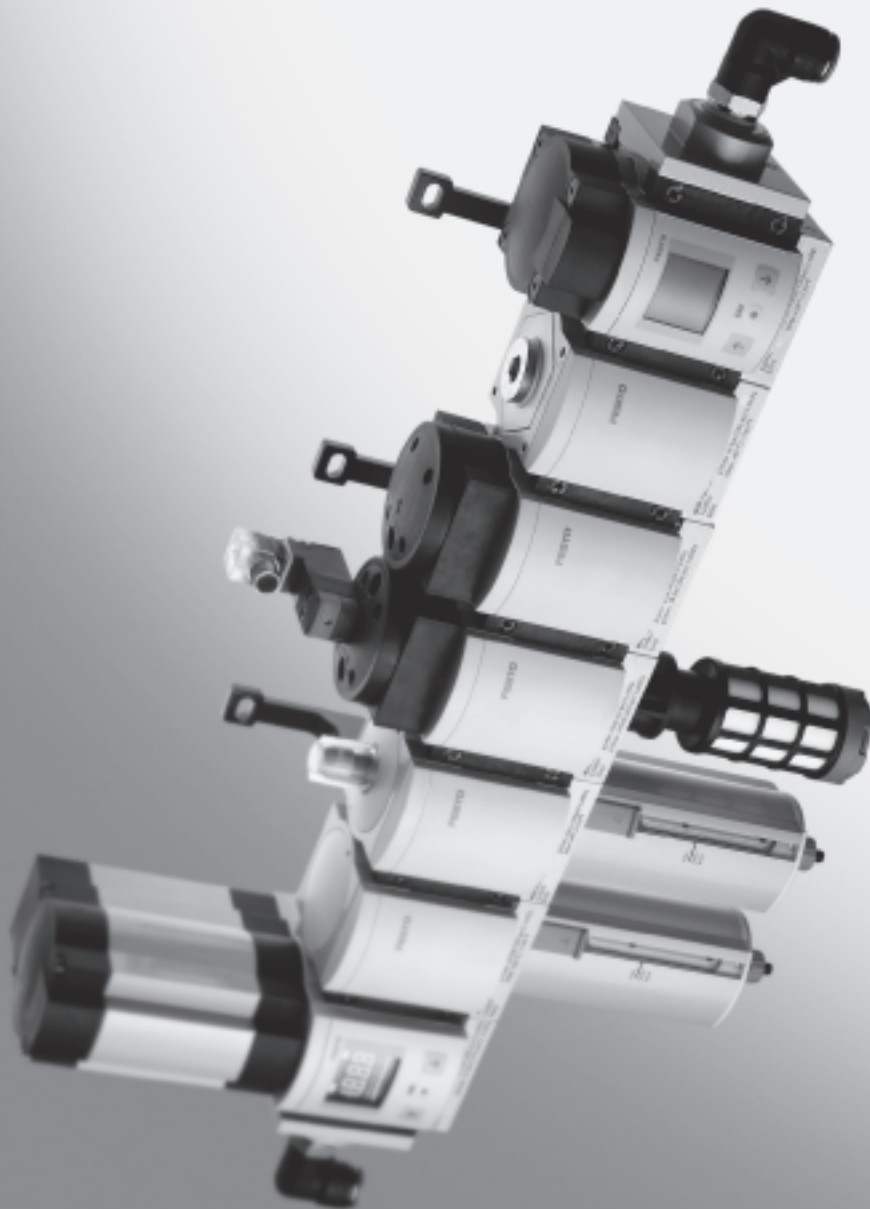


Wide range of configuration options

→ [www.festo.com/en/engineering](http://www.festo.com/en/engineering)



- Three sizes:
  - MS4 – grid  
dimension 40 mm
  - MS6 – grid  
dimension 62 mm
  - MS12 – grid  
dimension 124 mm
- Modular
- Easy to assemble
- Broad range of functions
- Compact with high flow rates
- Modern design
- Wide choice of variants
- Integrated safety functions

Specified types in accordance with ATEX directive for potentially explosive atmospheres

→ [www.festo.com/en/ex](http://www.festo.com/en/ex)

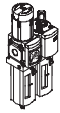
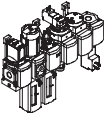








# MS series service units

Product range overview



MS series service units

1

Type	Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]						Grade of filtration [µm]			
				0.05	0.05	0.1	0.3	0.1	0.5	0.01	1	5	40
				...	...	...	...	...	...				
Code			AG...	D2	D4	D5	D6	D7	D8	A	B	C	E
<b>Service units</b>													
<b>MSB-FRC</b> 	4	G1/8, G1/4	G1/8, G1/4, G3/8	-	-	-	■	■	-	-	-	■	■
	6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	-	-	-	■	■	-	-	-	■	■
	12	-											
<b>Service unit combinations (further variants can be ordered using the configurator → <a href="http://www.festo.com/en/engineering">www.festo.com/en/engineering</a>)</b>													
<b>MSB</b> 	4	G1/4	G1/8, G1/4, G3/8	-	-	-	■	■	-	-	-	■	■
	6	G1/2	G1/4, G3/8, G1/2, G3/4	-	-	-	■	■	-	-	-	■	■
	12	-											
<b>Individual devices</b>													
Filter regulators <b>MS-LFR</b> 	4	G1/8, G1/4	G1/8, G1/4, G3/8	-	-	■	■	■	-	-	-	■	■
	6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	-	-	■	■	■	■	-	-	■	■
	12	-	G1, G1 1/4, G1 1/2, G2	-	-	-	■	■	■	-	-	■	■
Filters <b>MS-LF</b> 	4	G1/8, G1/4	G1/8, G1/4, G3/8	-	-	-	-	-	-	-	-	■	■
	6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	-	-	-	-	-	-	-	-	■	■
	12	-	G1, G1 1/4, G1 1/2, G2	-	-	-	-	-	-	-	-	■	■
Fine and micro filters <b>MS-LFM</b> 	4	G1/8, G1/4	G1/8, G1/4, G3/8	-	-	-	-	-	-	■	■	-	-
	6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	-	-	-	-	-	-	■	■	-	-
	12	-	G1, G1 1/4, G1 1/2, G2	-	-	-	-	-	-	■	■	-	-
Activated carbon filters <b>MS-LFX</b> 	4	G1/8, G1/4	G1/8, G1/4, G3/8	-	-	-	-	-	-	-	-	-	-
	6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	-	-	-	-	-	-	-	-	-	-
	12	-	G1, G1 1/4, G1 1/2, G2	-	-	-	-	-	-	-	-	-	-
Pressure regulators <b>MS-LR</b> 	4	G1/8, G1/4	G1/8, G1/4, G3/8	-	-	■	■	■	-	-	-	-	-
	6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	-	-	■	■	■	■	-	-	-	-
	12	-	G1, G1 1/4, G1 1/2, G2	-	-	-	■	■	■	-	-	-	-
Pressure regulators <b>MS-LRB</b> 	4	G1/4	G1/8, G1/4, G3/8	-	-	■	■	■	-	-	-	-	-
	6	G1/2	G1/4, G3/8, G1/2, G3/4	-	-	■	■	■	■	-	-	-	-
	12	-											
Precision pressure regulators <b>MS-LRP</b> 	4	-											
	6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	■	■	■	-	■	-	-	-	-	-
	12	-											
Precision pressure regulators <b>MS-LRPB</b> 	4	-											
	6	G1/2	G1/4, G3/8, G1/2, G3/4	■	■	■	-	■	-	-	-	-	-
	12	-											

# MS series service units

Product range overview



Type	Size	Bowl guard		Condensate drains				Pressure indicator					Actuator lock		Options		→ Page
		Plastic bowl guard	Metal bowl	Manual rotary	Semi-automatic	Fully automatic	External, fully-automatic, electrical	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter for EN pressure gauge G 1/8	Adapter for EN pressure gauge G 1/4	Pressure sensor with display	Rotary knob, lockable	Rotary knob, long	Silencer	Flow direction from right to left	
Code		R	U	M	H	V	E...	VS	AG	A8	A4	AD...	AS	LD	S	Z	
<b>Service units</b>																	
MSB-FRC	4	■	-	■	-	■	-	-	■	-	-	-	■	-	-	■	2-2
	6	■	■	■	-	■	-	-	■	-	-	-	■	-	-	■	
	12	-															
<b>Service unit combinations</b>																	
MSB	4	■	■	■	-	■	-	-	■	-	-	-	■	-	-	■	2-2
	6	■	■	■	-	■	-	-	■	-	-	-	■	-	-	■	
	12	-															
<b>Individual devices</b>																	
Filter regulators MS-LFR	4	■	■	■	■	■	-	■	■	■	■	■	■	■	-	■	3-2
	6	■	■	■	■	■	■	■	■	-	■	■	■	■	-	■	
	12	-	■	■	-	■	■	■	■	-	■	-	■	■	-	■	3-18
Filters MS-LF	4	■	■	■	■	■	-	-	-	-	-	-	-	-	-	■	4-2, 4-4
	6	■	■	■	■	■	■	-	-	-	-	-	-	-	-	■	
	12	-	■	■	-	■	■	-	-	-	-	-	-	-	-	■	4-32, 4-34
Fine and micro filters MS-LFM	4	■	■	■	■	■	-	-	-	-	-	-	-	-	-	■	4-2, 4-12
	6	■	■	■	■	■	■	-	-	-	-	-	-	-	-	■	
	12	-	■	■	-	■	■	-	-	-	-	-	-	-	-	■	4-32, 4-39
Activated carbon filters MS-LFX	4	■	■	-	-	-	-	-	-	-	-	-	-	-	-	■	4-2, 4-24
	6	■	■	-	-	-	-	-	-	-	-	-	-	-	-	■	
	12	-	■	-	-	-	-	-	-	-	-	-	-	-	-	■	4-32, 4-46
Pressure regulators MS-LR	4	-	-	-	-	-	-	■	■	■	■	■	■	■	-	■	5-2, 5-7
	6	-	-	-	-	-	-	■	■	-	■	■	■	■	-	■	
	12	-	-	-	-	-	-	■	■	-	■	-	■	■	-	■	5-58
Pressure regulators MS-LRB	4	-	-	-	-	-	-	■	■	■	■	■	■	■	-	■	5-2, 5-16
	6	-	-	-	-	-	-	■	■	-	■	■	■	■	-	■	
	12	-															
Precision pressure regulators MS-LRP	4	-															5-24, 5-29
	6	-	-	-	-	-	-	■	-	■	■	■	■	■	-	■	
	12	-															
Precision pressure regulators MS-LRPB	4	-															5-24, 5-38
	6	-	-	-	-	-	-	■	-	■	■	■	■	■	-	■	
	12	-															

# MS series service units

Product range overview



Type	Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]				Supply voltage				
				0.3 ... 4	0.3 ... 7	0.5 ... 12	0.5 ... 16	24 V DC (connection pattern to EN 175301)	24 V DC (connection pattern M12 to DESINA)	110 V AC (connection pattern to EN 175301)	230 V AC (connection pattern to EN 175301)	
Code			AG...	D5	D6	D7	D8	V24	V24P	V110	V230	
<b>Individual devices</b>												
Electrical pressure regulators <b>MS-LRE</b>		4	–									
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	■	■	■	■	–	–	–	–
		12	–									
Lubricators <b>MS-LOE</b>		4	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	–	–	–	–	–	–	–	–
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	–	–	–	–	–	–	–	–
		12	–	G1, G1 $\frac{1}{4}$ , G1 $\frac{1}{2}$ , G2	–	–	–	–	–	–	–	–
On-off valves <b>MS-EM(1)</b>		4	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	–	–	–	–	–	–	–	–
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	–	–	–	–	–	–	–	–
		12	–	G1, G1 $\frac{1}{4}$ , G1 $\frac{1}{2}$ , G2	–	–	–	–	–	–	–	–
On-off valves <b>MS-EE</b>		4	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	–	–	–	–	■	–	■	■
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	–	–	–	–	■	–	■	■
		12	–	G1, G1 $\frac{1}{4}$ , G1 $\frac{1}{2}$ , G2	–	–	–	–	■	■	■	■
Soft-start valves <b>MS-DL</b>		4	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	–	–	–	–	–	–	–	–
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	–	–	–	–	–	–	–	–
		12	–	G1, G1 $\frac{1}{4}$ , G1 $\frac{1}{2}$ , G2	–	–	–	–	–	–	–	–
Soft-start valves <b>MS-DE</b>		4	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	–	–	–	–	■	–	■	■
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	–	–	–	–	■	–	■	■
		12	–	G1, G1 $\frac{1}{4}$ , G1 $\frac{1}{2}$ , G2	–	–	–	–	■	■	■	■
Membrane air dryers <b>MS-LDM1</b>		4	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	–	–	–	–	–	–	–	–
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	–	–	–	–	–	–	–	–
		12	–									
Branching modules <b>MS-FRM</b>		4	G $\frac{1}{8}$ , G $\frac{1}{4}$	G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$	–	–	–	–	–	–	–	–
		6	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$	G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , G $\frac{3}{4}$	–	–	–	–	–	–	–	–
		12	–	G1, G1 $\frac{1}{4}$ , G1 $\frac{1}{2}$ , G2	–	–	–	–	–	–	–	–
Flow sensors <b>MS-SFE</b>		4	–									
		6	G $\frac{1}{2}$	G $\frac{1}{2}$	–	–	–	–	–	–	–	–
		12	–									

# MS series service units

Product range overview

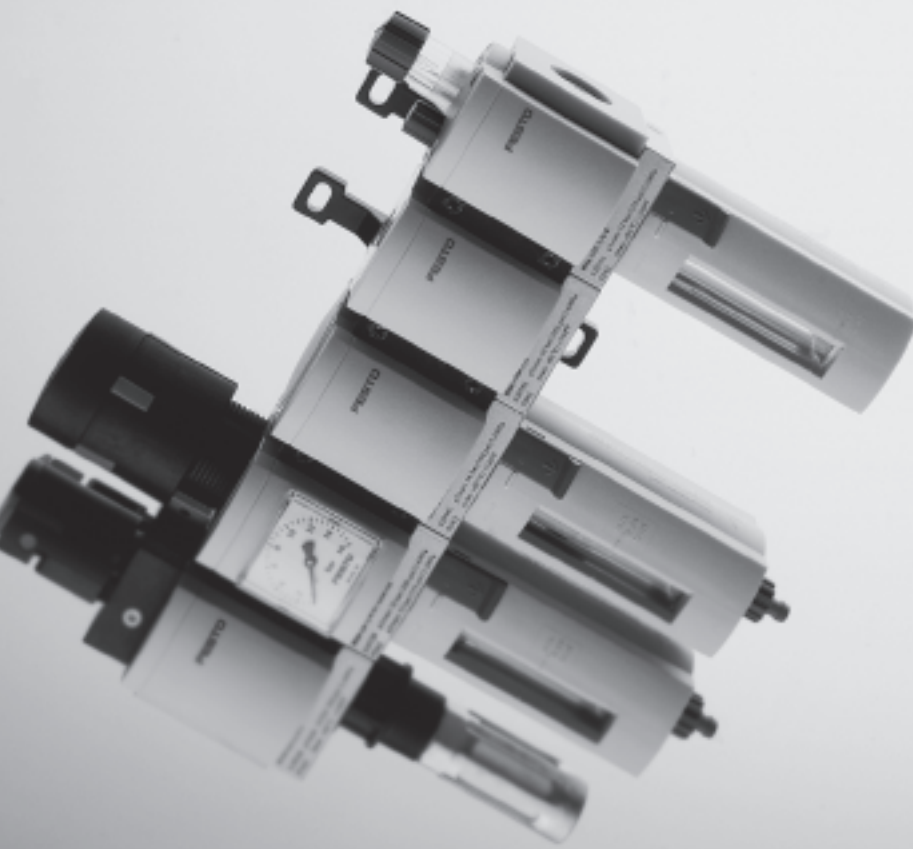


Type	Size	Bowl guard		Pressure indicator					Switch output		Options		→ Page	
		Plastic bowl guard	Metal bowl	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter for EN pressure gauge G 1/8	Adapter for EN pressure gauge G 1/4	Pressure sensor with display	2x PNP	2x NPN	Silencer	Flow direction from right to left		
														R
<b>Individual devices</b>														
Electrical pressure regulators <b>MS-LRE</b>	4	-												5-46
	6	-	-	■	■	-	■	-	-	-	-	-	■	
	12	-												
Lubricators <b>MS-LOE</b>	4	■	■	-	-	-	-	-	-	-	-	-	■	6-2
	6	■	■	-	-	-	-	-	-	-	-	-	■	
	12	-	■	-	-	-	-	-	-	-	-	-	■	6-10
On-off valves <b>MS-EM(1)</b>	4	-	-	■	■	■	■	■	-	-	■	■	7-2, 7-5	
	6	-	-	■	■	-	■	■	-	-	■	■		
	12	-	-	■	■	-	■	-	-	-	■	■	7-32, 7-35	
On-off valves <b>MS-EE</b>	4	-	-	■	■	■	■	■	-	-	■	■	7-2, 7-10	
	6	-	-	■	■	-	■	■	-	-	■	■		
	12	-	-	■	■	-	■	-	-	-	■	■	7-32, 7-39	
Soft-start valves <b>MS-DL</b>	4	-	-	■	■	■	■	■	-	-	-	■	7-2, 7-18	
	6	-	-	■	■	-	■	■	-	-	-	■		
	12	-	-	■	■	-	■	-	-	-	-	■	7-32, 7-43	
Soft-start valves <b>MS-DE</b>	4	-	-	■	■	■	■	■	-	-	-	■	7-2, 7-23	
	6	-	-	■	■	-	■	■	-	-	-	■		
	12	-	-	■	■	-	■	-	-	-	-	■	7-32, 7-47	
Membrane air dryers <b>MS-LDM1</b>	4	-	■	-	-	-	-	-	-	-	-	■	8-2	
	6	-	■	-	-	-	-	-	-	-	-	■		
	12	-												
Branching modules <b>MS-FRM</b>	4	-	-	■	■	■	■	■	-	-	-	■	9-2	
	6	-	-	■	■	-	■	■	-	-	-	■		
	12	-	-	■	-	-	-	-	-	-	-	-	9-14	
Flow sensors <b>MS-SFE</b>	4	-											10-2	
	6	-	-	-	-	-	-	-	■	■	-	■ <sup>1)</sup>		
	12	-												

1) To be ordered via configurator software only → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)



Wide range of configuration options  
→ [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

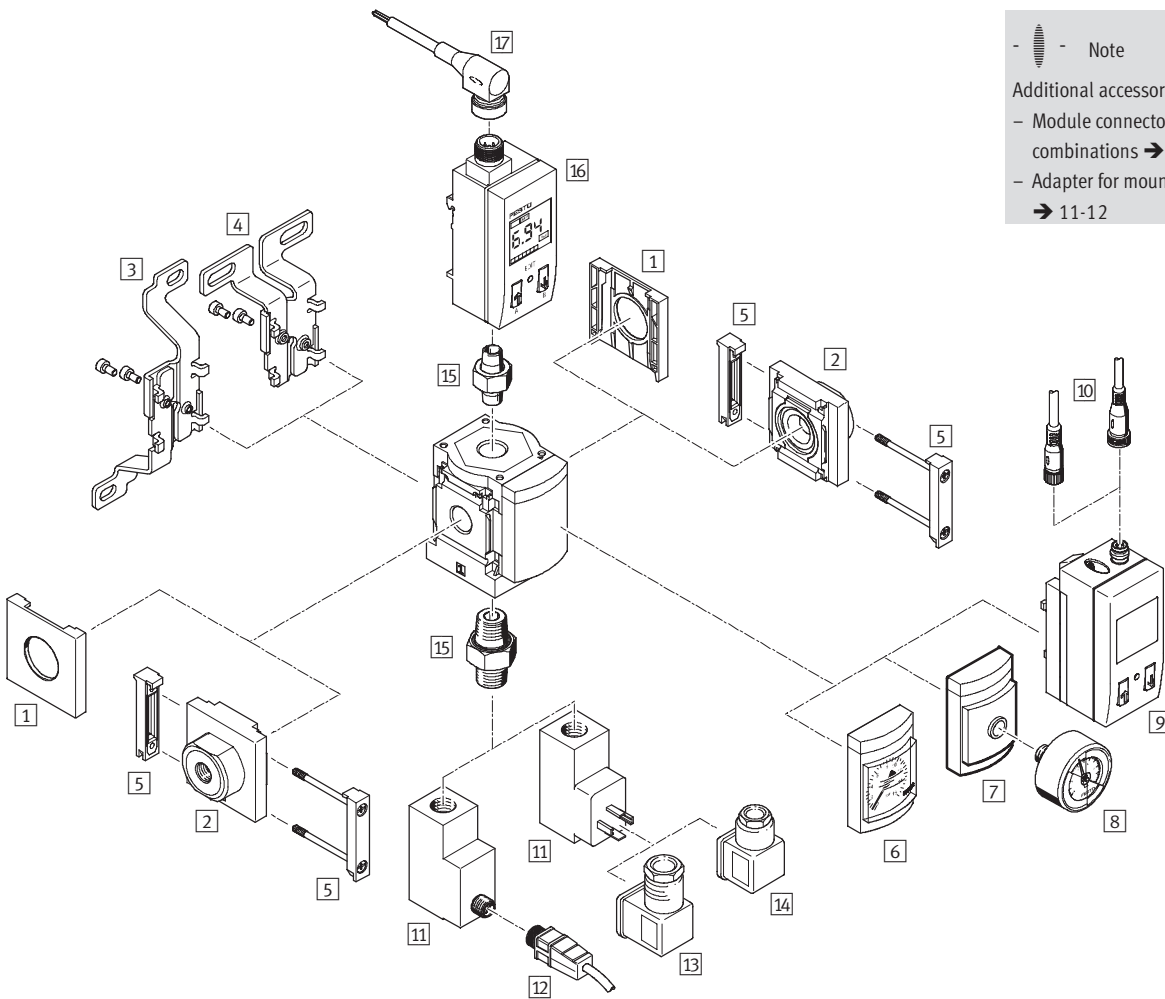


- MS4 – grid  
dimension 40 mm  
MS6 – grid  
dimension 62 mm
- Modular
- Easy to assemble
- Broad range of functions
- Compact with high flow rates
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- Wide choice of variants
- Integrated safety functions

Specified types in accordance with  
ATEX directive for potentially  
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## Branching modules MS4/MS6-FRM, MS series

Peripherals overview





## Branching modules MS4/MS6-FRM, MS series

Peripherals overview

Mounting attachments and accessories						
		Individual unit		Combination → 3/2.11-0		→ Page
		without connect- ing plate	with connecting plate	without connect- ing plate	with connecting plate	
1	Cover cap MS4/6-END	■	-	■	-	11-3
2	Connecting plate MS4/6-AG...	-	■	-	■	11-2
3	Mounting bracket MS4/6-WB	■	■	-	-	11-4
4	Mounting bracket MS4-WBM	■	■	-	-	11-4
5	Module connector MS4/6-MV	-	■	■	■	11-8
6	MS pressure gauge AG	■	■	■	■	9-10
7	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	9-10
8	Pressure gauge MA	■	■	■	■	11-20
9	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	9-10
10	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	11-20
11	Pressure switch PEV X/Y/M12	■	■	■	■	9-10, 11-18
12	Plug socket with cable SIM-M12-4...	■	■	■	■	11-20
13	Angled socket PEV-1/4-WD-LED-...	■	■	■	■	11-19
14	Plug socket MSSD-C-4P	■	■	■	■	11-19
15	Double nipple ESK	■	■	■	■	11-21
16	Pressure sensor SDE1-...-H18/W18 AD5/AD6	■	■	■	■	9-10, 11-18
17	Plug socket with cable SIM-M8-3.../SIM-M12-5...	■	■	■	■	11-20
-	Mounting bracket MS4/6-WP/WPB/WPM	-	■	■	■	11-6, 11-7

## Branching modules MS4/MS6-FRM, MS series

Type codes

**FESTO**

		MS	4	-	FRM	-	1/8	-	Y
<b>Series</b>									
MS	Standard service unit								
<b>Size</b>									
4	Grid dimension 40 mm								
6	Grid dimension 62 mm								
<b>Service function</b>									
FRM	Branching module								
<b>Connection size</b>									
1/8	Thread G1/8								
1/4	Thread G1/4								
3/8	Thread G3/8								
1/2	Thread G1/2								
<b>Non-return function/pressure switch</b>									
	Standard								
I	With integrated non-return function								
Y	With pressure switch								

### Further variants can be ordered using the modular system

Branching modules FRM

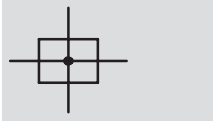
→ 9-10

- Connecting plates
- Pressure gauge alternatives
- Alternative pressure gauge scale
- Pressure switch
- Type of mounting
- Alternative flow direction

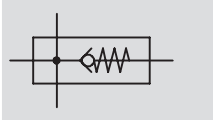
## Branching modules MS4/MS6-FRM, MS series


Technical data

Function  
Standard




With integrated non-return function



-  - Flow rate  
1,200 ... 13,000 l/min

-  - Temperature range  
-10 ... +60 °C

-  - Operating pressure  
0 ... 20 bar



- Pneumatic manifold with 4 connections
- Can be used as an intermediate distributor for varying air qualities
- Attachment facility for auxiliary modules
- Outlet top and bottom
- An integrated non-return valve prevents the return flow e.g. of lubricated compressed air
- Optional pressure sensor with display

General technical data					
Size	MS4		MS6		
Pneumatic connection 1, 2	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$
Pneumatic connection 3, 4	G $\frac{1}{4}$		G $\frac{1}{2}$		
Design	Branching module				
	Branching module with non-return function				
Type of mounting	Via accessories				
	In-line installation				
Assembly position	Any <sup>1)</sup>				
Pressure display	With pressure sensor for the output pressure display and with electric output				
	With pressure gauge for the output pressure display				

1) The branching module must be mounted vertically when combined with a pressure sensor as condensate must not collect in the pressure sensor.  
 -  - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard nominal flow rate qnN <sup>1)</sup> [l/min]					
Size	MS4		MS6		
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$
Standard					
In main flow direction 1 $\rightarrow$ 2	1,300	3,500	3,300	8,350	13,000
Outlet at top	2,200	2,300	6,570	7,800	6,700
Outlet at bottom	2,300	2,500	6,800	8,750	8,000
With non-return function					
In main flow direction 1 $\rightarrow$ 2	1,200	1,750	3,200	5,500	6,000
Outlet at top	500	500	2,700	2,900	3,100
Outlet at bottom	500	500	2,800	3,200	3,300

1) Measured at p<sub>1</sub> = 6 bar and p<sub>2</sub> = 5 bar, Δp = 1 bar

## Branching modules MS4/MS6-FRM, MS series

Technical data

**FESTO**

Operating and environmental conditions								
Variant	Standard		Non-return function I		Pressure switch X/Y/M12		Pressure sensor with display AD...	
Size	MS4	MS6	MS4	MS6	MS4	MS6	MS4	MS6
Operating pressure [bar]	0 ... 14	0 ... 20	0 ... 10	0 ... 20	0 ... 12	0 ... 12	0 ... 10	0 ... 10
Operating medium	Compressed air		Compressed air		Compressed air		Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm	
Ambient temperature [°C]	-10 ... +60		-10 ... +60		-10 ... +60		0 ... +50	
Temperature of medium [°C]	-10 ... +60		-10 ... +60		-10 ... +60		0 ... +50	
Storage temperature [°C]	-10 ... +60		-10 ... +60		-10 ... +60		-10 ... +60	
Corrosion resistance class CRC <sup>1)</sup>	2							

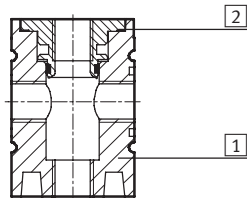
1) Corrosion resistance class 2 according to Festo standard 940 070

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.

Weight [g]		
Size	MS4	MS6
Standard	160	500
With non-return function	160	400
With pressure switch	400	778
With pressure sensor	250	570

### Materials

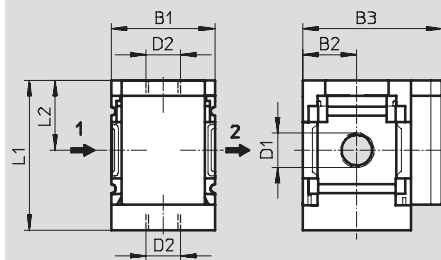
Sectional view



Branching module	
1	Housing Die-cast aluminium
2	Threaded insert Aluminium
Note on materials Free of copper and PTFE (not with variants AG or AD...)	

### Dimensions – Standard/With non-return function I

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



→ Flow direction

Type	B1	B2	B3	D1	D2	L1	L2
MS4-FRM-1/8	40	21	54	G1/8	G1/4	58	27
MS4-FRM-1/8-I						59.9	28.9
MS4-FRM-1/4	40	21	54	G1/4	G1/4	58	27
MS4-FRM-1/4-I						59.9	28.9
MS6-FRM-1/4	62	31	76	G1/4	G1/2	84.5	39
MS6-FRM-1/4-I						87.2	41.7
MS6-FRM-3/8	62	31	76	G3/8	G1/2	84.5	39
MS6-FRM-3/8-I						87.2	41.7
MS6-FRM-1/2	62	31	76	G1/2	G1/2	84.5	39
MS6-FRM-1/2-I						87.2	41.7

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

## Branching modules MS4/MS6-FRM, MS series

Technical data

**Dimensions – Pressure gauge alternatives** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Integrated MS pressure gauge AG, display unit [bar] Adapter plate A8/A4 for EN pressure gauge 1/8/1/4, without pressure gauge

→ Flow direction → Flow direction

Pressure sensor with display AD1 ... AD4 Technical data SDE1 → [www.festo.com](http://www.festo.com)

→ Flow direction

Variant AD1:  
SDE1-D10-G2-MS-L-P1-M8 with  
3-pin plug M8x1, 1 switch output  
PNP

Variant AD2:  
SDE1-D10-G2-MS-L-N1-M8 with  
3-pin plug M8x1, 1 switch output  
NPN

Variant AD3:  
SDE1-D10-G2-MS-L-PI-M12 with  
4-pin plug M12x1, 1 switch output  
PNP and 4 ... 20 mA analogue

Variant AD4:  
SDE1-D10-G2-MS-L-NI-M12 with  
4-pin plug M12x1, 1 switch output  
NPN and 4 ... 20 mA analogue

Type	B2	B3	D1	D4	D6	L5	L6
MS4-FRM-1/8-...-AG	21	57	G1/8	-	-	-	-
MS4-FRM-1/4-...-AG			G1/4	-	-	-	-
MS4-FRM-1/8-...-A8	21	58.5	G1/8	G1/8	-	-	-
MS4-FRM-1/4-...-A8			G1/4				
MS4-FRM-1/8-...-A4	21	58.5	G1/8	G1/4	-	-	-
MS4-FRM-1/4-...-A4			G1/4				
MS4-FRM-1/8-...-AD1/AD2	21	82.6	G1/8	-	M8x1	35.1	46.7
MS4-FRM-1/4-...-AD1/AD2			G1/4				
MS4-FRM-1/8-...-AD3/AD4	21	82.6	G1/8	-	M12x1	35.1	55.8
MS4-FRM-1/4-...-AD3/AD4			G1/4				
MS6-FRM-1/4-...-AG	31	77	G1/4	-	-	-	-
MS6-FRM-3/8-...-AG			G3/8				
MS6-FRM-1/2-...-AG			G1/2				
MS6-FRM-1/4-...-A4	31	78.5	G1/4	G1/4	-	-	-
MS6-FRM-3/8-...-A4			G3/8				
MS6-FRM-1/2-...-A4			G1/2				
MS6-FRM-1/4-...-AD1/AD2	31	103	G1/4	-	M8x1	35.1	46.7
MS6-FRM-3/8-...-AD1/AD2			G3/8				
MS6-FRM-1/2-...-AD1/AD2			G1/2				
MS6-FRM-1/4-...-AD3/AD4	31	103	G1/4	-	M12x1	35.1	55.8
MS6-FRM-3/8-...-AD3/AD4			G3/8				
MS6-FRM-1/2-...-AD3/AD4			G1/2				

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

**New**  
Variants AD..., I

**Branching modules MS4/MS6-FRM, MS series**

Technical data

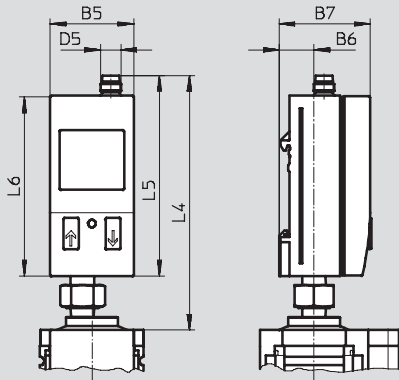


**Dimensions – Pressure gauge alternatives**

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

Pressure sensor with display AD5/AD6

Technical data SDE1 → [www.festo.com](http://www.festo.com)



Variant AD5:  
SDE1-D10-G2-H18-C-P1-M8 with  
3-pin plug M8x1, 1 switch output  
PNP

Variant AD6:  
SDE1-D10-G2-W18-L-2I-M12 with  
5-pin plug M12x1, 2 switch outputs  
PNP and 4 ... 20 mA analogue

Type	B5	B6	B7	D5	L4	L5	L6
MS4-FRM-...-AD5	32.3	13.5	35.2	M8	99	78	70
MS4-FRM-...-AD6				M12	108	87	
MS6-FRM-...-AD5	32.3	13.5	35.2	M8	94	78	70
MS6-FRM-...-AD6				M12	103	87	

## Branching modules MS4/MS6-FRM, MS series

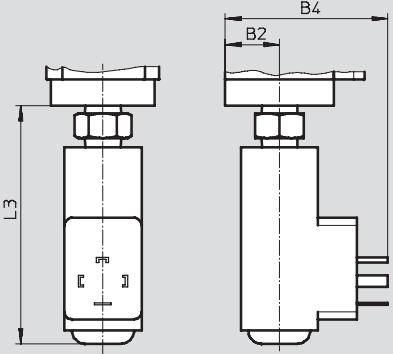
Technical data

**FESTO**

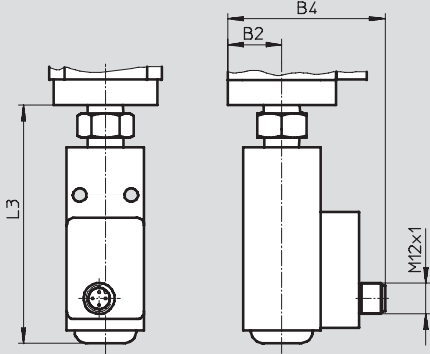
**Dimensions – Pressure switch** Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Pressure switch with adjustable pressure switching point X/Y/M12 Technical data PEV → [www.festo.com](http://www.festo.com)

Variant X/Y



Variant M12








Variant X:  
PEV-1/4-SC-0D with display, plug, square design to DIN EN 175 301, type A

Variant Y:  
PEV-1/4-B-0D, plug, square design to DIN EN 175 301, type A

Variant M12:  
PEV-1/4-B-M12 with 4-pin plug M12x1

Type	B2	B4	L3
MS4-FRM-...-X/Y	21	63	92.3
MS4-FRM-...-M12	21	61	92.3
MS6-FRM-...-X/Y	31	73	99.5
MS6-FRM-...-M12	31	71	99.5

Ordering data				
Size	Connection	Part No.	Type	
<b>Standard</b>				
MS4	G1/8	529 559	MS4-FRM-1/8-1 <sup>1)</sup>	
	G1/4	529 555	MS4-FRM-1/4-1 <sup>1)</sup>	
MS6	G1/4	529 857	MS6-FRM-1/4-1 <sup>1)</sup>	
	G3/8	529 861	MS6-FRM-3/8-1 <sup>1)</sup>	
	G1/2	529 853	MS6-FRM-1/2-1 <sup>1)</sup>	
<b>With integrated non-return function</b>				
MS4	G1/8	536 965	MS4-FRM-1/8-I <sup>1)</sup>	 New
	G1/4	536 966	MS4-FRM-1/4-I <sup>1)</sup>	 New
MS6	G1/4	536 967	MS6-FRM-1/4-I <sup>1)</sup>	 New
	G3/8	536 968	MS6-FRM-3/8-I <sup>1)</sup>	 New
	G1/2	536 969	MS6-FRM-1/2-I <sup>1)</sup>	 New
<b>With pressure switch PEV-1/4-B-0D (variant Y)</b>				
MS4	G1/8	529 560	MS4-FRM-1/8-Y <sup>1)</sup>	
	G1/4	529 556	MS4-FRM-1/4-Y <sup>1)</sup>	
MS6	G1/4	529 858	MS6-FRM-1/4-Y <sup>1)</sup>	
	G3/8	529 862	MS6-FRM-3/8-Y <sup>1)</sup>	
	G1/2	529 854	MS6-FRM-1/2-Y <sup>1)</sup>	

1) Free of copper and PTFE

## Branching modules MS4/MS6-FRM, MS series

Ordering data – Modular products

**FESTO**

Mandatory data				
Module No.	Series	Size	Function	Connection size
527 703	MS	4	FRM	1/8
527 676		6		1/4
				3/8
				1/2
				AGA
				AGB
				AGC
				AGD
				AGE
<b>Ordering example</b>				
527 676	MS	6	- FRM	- 3/8

Ordering table						
Grid dimension	[mm]	40	62	Condi- tions	Code	Enter code
M	Module No.	527 703	527 676			
	Series	Standard			MS	MS
	Size	4	6		...	
	Function	Branching module			-FRM	-FRM
	Connection size	Thread G1/8	-		-1/8	
		Thread G1/4	Thread G1/4		-1/4	
		-	Thread G3/8		-3/8	
		-	Thread G1/2		-1/2	
		Connecting plate G1/8	-		-AGA	
		Connecting plate G1/4	Connecting plate G1/4		-AGB	
		Connecting plate G3/8	Connecting plate G3/8		-AGC	
		-	Connecting plate G1/2		-AGD	
		-	Connecting plate G3/4		-AGE	

Transfer order code

	MS		-	FRM		-	
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## Branching modules MS4/MS6-FRM, MS series

Ordering data – Modular products

FESTO

Options					
Additional function	Pressure gauge alternatives	Alternative pressure gauge scale	Pressure switch	Type of mounting	Alternative flow direction
I	AG A8 A4 AD1 AD2 AD3 AD4 AD5 AD6	PSI MPA	X Y M12	WP WPM WB WBM	Z
-	- AG	- PSI	- M12	- WB	- Z

Ordering table						
Grid dimension	[mm]	40	62	Condi- tions	Code	Enter code
0	Additional function	With integrated non-return function		1	-I	
	Pressure gauge alternatives	MS pressure gauge, bar (with adapter)	MS pressure gauge, bar		-AG	
		Adapter plate for EN pressure gauge 1/8, without pressure gauge	-		-A8	
		Adapter plate for EN pressure gauge 1/4, without pressure gauge			-A4	
		Pressure sensor with display, plug M8, 1 switching output PNP, 3-pin		2	-AD1	
		Pressure sensor with display, plug M8, 1 switching output NPN, 3-pin		2	-AD2	
		Pressure sensor with display, plug M12, 1 switching output PNP, 4-pin, analogue output 4 ... 20 mA		2	-AD3	
		Pressure sensor with display, plug M12, 1 switching output NPN, 4-pin, analogue output 4 ... 20 mA		2	-AD4	
		Pressure sensor with display, plug M8, 1 switching output PNP, 3-pin		2	-AD5	
		Pressure sensor with display, plug M12, 2 switching outputs PNP, 5-pin, analogue output 4 ... 20 mA		2	-AD6	
		Alternative pressure gauge scale	psi		3	-PSI
	MPa			3	-MPA	
	Pressure switch	Pressure switch PEV with display, socket, EN 175301, type A, cube		4	-X	
		Pressure switch PEV without display, socket, EN 175301, type A, cube		4	-Y	
		Pressure switch PEV without display, socket, round, M12, 4-pin		4	-M12	
	Type of mounting	Mounting bracket		5	-WP	
		Mounting bracket		5	-WPM	
		Mounting bracket			-WB	
		Mounting bracket	-		-WBM	
	Alternative flow direction	Flow direction from right to left			-Z	

1 I Not with pressure gauge alternatives AD5 or AD6.

2 AD1 ... AD6 Measuring range max. 10 bar.

3 PSI, MPA Only with pressure gauge AG.

4 X, Y, M12 Max. permissible input pressure P1 = 12 bar.

Not with pressure gauge alternatives AD5 or AD6.

5 WP, WPM Only with connecting plate AGA, AGB, AGC, AGD or AGE.

### Transfer order code

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



## MS12 series service units

FESTO

Wide range of configuration options  
→ [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

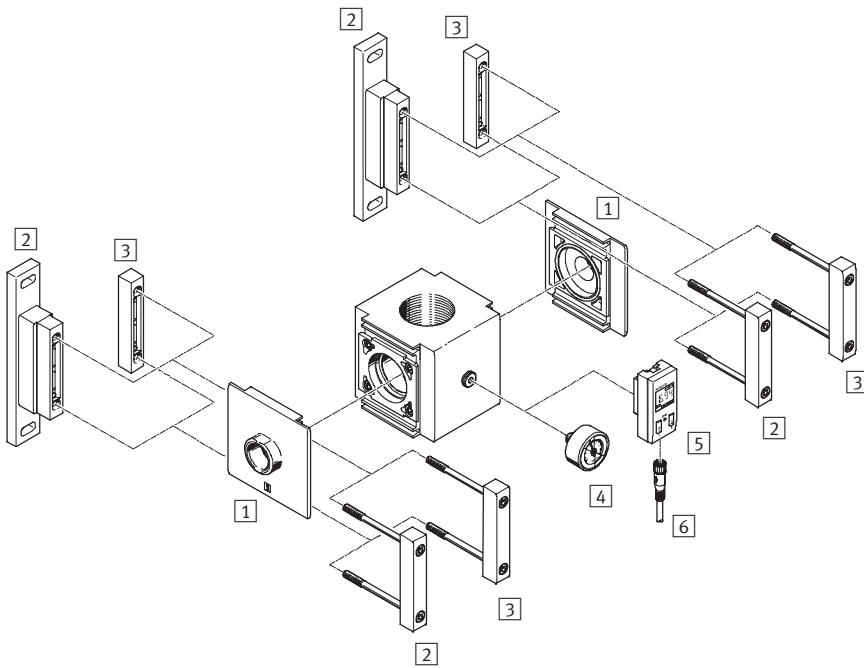


- Grid dimension 124 mm
- High flow rates
- Modern design



# Branching modules MS12-FRM, MS series

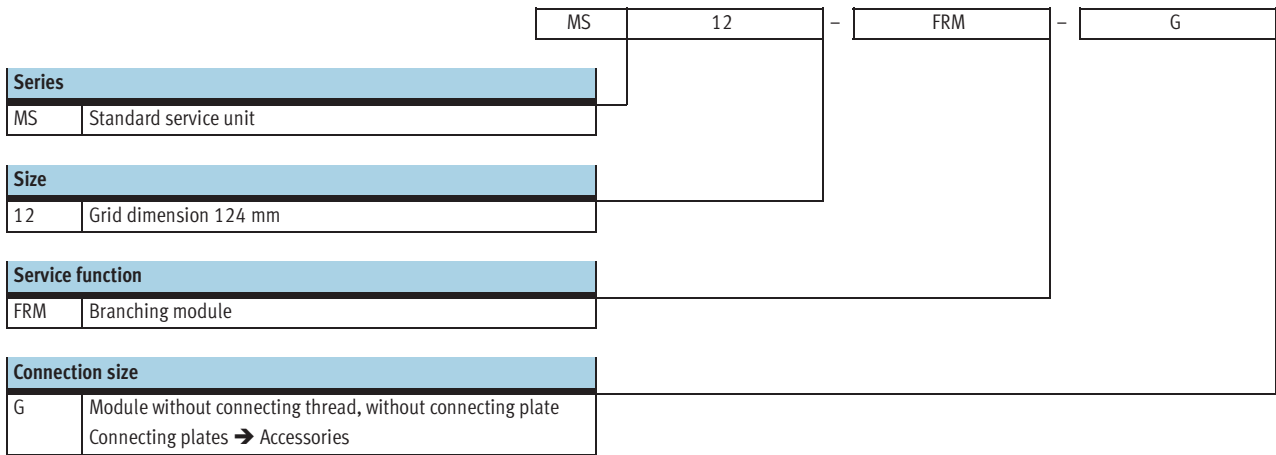
Peripherals overview



Mounting attachments and accessories		→ Page
1	Connecting plate MS12-AG...	11-2
2	Mounting bracket MS12-WP	11-8
3	Module connector MS12-MV	11-8
4	Pressure gauge MA	11-20
5	Pressure sensor SDE1-...R14/R18	11-18
6	Plug socket with cable SIM-M8-3.../SIM-M8-4.../SIM-M12-3...	11-20

# Branching modules MS12-FRM, MS series

Type codes



**Further variants can be ordered using the modular system**

Branching modules FRM → 9-18

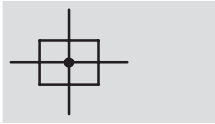
- Connecting plates
- Type of mounting




# Branching modules MS12-FRM, MS series

Technical data



## Function



-  - Flow rate  
25,000 ... 42,000 l/min
-  - Temperature range  
-10 ... +60 °C
-  - Operating pressure  
0 ... 21 bar



- Pneumatic manifold with 4 connections
- Attachment facility for auxiliary modules
- Outlet top and bottom
- Can be used as an intermediate distributor for varying air qualities

General technical data				
Pneumatic connection 1, 2 <sup>1)</sup>	G1	G1¼	G1½	G2
Pneumatic connection 3	G2			
Pneumatic connection 4	G1			
Design	Branching module			
Type of mounting	Via accessories			
	In-line installation			
Assembly position	Any			

1) Dependent on connecting plate selected, must be ordered separately as an accessory → 11-2  
 - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard nominal flow rate $q_{nN}^{1)}$ [l/min]	
In main flow direction 1 → 2	25,000 ... 42,000

1) Dependent on connecting plate selected, must be ordered separately as an accessory → 11-2  
 Measured at  $p_1 = 6$  bar and  $p_2 = 5$  bar,  $\Delta p = 1$  bar

Operating and environmental conditions	
Operating pressure [bar]	0 ... 21
Operating medium	Compressed air
Ambient temperature [°C]	-10 ... +60
Temperature of medium [°C]	-10 ... +60
Storage temperature [°C]	-10 ... +60
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.

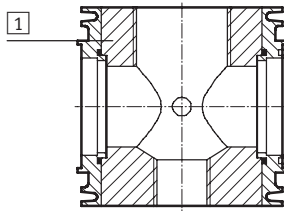
# Branching modules MS12-FRM, MS series

Technical data

Weights [g]	
Branching module	3,000

## Materials

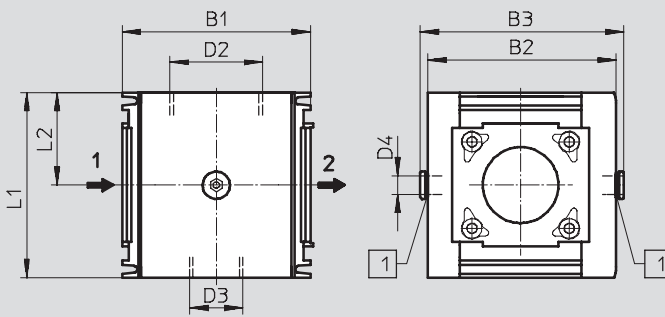
Sectional view



Branching module		
1	Body	Die-cast aluminium
-	Seals	Nitrile rubber
	Note on materials	Free of copper and PTFE

## Dimensions – Standard

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



1 G $\frac{1}{4}$  Female thread in body, sealed with cover plate by default

→ Flow direction

Type	B1	B2	B3	D2	D3	D4	L1	L2
MS12-FRM	124	124	134	G2	G1	G $\frac{1}{4}$	122	61

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

Ordering data			
Size	Connection	Part No.	Type
MS12	G1 ... G2 <sup>1)</sup>	<b>541 681</b>	<b>MS12-FRM-G<sup>2)</sup></b>

1) Connecting plate must be ordered separately as an accessory → 11-2

2) Free of copper and PTFE

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

# Branching modules MS12-FRM, MS series

Ordering data – Modular products



M Mandatory data					O Options
Module No.	Series	Size	Function	Connection size	Type of mounting
535 035	MS	12	FRM	AGF AGG AGH AGI G	WP
<b>Order example</b>					
535 035	MS	12	- FRM	- AGF	- WP

Ordering table					
Grid dimension	[mm]	124	Condi- tions	Code	Enter code
M	Module No.	535 035			
	Series	Standard		MS	MS
	Size	12		12	12
	Function	Branching module		-FRM	-FRM
	Connection size	Connecting plate G1		-AGF	
		Connecting plate G1¼		-AGG	
		Connecting plate G1½		-AGH	
		Connecting plate G2		-AGI	
		Module without connecting thread, without connecting plate		-G	
O	Type of mounting	Mounting bracket	1	-WP	

1 WP Only with connecting plate AGF, AGG, AGH or AGI.

Transfer order code

535 035	MS	12	- FRM	-	-
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# MS series service units

Accessories

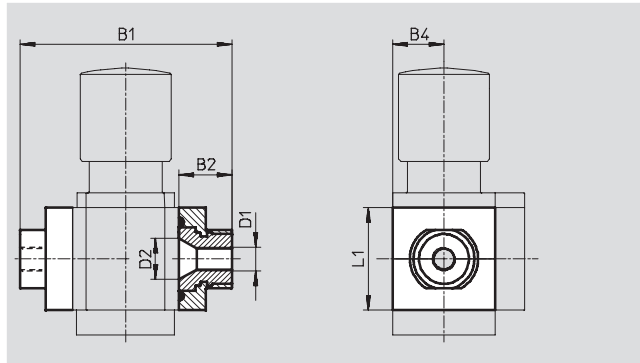


## Connecting plate MS4/6-AG...

(order code: AG...)

- Adapter for pneumatic connection
- MS6-AGE for implementing threaded connection G $\frac{3}{4}$

Material:  
Aluminium



Dimensions and ordering data									
Size	B1	B2	B4	D1	D2	L1	Weight [g]	Part No.	Type
MS4	83.5	21.5	21	G $\frac{1}{8}$	16.8	42	128	526 068	MS4-AGA
				G $\frac{1}{4}$				526 069	MS4-AGB
				G $\frac{3}{8}$				526 070	MS4-AGC
MS6	115	26.5	31	G $\frac{1}{4}$	24	62	300	526 080	MS6-AGB
				G $\frac{3}{8}$				526 081	MS6-AGC
				G $\frac{1}{2}$				526 082	MS6-AGD
				G $\frac{3}{4}$				526 083	MS6-AGE

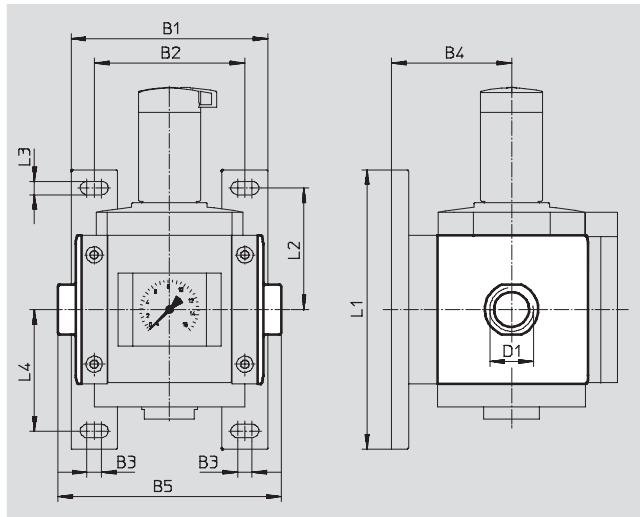
-||- Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

## Connecting plate MS12-AG...

(order code: AG...)

- Adapter for pneumatic connection

Material:  
Die-cast aluminium  
Free of copper and PTFE



Dimensions and ordering data													
Size	B1	B2	B3	B4	B5	D1	L1	L2	L3	L4	Weight [g]	Part No.	Type
MS12	162	124	12	99	184	G1	230	100	11	100	1,300	537 135	MS12-AGF
					184	G1 $\frac{1}{4}$						537 136	MS12-AGG
					184	G1 $\frac{1}{2}$						537 137	MS12-AGH
					196	G2						537 138	MS12-AGI

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

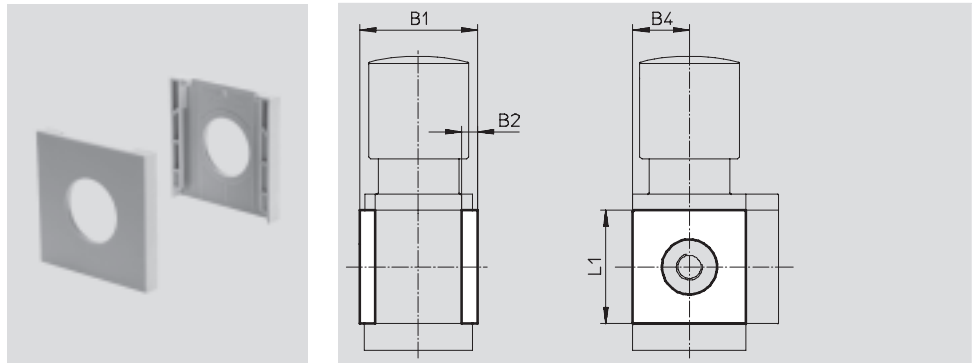
## MS series service units

Accessories

### Cover cap MS4/6-END

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

Material:  
Reinforced polyamide  
Free of copper and PTFE



Dimensions and ordering data						
Size	B1	B2	B4	L1	Part No.	Type
MS4	43.6	6	21	42	538 779	MS4-END
MS6	67	8	31	62	538 780	MS6-END

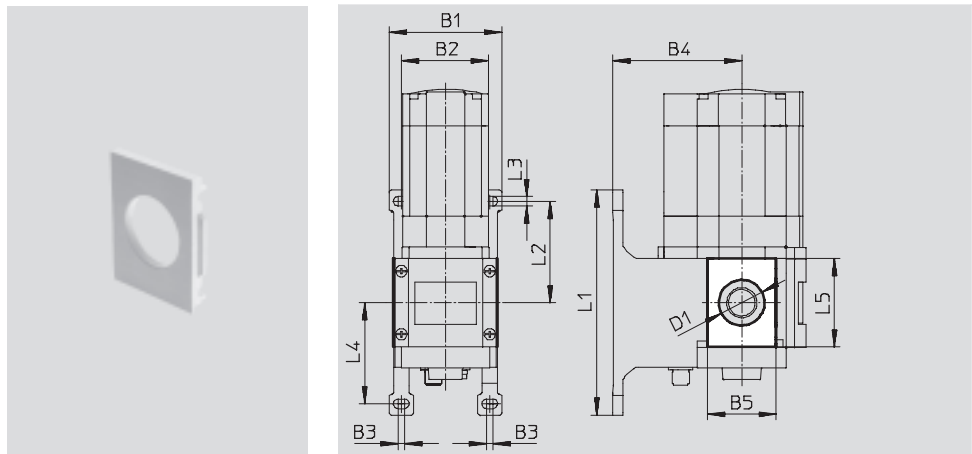
• Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

### Mounting plate MS4/6-AEND

(order code: WBE; scope of delivery includes wall mounting plate MS6-WPB)

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

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



Dimensions and ordering data																	
Size	B1	B2	B3	B4		B5	D1 ∅	L1	L2	L3	L4	L5	CRC <sup>1)</sup>	Weight [g]	Part No.	Type	
				WP	WPB												
MS4	55.2	40.2	4	44	66	30.4	20.3	106	46.5	5.6	46.7	42	2	4	542 966	MS4-AEND	New
MS6	79	62	4.5	54	90.5	48.4	32	158	71	6.6	71	62	2	17	535 408	MS6-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.

# MS series service units

Accessories



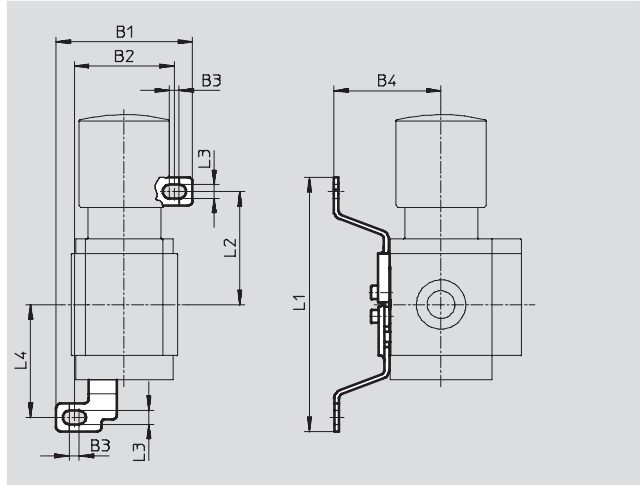
## Mounting bracket MS4/6-WB

(order code: WB)

- For wall mounting

Material:

Steel



Dimensions and ordering data											
Size	B1	B2	B3	B4	L1	L2	L3	L4	Weight [g]	Part No.	Type
MS4	56.2	41.2	4	44.2	104.6	46.6	5.6	46.5	46	532 185	MS4-WB
MS6	79.4	61.9	4.5	55	157.6	71	6.6	71	121	532 196	MS6-WB

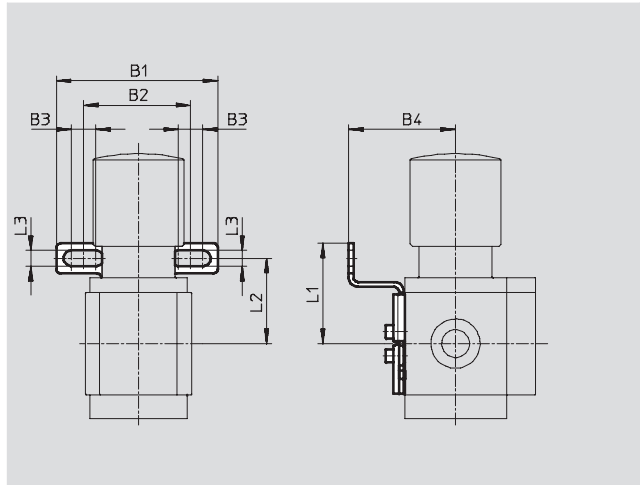
## Mounting bracket MS4-WBM

(order code: WBM)

- For wall mounting

Material:

Steel



Dimensions and ordering data											
Size	B1	B2	B3	B4	L1	L2	L3	Weight [g]	Part No.	Type	
MS4	66.5	44	10	44	41.3	35	6.5	48	526 062	MS4-WBM	

# MS series service units

Accessories



## Mounting bracket MS4/6-WP...

Clearances for mounting service unit combinations

1 unit

MS4-...: 40 mm

MS6-...: 62 mm

2 units

MS4-...: 80 mm

MS6-...: 124 mm with WP, WPB

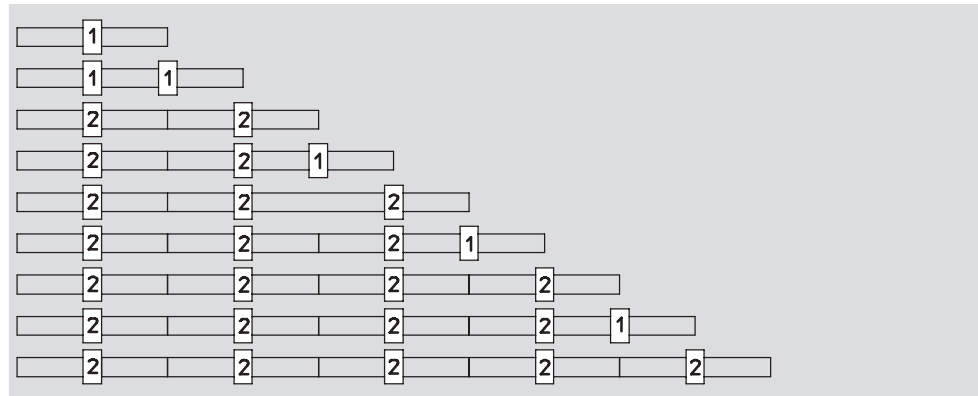
138 mm with WPM-2D

1 Mounting bracket WP, WPB or WPM-D

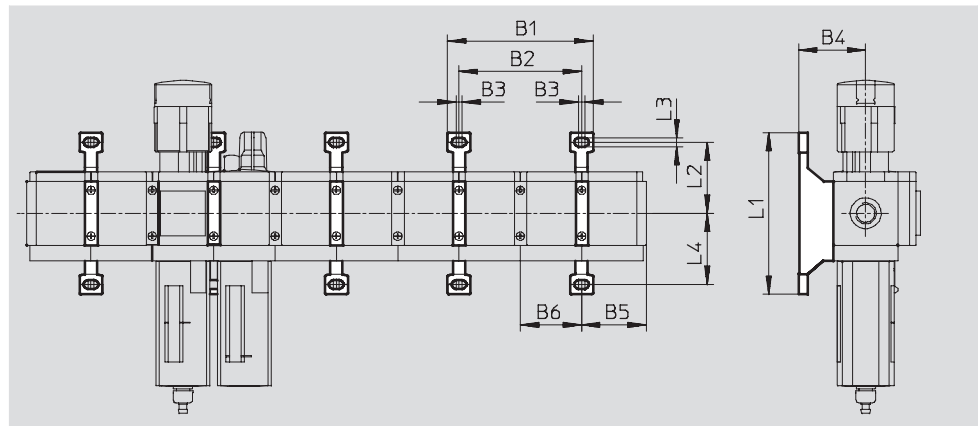
2 Mounting bracket WP, WPB or WPM-2D

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						
MS6-WP	141	124	4.5	54	64.5	62	158	71	6.6	71
MS6-WPB				90.5						
MS6-WPM-...D				54						
MS6-WPM-...D	168	138	17.5	54	65.5	69	98.6	41.3		41.3

# MS series service units

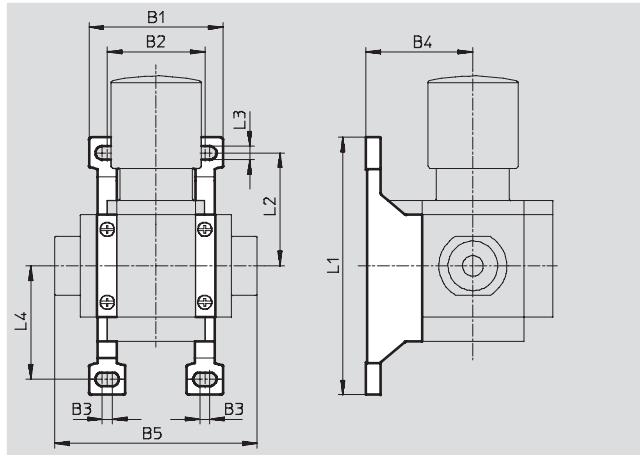
Accessories



## Mounting bracket MS4/6-WP

(order code: WP)

- For connecting the modules for wall mounting
- In combination with a connecting plate MS4/6-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
- For pressure regulator LRB with angled outlet block B... at rear



Material:

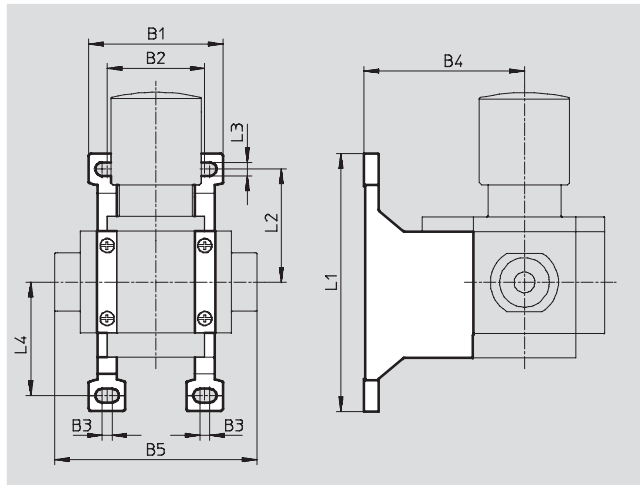
Die-cast aluminium

Dimensions and ordering data												
Size	B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [g]	Part No.	Type
MS4	55.2	40.2	4	44	83.4	106	46.5	5.6	46.7	39	532 184	MS4-WP
MS6	79	62	4.5	54	115	158	71	6.6	71	76	532 195	MS6-WP

## Mounting bracket MS4/6-WPB

(order code: WPB)

- For connecting the modules for wall mounting
- In combination with a connecting plate MS4/6-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 aluminium

Dimensions and ordering data												
Size	B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [g]	Part No.	Type
MS4	55.2	40.2	4	66	83.4	106	46.5	5.6	46.7	55	526 063	MS4-WPB
MS6	79	62	4.5	90.5	115	158	71	6.6	71	115	526 074	MS6-WPB

# MS series service units

Accessories



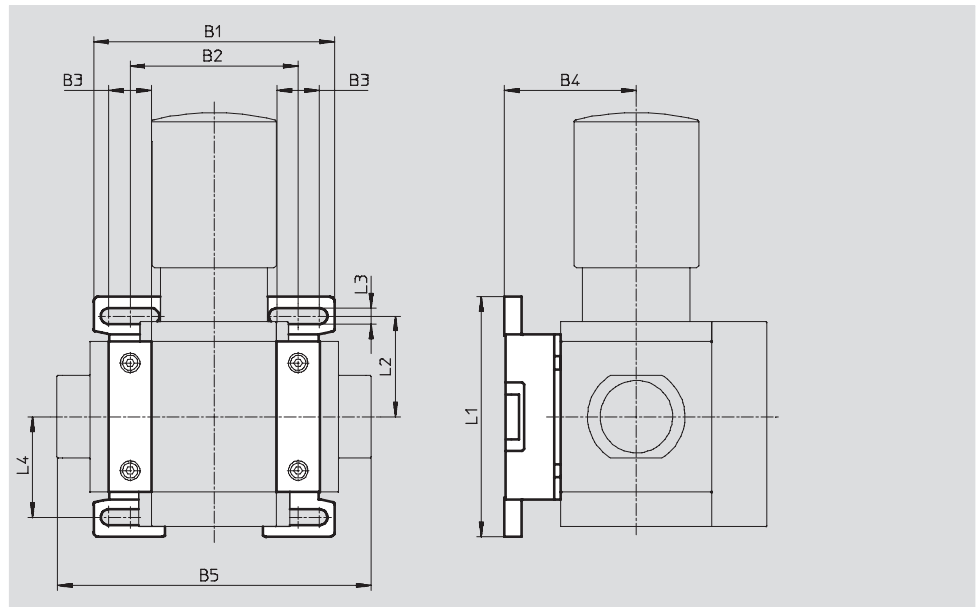
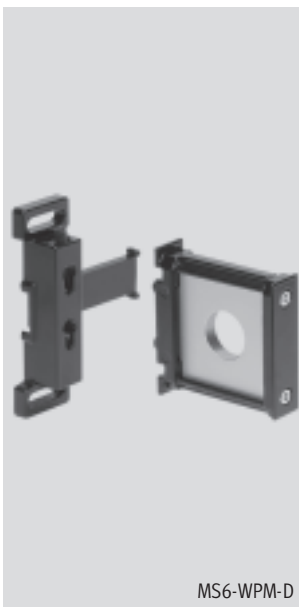
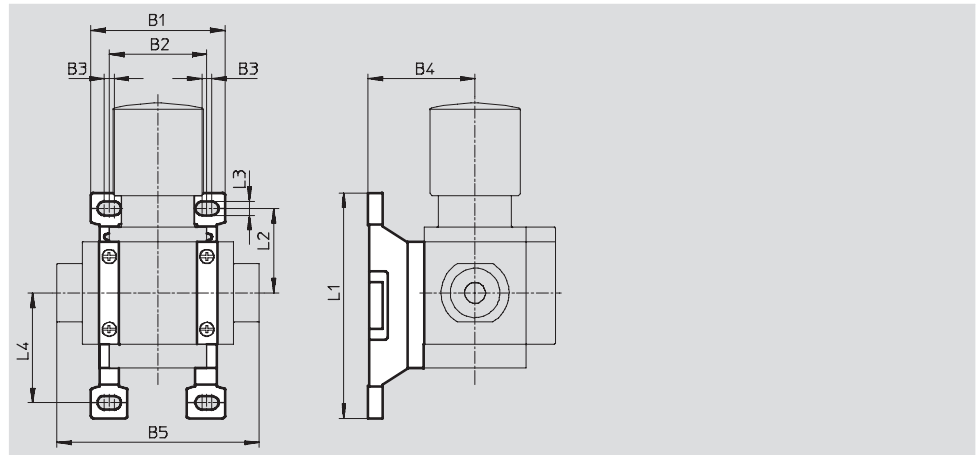
## Mounting bracket MS4/6-WPM

(order code: WPM)

- For connecting the modules for wall mounting
- In combination with a connecting plate MS4/6-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 aluminium



Dimensions and ordering data													
Size	B1	B2	B3	B4	B5	L1	L2	L3	L4	Clearance	Weight [g]	Part No.	Type
MS4	55.2	40	4	44	83.4	92.8	34.8	5.6	45.2	40	45	526 060	MS4-WPM-D
	95.2	80			123.4					80	55	526 061	MS4-WPM-2D
MS6	99	69	17.5	54	129	98.6	41.3	6.6	41.3	62	144	526 073	MS6-WPM-D
	168	138			198					124	154	532 186	MS6-WPM-2D

# MS series service units

Accessories

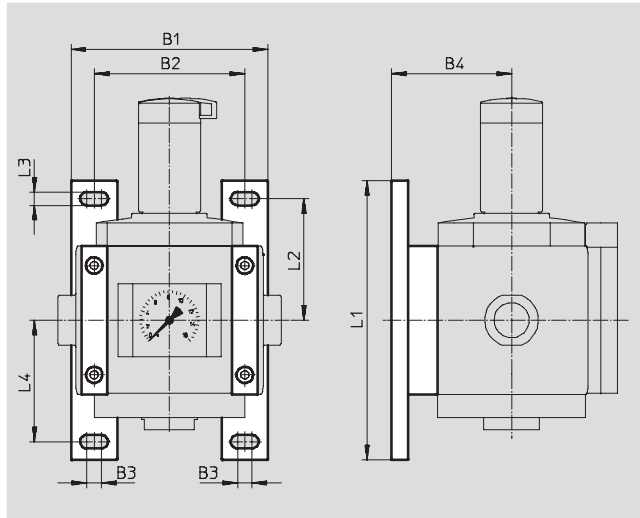


## Wall mounting plate MS12-WP

(order code: WP)

- For connecting the modules for wall mounting
- In combination with a connecting plate for mounting an individual unit on a wall

Material:  
Die-cast aluminium  
Free of copper and PTFE



Dimensions and ordering data											
Size	B1	B2	B3	B4	L1	L2	L3	L4	Weight [g]	Part No.	Type
MS12	162	124	12	99	230	100	11	100	700	537 133	MS12-WP

## Module connector MS...-MV

- For connecting modules

Material:  
MS4/6: Stainless steel/polyacetate

MS12: Die-cast aluminium,  
free of copper and PTFE



MS4/6



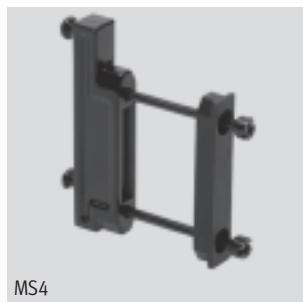
MS12

Ordering data			
Size	Weight [g]	Part No.	Type
MS4	36	532 798	MS4-MV
MS6	54	532 799	MS6-MV
MS12	500	537 134	MS12-MV

## Module connector MS4/6-MVM

- For installation of modules with regulating knob pointing downwards

Material:  
Die-cast aluminium



MS4



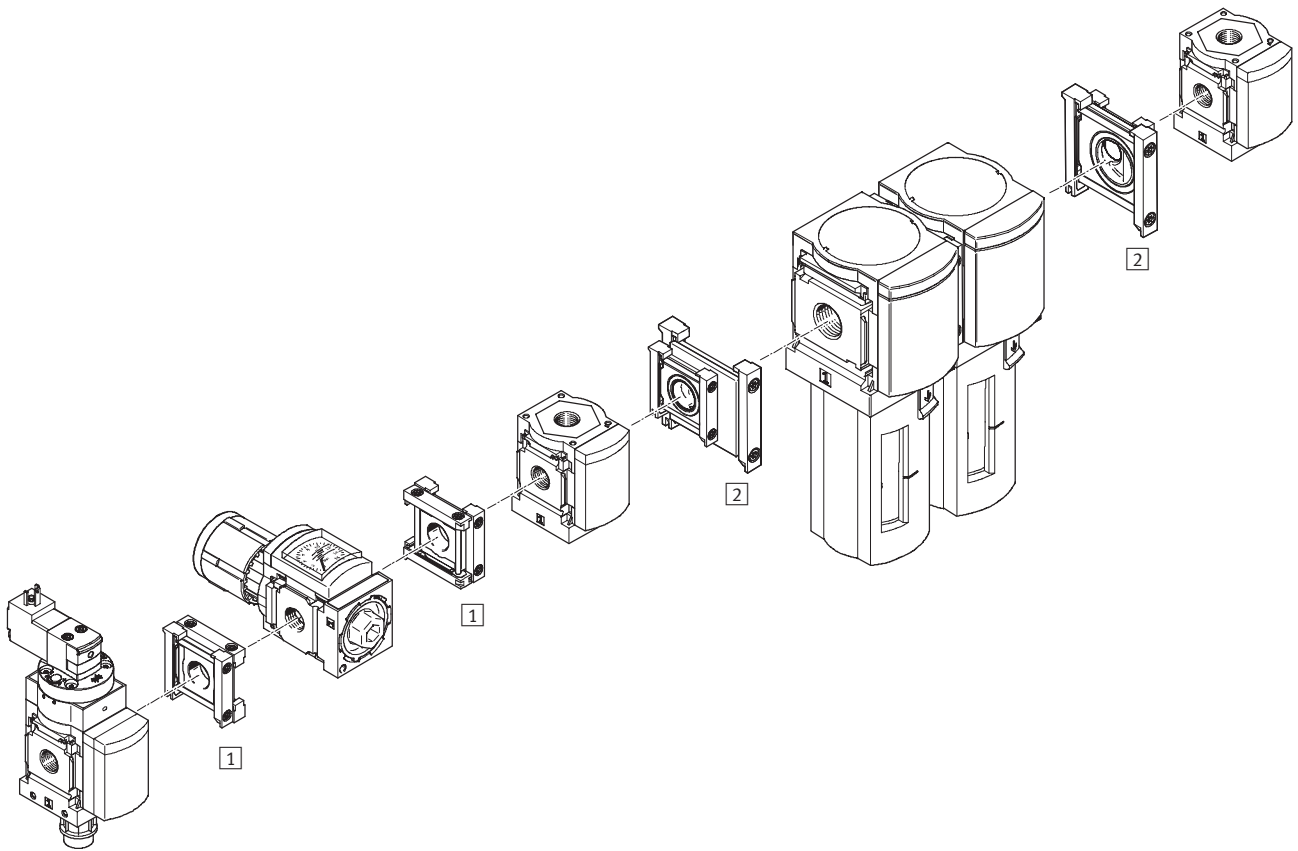
MS6

Ordering data		
Size	Part No.	Type
MS4	532 800	MS4-MVM
MS6	532 801	MS6-MVM




# MS series service units

Accessories



Mounting attachments		→ Page
1	Module connector MS4/6-RMV	11-10
2	Module connector MS4-6-AMV	11-11

 Note  
 Mounting attachments for wall  
 mounting → 11-5

## MS series service units

Accessories

### Module connector MS4/6-RMV

- For connecting service units at right angles to the axis of connection

Material:

Connecting plate, module connector:

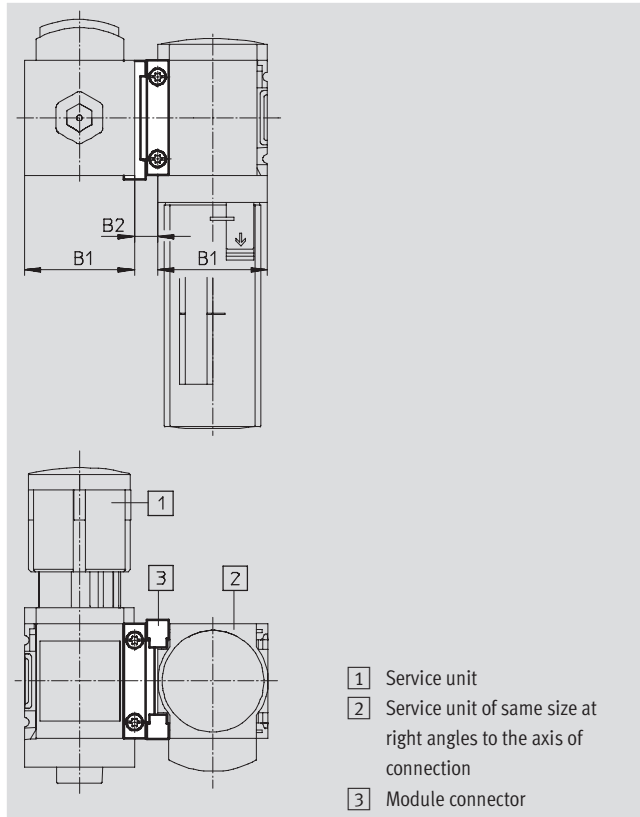
Die-cast aluminium

Sealing ring: Nitrile rubber

Conforms to RoHS

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data						
Size	B1	B2	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
MS4	40.2	8.5	2	50	543 490	MS4-RMV
MS6	62	11	2	80	543 491	MS6-RMV

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. 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.

# MS series service units

Accessories

## Module connector MS4-6-AMV

- For connecting MS4 and MS6 service units as one unit

Material:

Connecting plate, module connector:

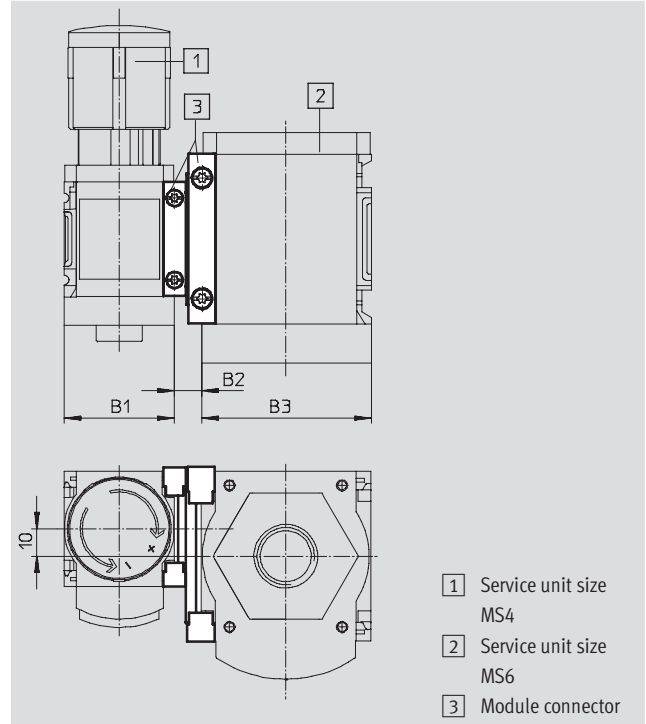
Die-cast aluminium

Sealing ring: Nitrile rubber

Conforms to RoHS

Temperature of medium:

-10 ... +60 °C



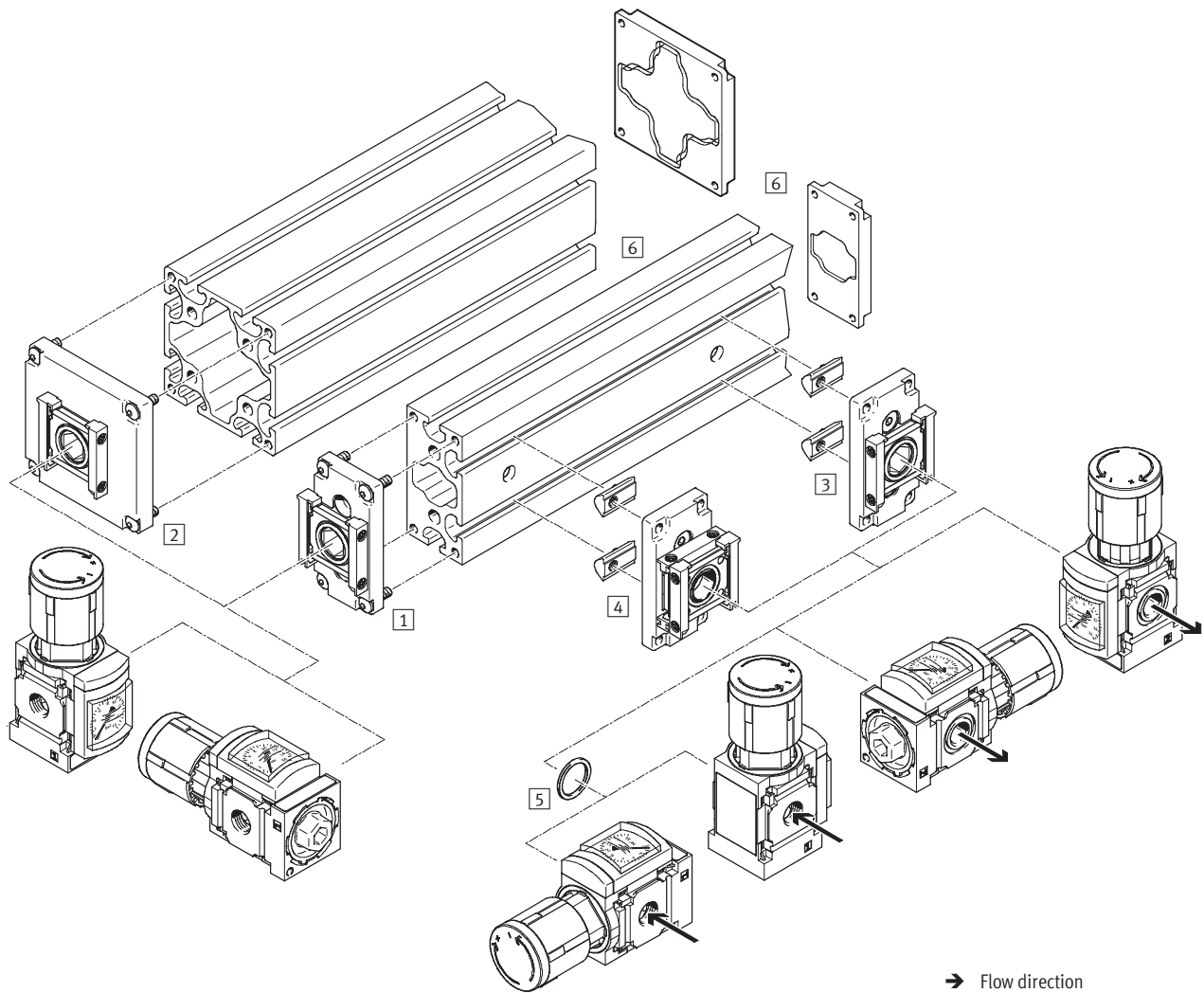
- 1 Service unit size MS4
- 2 Service unit size MS6
- 3 Module connector

Dimensions and ordering data						
Size	B1	B2	B3	CRC <sup>1)</sup>	Weight [g]	Part No. Type
MS4/6	40.2	10	62	2	200	543 489 MS4-6-AMV

1) Corrosion resistance class 2 to Festo standard 940 070  
 Components subject to moderate corrosion stress. 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.


# MS series service units

Accessories



→ Flow direction

Mounting attachments		→ Page
1	Pressure supply module MS4/6-E-IPM-40-80	11-13
2	Pressure supply module MS4/6-E-IPM-80-80	11-14
3	Branching module MS4/6-A-IPM-80	11-15
4	Branching module MS4/6-A-RMV-IPM-80	11-16
5	Sealing ring MS4/6-NNR	11-17
6	Profiles 40x80/80x80, cover plates, supply plates, drilling jigs	On request

 Note  
Further mounting attachments are required for mounting a service unit combination → 11-5

# MS series service units

Accessories

## Pressure supply module

### MS4/6-E-IPM-40-80

- For mounting a service unit on the end of a profile of size 40x80
- Module connector can be repositioned by 90° for horizontal mounting of the service unit

Material:

Connecting plate, hollow bolt, module connector: Die-cast aluminium

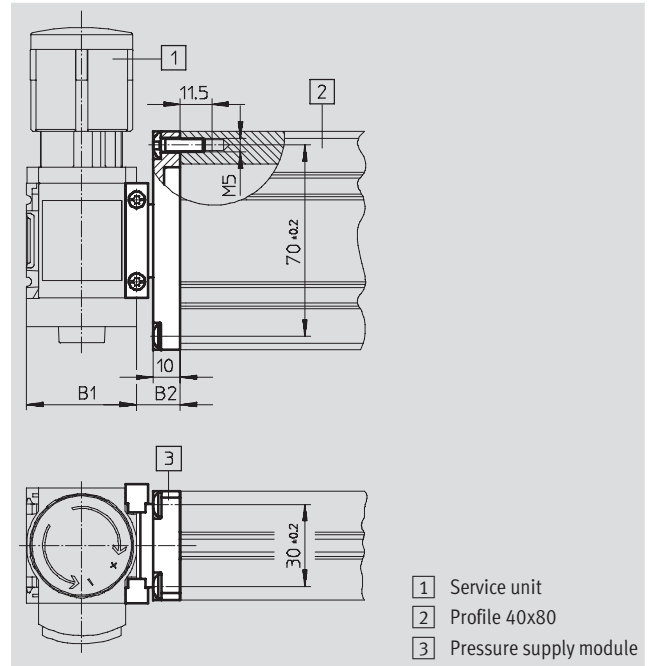
Screws: Steel

Seals: Nitrile rubber

Conforms to RoHS

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data						
Size	B1	B2	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
MS4	40.2	16	2	90	543 494	MS4-E-IPM-40-80
MS6	62	16	2	210	543 496	MS6-E-IPM-40-80

1) Corrosion resistance class 2 to Festo standard 940 070  
 Components subject to moderate corrosion stress. 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.

## MS series service units

Accessories

### Pressure supply module

#### MS4/6-E-IPM-80-80

- For mounting a service unit on the end of a profile of size 80x80
- Module connector can be repositioned by 90° for horizontal mounting of the service unit

Material:

Connecting plate, hollow bolt, module

connector: Die-cast aluminium

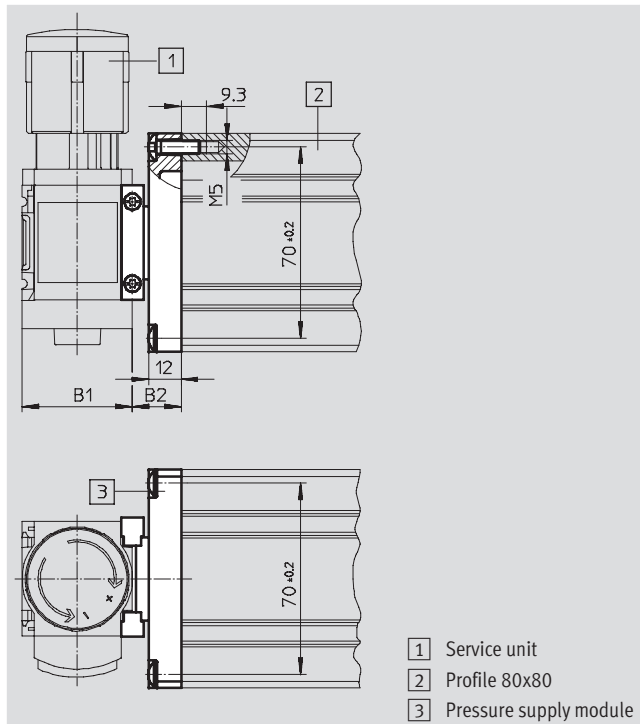
Screws: Steel

Seals: Nitrile rubber

Conforms to RoHS

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data						
Size	B1	B2	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
MS4	40.2	18	2	100	543 495	MS4-E-IPM-80-80
MS6	62	18	2	240	543 497	MS6-E-IPM-80-80

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. 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.

## MS series service units

Accessories

### Branching module MS4/6-A-IPM-80

- For mounting a service unit on the long side of a profile
- Module connector can be repositioned by 90° for horizontal mounting of the service unit

Material:

Connecting plate, hollow bolt, module

connector: Die-cast aluminium

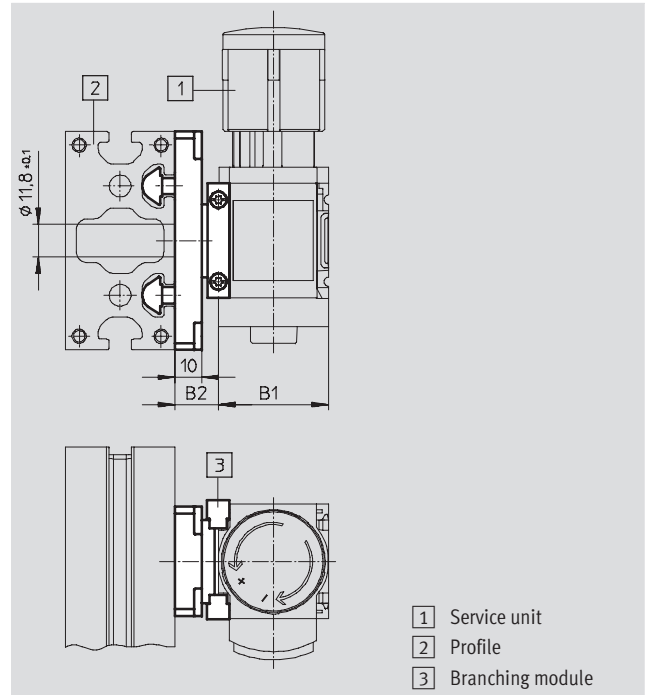
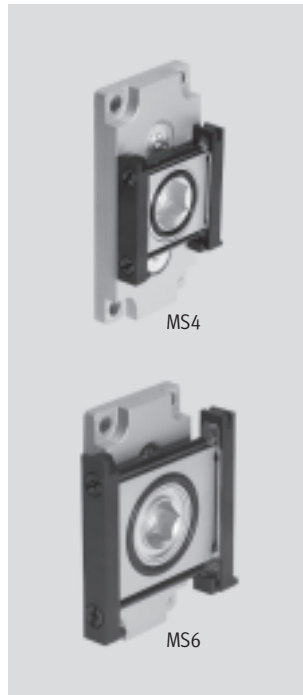
Screws: Steel

Seals: Nitrile rubber

Conforms to RoHS

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data						
Size	B1	B2	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
MS4	40.2	16	2	90	543 498	MS4-A-IPM-80
MS6	62	16	2	200	543 499	MS6-A-IPM-80

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. 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.

## MS series service units

Accessories

### Branching module

#### MS4/6-A-RMV-IPM-80

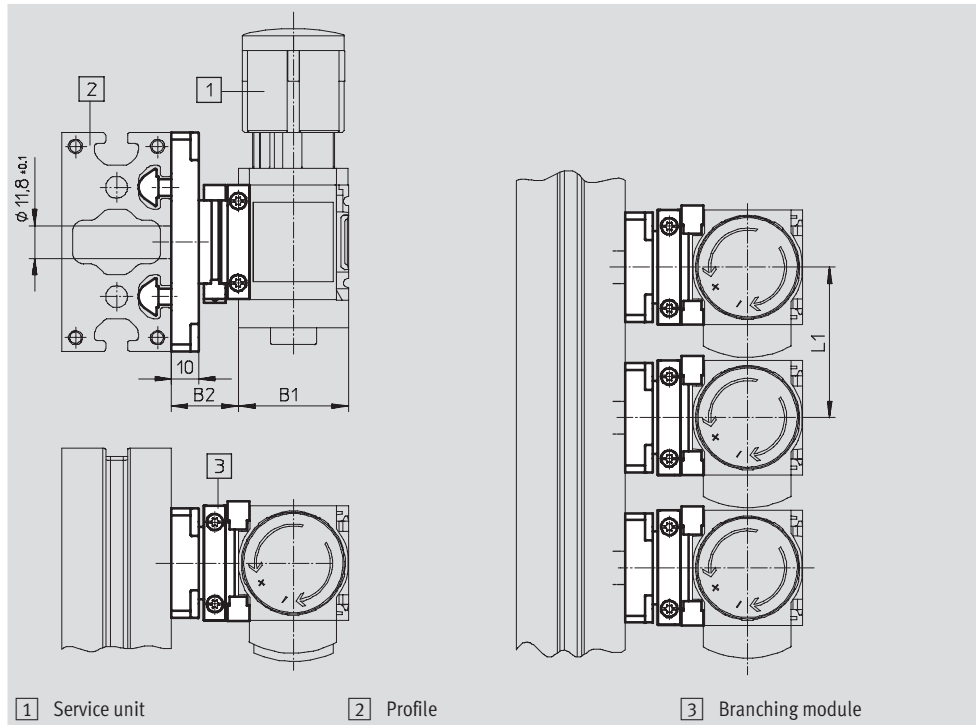
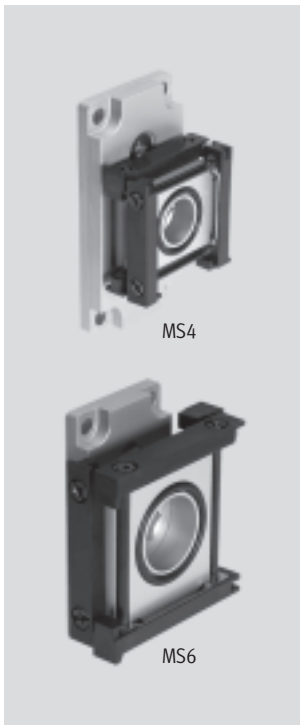
- For mounting a service unit on the long side of a profile
- Suitable for manifold mounting (the fittings on the module connector can be accessed from above for fast replacement of an individual component)
- Module connector can be repositioned by 90° for horizontal mounting of the service unit

Material:

Connecting plate, hollow bolt,  
module connector: Die-cast  
aluminium  
Screws: Steel  
Seals: Nitrile rubber  
Conforms to RoHS

Temperature of medium:

-10 ... +60 °C



Dimensions and ordering data							
Size	B1	B2	L1	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
MS4	40.2	24.5	55	2	150	543 500	MS4-A-RMV-IPM-80
MS6	62	27	77	2	220	543 501	MS6-A-RMV-IPM-80

1) Corrosion resistance class 2 to Festo standard 940 070  
Components subject to moderate corrosion stress. 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.



## MS series service units

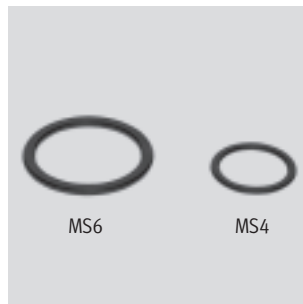
Accessories

### Sealing ring MS4/6-NNR

- For sealing a branching module  
MS-A-IPM when used as a pressure supply module

Material:  
Nitrile rubber  
Conforms to RoHS

Temperature of medium:  
-10 ... +60 °C






Dimensions and ordering data				
Size	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
MS4	2	1	<b>543 492</b>	<b>MS4-NNR</b>
MS6	2	1	<b>543 493</b>	<b>MS6-NNR</b>

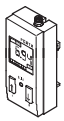

1) Corrosion resistance class 2 to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# MS series service units

Accessories

FESTO


Ordering data – Pressure switch PEV					Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Pneumatic connection	Pressure switching point	Electrical connection	Order code	Part No.	Type
	G1/4	Adjustable with visual scale	Plug, square design to DIN EN 175 301, type A	X	161 760	PEV-1/4-SC-0D
	G1/4	Adjustable	Plug, square design to DIN EN 175 301, type A	Y	175 250	PEV-1/4-B-0D
	G1/4	Adjustable	Plug M12x1, 4-pin	M12	192 488	PEV-1/4-B-M12


Ordering data – Pressure sensor SDE1						Technical data → <a href="http://www.festo.com">www.festo.com</a>		
	Pneumatic connection	Electrical output	Electrical connection	Display	Order code	Part No.	Type	
Pressure sensor SDE1 for branching module MS-FRM, pressure measuring range 0 ... 10 bar, relative pressure measurement								
	Female thread G1/8	1 switch output PNP	M8x1, 3-pin	LCD	AD5	192 030	SDE1-D10-G2-H18-C-P1-M8	
		2 switch outputs PNP and 4 ... 20 mA analogue	M12x1, 5-pin	Illuminated LCD	AD6	534 062	SDE1-D10-G2-W18-L-2I-M12	
Pressure sensor SDE1 for direct mounting on the service unit with pressure gauge connection (adapter for pneumatic connection included in scope of delivery), pressure measuring range 0 ... 10 bar, relative pressure measurement								
	Male thread R1/8	1 switch output PNP	M8x1, 3-pin	LCD	–	192 026	SDE1-D10-G2-R18-C-P1-M8	
			M8x1, 3-pin	Illuminated LCD	–	529 970	SDE1-D10-G2-R18-L-P1-M8	
			M12x1, 3-pin	Illuminated LCD	–	534 064	SDE1-D10-G2-R18-L-P1-M12	
		2 switch outputs PNP	M8x1, 4-pin	LCD	–	192 027	SDE1-D10-G2-R18-C-P2-M8	
			M8x1, 4-pin	Illuminated LCD	–	529 971	SDE1-D10-G2-R18-L-P2-M8	
			1 switch output PNP and 0 ... 10 V analogue	M8x1, 4-pin	LCD	–	529 958	SDE1-D10-G2-R18-C-PU-M8
		M8x1, 4-pin		Illuminated LCD	–	529 972	SDE1-D10-G2-R18-L-PU-M8	
		Male thread R1/4	1 switch output PNP	M8x1, 3-pin	LCD	–	192 028	SDE1-D10-G2-R14-C-P1-M8
				M8x1, 3-pin	Illuminated LCD	–	529 967	SDE1-D10-G2-R14-L-P1-M8
	M12x1, 3-pin			Illuminated LCD	–	534 157	SDE1-D10-G2-R14-L-P1-M12	
	2 switch outputs PNP		M8x1, 4-pin	LCD	–	192 029	SDE1-D10-G2-R14-C-P2-M8	
			M8x1, 4-pin	Illuminated LCD	–	529 968	SDE1-D10-G2-R14-L-P2-M8	
	1 switch output PNP and 0 ... 10 V analogue		M8x1, 4-pin	LCD	–	529 957	SDE1-D10-G2-R14-C-PU-M8	
		M8x1, 4-pin	Illuminated LCD	–	529 969	SDE1-D10-G2-R14-L-PU-M8		

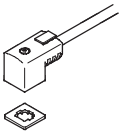
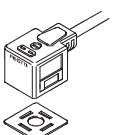
# MS series service units


Accessories


**FESTO**

Ordering data – Angled socket PEV						Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Description	Operating voltage range	Electrical connection	Switching status display	Part No.	Type	
	for PEV-1/4-...-OD	15 ... 30 V DC	4-pin	Yellow LED	<b>164 274</b>	<b>PEV-1/4-WD-LED-24</b>	
		≤ 230 V AC ≤ 180 V DC	4-pin	Yellow LED	<b>164 275</b>	<b>PEV-1/4-WD-LED-230</b>	

Ordering data – Plug socket MSSD						Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Description	Operating voltage range	Electrical connection	Type of mounting cable connection	Part No.	Type	
	for PEV-1/4-...-OD	≤ 250 V AC/DC	3-pin	Clamping screws	<b>171 157</b>	<b>MSSD-C-4P</b>	
	for MS4/6-EE/DE	≤ 250 V AC/DC	3-pin	Clamping screws	<b>151 687</b>	<b>MSSD-EB</b>	
			4-pin	Insulation displacement technology	<b>192 745</b>	<b>MSSD-EB-S-M14</b>	
	for MS12-EE/DE	≤ 250 V AC/DC	3-pin	Clamping screws	<b>34 583</b>	<b>MSSD-C</b>	
4-pin			Insulation displacement technology	<b>192 748</b>	<b>MSSD-C-S-M16</b>		

Ordering data – Plug socket with cable KMEB/KMC							Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Description	Operating voltage range	Electrical connection	Switching status display	Cable length [m]	Part No.	Type	
	for MS4/6-EE/DE	24 V DC	2-pin	LED	2.5	<b>547 268</b>	<b>KMEB-3-24-2,5-LED</b>	
				–	5	<b>547 269</b>	<b>KMEB-3-24-5-LED</b>	
			–	2.5	<b>547 270</b>	<b>KMEB-3-24-2,5</b>		
				5	<b>547 271</b>	<b>KMEB-3-24-5</b>		
		3-pin	LED	2.5	<b>151 688</b>	<b>KMEB-1-24-2,5-LED</b>		
				5	<b>151 689</b>	<b>KMEB-1-24-5-LED</b>		
			–	10	<b>193 457</b>	<b>KMEB-1-24-10-LED</b>		
				230 V AC	3-pin	–	2.5	<b>151 690</b>
5	<b>151 691</b>	<b>KMEB-1-230AC-5</b>						
	for MS12-EE/DE	24 V DC	3-pin	LED	2.5	<b>30 931</b>	<b>KMC-1-24DC-2,5-LED</b>	
					5	<b>30 933</b>	<b>KMC-1-24DC-5-LED</b>	
					10	<b>193 459</b>	<b>KMC-1-24-10-LED</b>	
		230 V AC	3-pin	–	2.5	<b>30 932</b>	<b>KMC-1-230AC-2,5</b>	
					5	<b>30 934</b>	<b>KMC-1-230AC-5</b>	

Ordering data – Illuminating seal MEB-LD/MC-LD					Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Description	Operating voltage range	Part No.	Type		
	for plug socket with cable KMEB and plug socket MSSD-EB	12 ... 24 V DC	<b>151 717</b>	<b>MEB-LD-12-24DC</b>		
		230 V DC/AC ±10%	<b>151 718</b>	<b>MEB-LD-230AC</b>		
	for plug socket with cable KMC and plug socket MSSD-C	12 ... 24 V DC	<b>19 145</b>	<b>MC-LD-12-24DC</b>		
		230 V DC/AC ±10%	<b>19 146</b>	<b>MC-LD-230AC</b>		

Ordering data – Locking clip CPV18-HV					Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Description	Part No.	Type	PU <sup>1)</sup>		
	for MS4/6-EE/DE-...-V24				<b>530 056</b>	<b>CPV18-HV</b>
	Cover for manual override, the clip prevents actuation					<b>10</b>

1) Packaging unit quantity

# MS series service units

Accessories



Ordering data – Plug socket with cable SIM-M8			Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Electrical connection	Cable length [m]	Part No.	Type
	M8x1, 3-pin	2.5	159 420	SIM-M8-3GD-2,5-PU
		5	159 421	SIM-M8-3GD-5-PU
		10	192 964	SIM-M8-3GD-10-PU
	M8x1, 4-pin	2.5	158 960	SIM-M8-4GD-2,5-PU
		5	158 961	SIM-M8-4GD-5-PU
	M8x1, 3-pin	2.5	159 422	SIM-M8-3WD-2,5-PU
		5	159 423	SIM-M8-3WD-5-PU
		10	192 965	SIM-M8-3WD-10-PU
	M8x1, 4-pin	2.5	158 962	SIM-M8-4WD-2,5-PU
		5	158 963	SIM-M8-4WD-5-PU


Ordering data – Plug socket with cable SIM-M12			Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Electrical connection	Cable length [m]	Part No.	Type
	M12x1, 3-pin	2.5	159 428	SIM-M12-3GD-2,5-PU
		5	159 429	SIM-M12-3GD-5-PU
	M12x1, 4-pin	5	164 259	SIM-M12-4GD-5-PU
	M12x1, 5-pin	2.5	175 715	SIM-M12-5GD-2,5-PU
		5	175 716	SIM-M12-5GD-5-PU
	M12x1, 3-pin	2.5	159 430	SIM-M12-3WD-2,5-PU
		5	159 431	SIM-M12-3WD-5-PU
M12x1, 4-pin	5	164 258	SIM-M12-4WD-5-PU	


Ordering data – Pressure gauge MA							
	Nominal size	Pneumatic connection	Indicating range		Part No.	Type	
			[bar]	[psi]			
	Pressure gauge MA, DIN EN 837-1					Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	40	G $\frac{1}{4}$	0 ... 16	0 ... 232	183 901	MA-40-16-G $\frac{1}{4}$ -EN	
	Pressure gauge MA, DIN EN 837-1, with red-green range					Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	40	R $\frac{1}{8}$	0 ... 16	–	525 726	MA-40-16-R $\frac{1}{8}$ -E-RG	
	50	R $\frac{1}{4}$	0 ... 16	–	525 729	MA-50-16-R $\frac{1}{4}$ -E-RG	
Precision pressure gauge MAP, DIN EN 837-1					Technical data → <a href="http://www.festo.com">www.festo.com</a>		
40	R $\frac{1}{8}$	0 ... 1	0 ... 15	161 126	MAP-40-1- $\frac{1}{8}$ -EN		
		0 ... 4	0 ... 58	162 842	MAP-40-4- $\frac{1}{8}$ -EN		
		0 ... 6	0 ... 87	161 127	MAP-40-6- $\frac{1}{8}$ -EN		
		0 ... 16	0 ... 232	161 128	MAP-40-16- $\frac{1}{8}$ -EN		


## MS series service units

Accessories

FESTO

Ordering data – Silencer U			Technical data → <a href="http://www.festo.com">www.festo.com</a>	
	Description	Pneumatic connection	Part No.	Type
	for MS4-EM1/EE	G $\frac{1}{4}$	<b>6 842</b>	<b>U-<math>\frac{1}{4}</math>-B</b>
	for MS6-EM1/EE	G $\frac{1}{2}$	<b>6 844</b>	<b>U-<math>\frac{1}{2}</math>-B</b>
	for MS12-EM/EE	G1	<b>151 990</b>	<b>U-1-B</b>

Ordering data – Double nipple ESK					
	Description	Pneumatic connection		Part No.	Type
	Adjustable for angular compensation • For retro-fitting pressure switch PEV or pressure sensor SDE1 to branching module MS-FRM	R $\frac{1}{8}$	R $\frac{1}{4}$	<b>534 151</b>	<b>ESK-<math>\frac{1}{8}</math>-<math>\frac{1}{4}</math></b>
		R $\frac{1}{4}$	R $\frac{1}{4}$	<b>151 521</b>	<b>ESK-<math>\frac{1}{4}</math>-<math>\frac{1}{4}</math></b>
			R $\frac{1}{2}$	<b>534 153</b>	<b>ESK-<math>\frac{1}{4}</math>-<math>\frac{1}{2}</math></b>

Ordering data – Padlock LRVS-D				
	Description	Weight [g]	Part No.	Type
	for filter or pressure regulators	120	<b>193 786</b>	<b>LRVS-D</b>

Ordering data – Special oil OFSW				
	Description	Scope of delivery	Part No.	Type
	for lubricators	1 litre	<b>152 811</b>	<b>OFSW-32</b>