4N-LOE – Inch Series

Technical Data

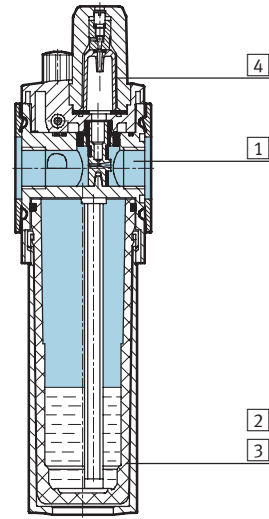


## Standard Flow Rate $q_n$ as a Function of the Differential Pressure $\Delta p_{1-2}$



## Materials

Sectional view



Lubricators		
1	Body	Die-cast aluminum
2	Plastic bowl guard	Polycarbonate/polyamide
3	Metal bowl	Aluminum
	Viewing window	Polyamide
4	Lubricator dome	Polycarbonate
-	Seals	Nitrile rubber

# Lubricators MS4N-LOE – Inch Series

Dimensional Drawings, Ordering Data – Pre-configured Products



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

1 Installation dimensions  
→ Flow direction

Type	B1	B2	B3	D1	L1 Bowl guard		L2	L3	L4	L5
					Plastic	Metal				
MS4N-LOE-1/8	1.65	0.83	2.13	1/8 NPT	6.56	7.28	2.09	1.02	3.31	3.15
MS4N-LOE-1/4				1/4 NPT						

1) Dimensions are in inches, unless otherwise noted.

Ordering Data						
Connection	Plastic bowl with plastic bowl guard			Metal bowl		
	Part No.	Type	LT	Part No.	Type	LT
1/8 NPT	531703	MS4N-LOE-1/8-R	1D	535799	MS4N-LOE-1/8-U	Q
1/4 NPT	531702	MS4N-LOE-1/4-R	1D	535798	MS4N-LOE-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

# Lubricators MS4N-LOE – 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
527702	MS	4	N	LOE	1/8, 1/4, AQK, AQN, AQP	R U	WP WPM WB WBM	Z
<b>Order example</b>								
<b>527702</b>	<b>MS</b>	<b>4</b>	<b>N</b>	<b>- LOE</b>	<b>- AQN</b>	<b>- R</b>	<b>- WP</b>	<b>- Z</b>

Ordering Table		Grid dimension [mm]	40	Conditions	Code	Enter code
M	Part No.	527702				
	Series	Standard			MS	MS
	Size	4			4	4
	Thread	NPT thread			N	N
	Function	Lubricators			-LOE	-LOE
	Connection size	Body thread 1/8 NPT			-1/8	
		Body thread 1/4 NPT			-1/4	
		Port plate 1/8 NPT (dimensions → 356)			-AQK	
		Port plate 1/4 NPT (dimensions → 356)			-AQN	
		Port plate 3/8 NPT (dimensions → 356)			-AQP	
	Bowl	Plastic bowl with plastic bowl guard			-R	
		Metal bowl			-U	
O	Type of mounting	Mounting bracket (dimensions → 357)		1	-WP	
		Mounting bracket (dimensions → 357)		1	-WPM	
		Mounting bracket (dimensions → 354)			-WB	
		Mounting bracket (dimensions → 354)			-WBM	
	Reverse flow direction	Flow direction from right to left			-Z	

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

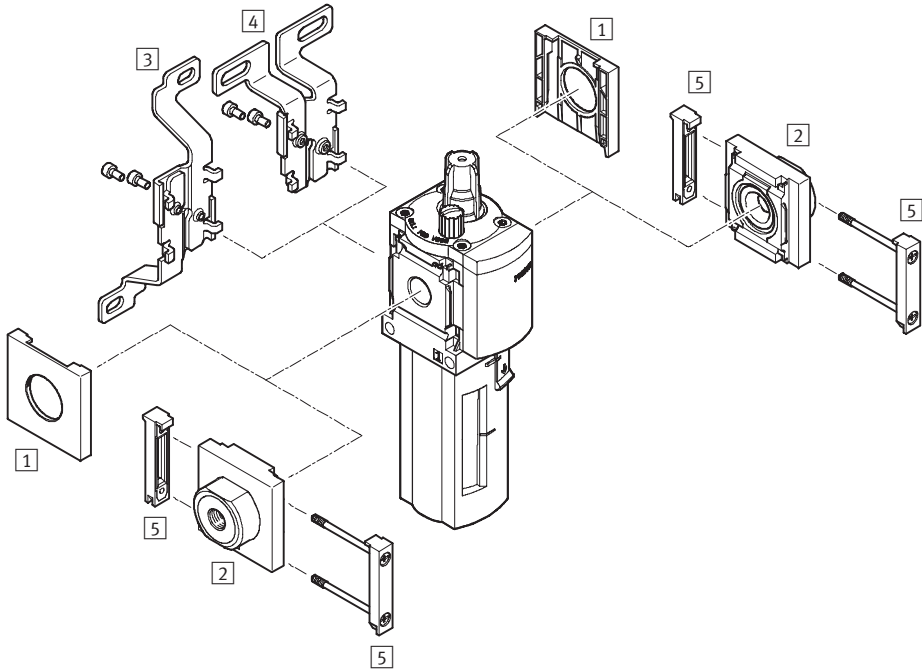
Transfer order code

527702	MS	4	N	- LOE	-		-		-	
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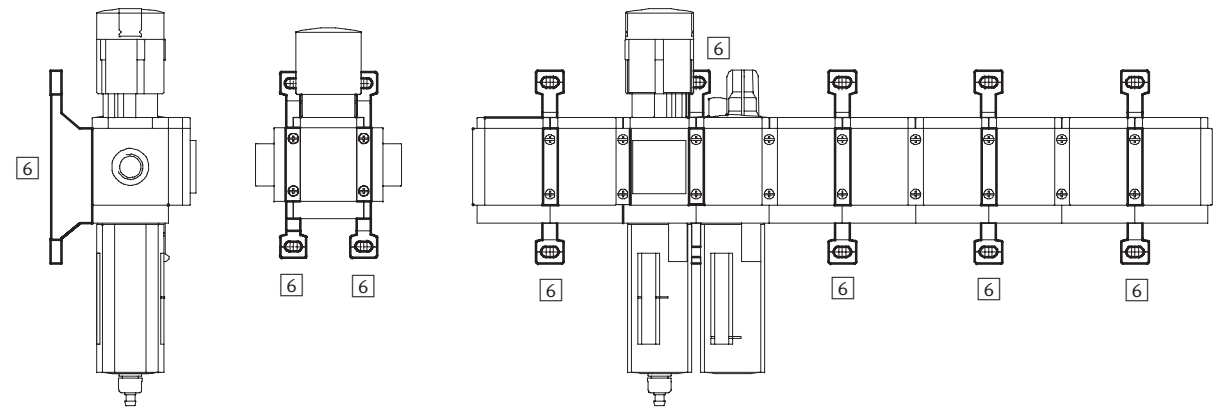
# Lubricators MS4N-LOE – Inch Series

Accessories Overview

## Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



# Lubricators MS4N-LOE – 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	■	-	■	-	355
2	Port plate MS4N-AQ...	-	■	-	■	356
3	Mounting bracket MS4-WB	■	■	-	-	354
4	Mounting bracket MS4-WBM	■	■	-	-	354
5	Body connector MS4-MV	-	■	■	■	356
6	Mounting bracket MS4-WP/WPB/WPM	-	■	■	■	357

# Lubricators MS4N-LOE – Inch Series



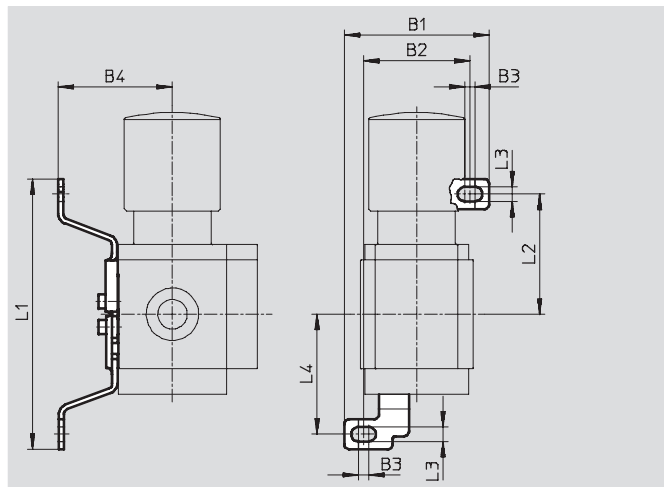
Accessories

## 3 Mounting bracket MS4-WB

- For wall mounting

Material:

Steel



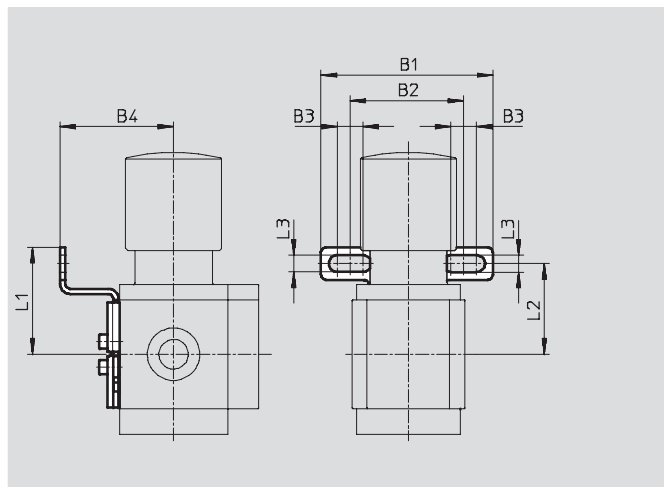
Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.21	1.62	0.16	1.74	4.12	1.83	0.22	1.83	0.09	532185	MS4-WB

## 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



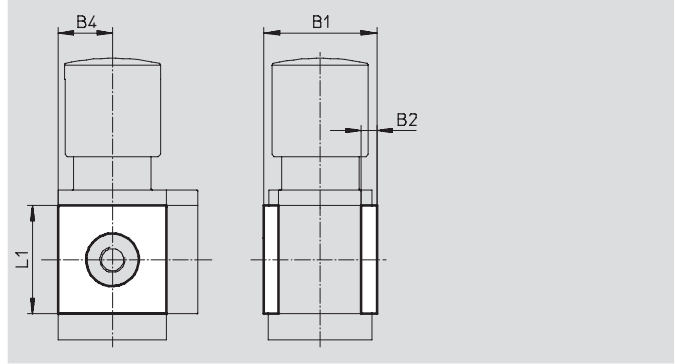
# Lubricators MS4N-LOE – Inch Series

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

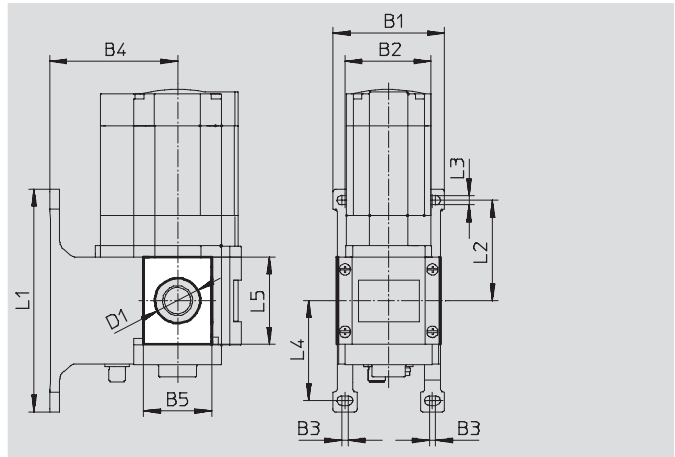


Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
1.72	0.24	0.83	1.65	538779	MS4-END	

## Mounting plate MS4-AEND

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

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.

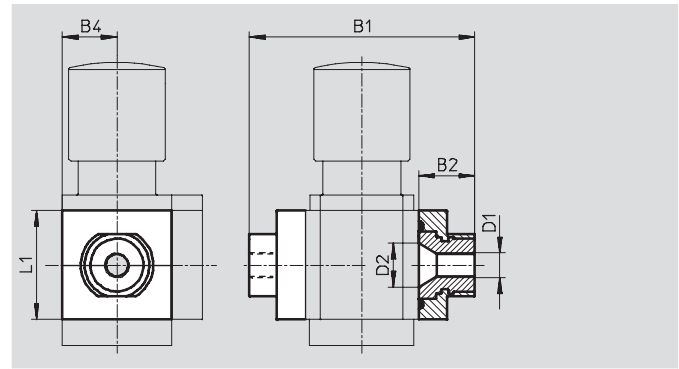
## Lubricators MS4N-LOE – Inch Series

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

# Lubricators MS4N-LOE – Inch Series

Accessories



## 6 Mounting Bracket MS4-WP...

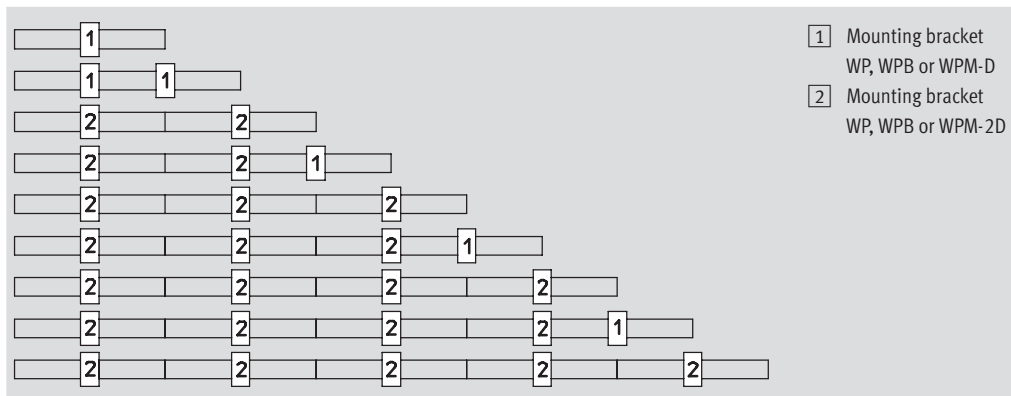
Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 1.575 in

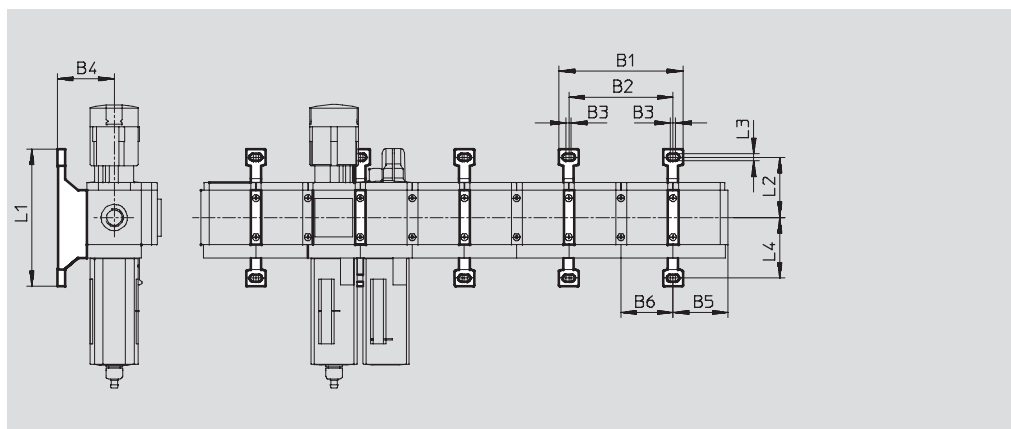
2 units: 3.15 in

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						3.65

# Lubricators MS4N-LOE – Inch Series

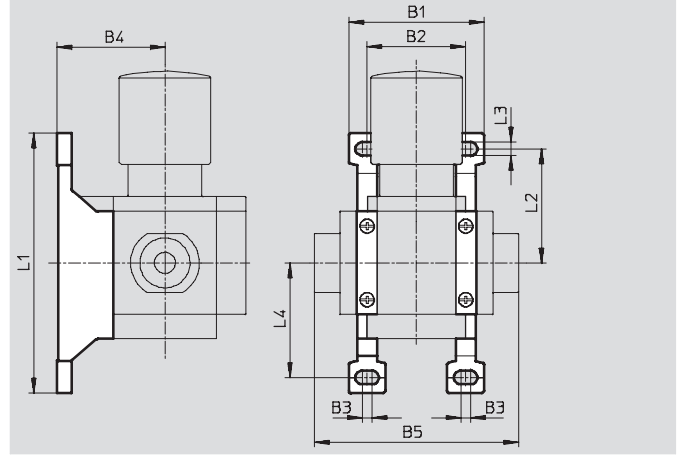


Accessories

## 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

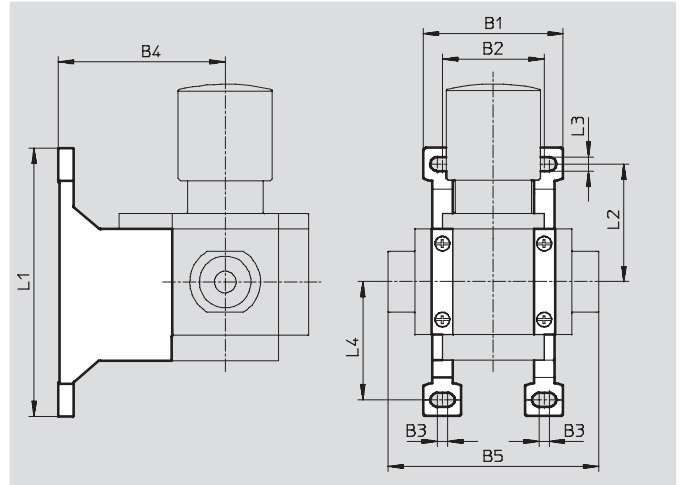


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.17	1.58	0.16	1.73	3.28	4.17	1.83	0.22	1.84	0.08	532184	MS4-WP

## 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

# Lubricators MS4N-LOE – Inch Series

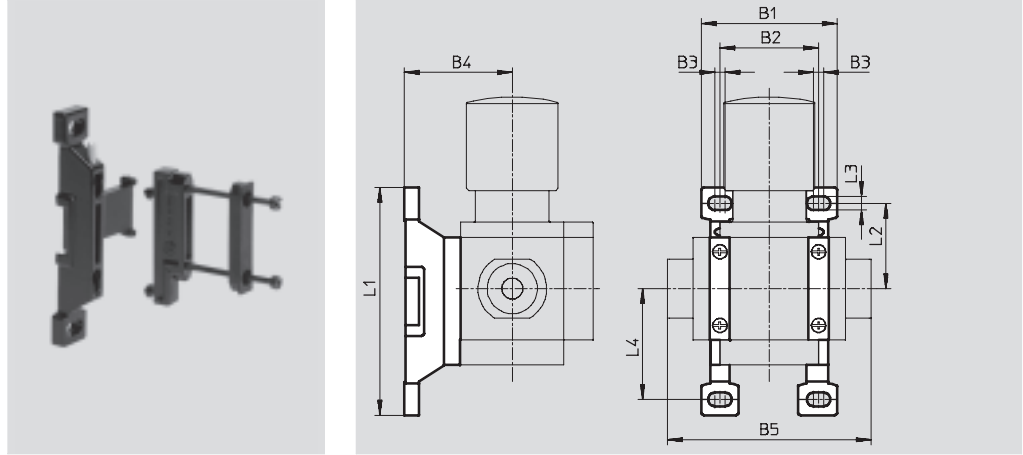
Accessories

## 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

# Lubricators MS4N-LOE – Inch Series

Accessories



Ordering Data – Special Oil OFSW				
	Description	Scope of delivery	Part No.	Type
	for lubricators	1 liter	152811	OFSW-32

# Festo - Your Partner in Automation



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

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



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

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



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

**Festo Customer Interaction Center**  
1 800 993 3786  
1 800 963 3786  
[customer.service.us@festo.com](mailto:customer.service.us@festo.com)



**4 Regional Service Center**  
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