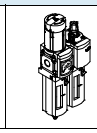
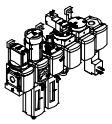
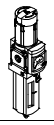
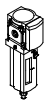
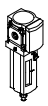
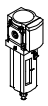
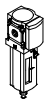
Service unit combinations MSB, MS series

★/☆	Festo core product range Covers 80% of your automation tasks	★	Ready for dispatch from the Festo factory in 24 hours Held in stock in 13 service centres worldwide More than 2200 products
Worldwide:	Always in stock	☆	Ready for dispatch in 5 days maximum from stock Assembled for you in 4 service centres worldwide Up to 6 x 10^{12} variants per product series
Superb:	Festo quality at an attractive price		
Easy:	Reduces procurement and storing complexity		

Look for the star!

Service unit combinations MSB, MS series

Product range overview – MS series service units

Type		Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]						Grade of filtration [µm]			
					0.05 … 0.7	0.05 … 2.5	0.1 … 4	0.3 … 7	0.1 … 12	0.5 … 16	0.01	1	5	40
Code				AG…/AQ…	D2	D4	D5	D6	D7	D8	A	B	C	E
Service unit combinations														
MSB-FRC		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	■	■	–	–	–	■	■
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	■	■	–	–	–	■	■
		9	–											
		12	–											
Service unit combinations (further variants can be ordered using the configurator ➔ Internet: msb4, msb6 or msb9)														
MSB		4	G¼	G⅛, G¼, G⅜	–	–	–	■	■	–	–	–	■	■
		6	G½	G¼, G⅜, G½, G¾	–	–	–	■	■	–	–	–	■	■
		9	–											
		12	–											
Individual devices														
Filter regulators **MS-LFR**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	■	■	■	–	–	–	■	■
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	■	■	■	■	–	–	■	■
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	■	■	■	■	–	–	■	■
		12	–	G1, G1¼, G1½, G2	–	–	–	■	■	■	–	–	■	■
Filters **MS-LF**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	–	–	■	■
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–	■	■
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	–	–	■	■
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–	■	■
Fine and micro filters **MS-LFM**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	■	■	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	■	■	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	■	■	–	–
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	■	■	–	–
Activated carbon filters **MS-LFX**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	–	–	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–	–	–
Water separators **MS-LWS**		4	–											
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–	–	–

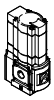
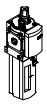
Service unit combinations MSB, MS series

Product range overview – MS series service units

Type	Size	Bowl guard		Condensate drains				Pressure indicator					Security		Options		➔ Page/ Internet
		Plastic bowl with 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 plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	Rotary knob with detent, lockable via accessories	Rotary knob with integrated lock	Silencer	Flow direction from right to left	
Code		R	U	M	H	V	E...	VS	AG	A8	A4	AD...	AS	E11	S	Z	
Service unit combinations																	
MSB-FRC	4	■	–	■	–	■	–	–	■	–	–	–	■	–	–	■	msb4
	6	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	msb6
	9	–															–
	12	–															–
Service unit combinations																	
MSB	4	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	8
	6	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	8
	9	–															–
	12	–															–
Individual devices																	
Filter regulators	4	■	■	■	■	■	–	■	■	■	■	■	■	■	–	■	ms4-lfr
MS-LFR	6	■	■	■	■	■	■	■	■	–	■	■	■	■	–	■	ms6-lfr
	9	–	■	■	■	■	■	■	■	–	■	■	■	■	–	■	ms9-lfr
	12	–	■	■	–	■	■	■	■	–	■	–	■	■	–	■	ms12-lfr
Filters	4	■	■	■	■	■	–	–	–	–	–	–	–	–	–	■	ms4-lf
MS-LF	6	■	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms6-lf
	9	–	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms9-lf
	12	–	■	■	–	■	■	–	–	–	–	–	–	–	–	■	ms12-lf
Fine and micro	4	■	■	■	■	■	–	–	–	–	–	–	–	–	–	■	ms4-lfm
filters	6	■	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms6-lfm
MS-LFM	9	–	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms9-lfm
	12	–	■	■	–	■	■	–	–	–	–	–	–	–	–	■	ms12-lfm
Activated carbon	4	■	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms4-lfx
filters	6	■	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms6-lfx
MS-LFX	9	–	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms9-lfx
	12	–	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms12-lfx
Water separators	4	–															–
MS-LWS	6	–	■	–	–	■	■	–	–	–	–	–	–	–	–	■	ms6-lws
	9	–	■	–	–	■	■	–	–	–	–	–	–	–	–	■	ms9-lws
	12	–	■	–	–	■	■	–	–	–	–	–	–	–	–	■	ms12-lws

Service unit combinations MSB, MS series

Product range overview – MS series service units

Type		Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]						Supply voltage			
					0.05 ... 0.7	0.05 ... 2.5	0.1 ... 4	0.3 ... 7	0.1 ... 12	0.5 ... 16	24 V DC, connection pattern to EN 175301	24 V DC, connection M12 to IEC 61076-2-101	110 V AC, connection pattern to EN 175301	230 V AC, connection pattern to EN 175301
Code				AG…/AQ…	D2	D4	D5	D6	D7	D8	V24	V24P	V110	V230
Individual devices														
Pressure regulators **MS-LR**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	■	■	■	–	–	–	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	■	■	■	■	–	–	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	■	■	■	■	–	–	–	–
		12	–	G1, G1¼, G1½, G2	–	–	–	■	■	■	–	–	–	–
Pressure regulators **MS-LRB**		4	G¼	G⅛, G¼, G⅜	–	–	■	■	■	–	–	–	–	–
		6	G½	G¼, G⅜, G½, G¾	–	–	■	■	■	■	–	–	–	–
		9	–											
		12	–											
Precision pressure regulators **MS-LRP**		4	–											
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	■	■	■	–	■	–	–	–	–	–
		9	–											
		12	–											
Precision pressure regulators **MS-LRPB**		4	–											
		6	G½	G¼, G⅜, G½, G¾	■	■	■	–	■	–	–	–	–	–
		9	–											
		12	–											
Electrical pressure regulators **MS-LRE**		4	–											
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	■	■	■	■	–	–	–	–
		9	–											
		12	–											
Lubricators **MS-LOE**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	–	–	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–	–	–
On-off valves, manually actuated **MS-EM(1)**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	–	–	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–	–	–
On-off valves, electrically actuated **MS-EE**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	■	–	■	■
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	■	–	■	■
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	■	■	■	■
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	■	■	■	■
Soft-start valves, pneumatically actuated **MS-DL**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	–	–	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–	–	–
		9	–											
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–	–	–
Soft-start valves, electrically actuated **MS-DE**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	■	–	■	■
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	■	–	■	■
		9	–											
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	■	■	■	■

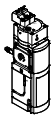
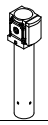
Service unit combinations MSB, MS series

Product range overview – MS series service units

Type	Size	Bowl guard		Pressure indicator					Security		Options		➔ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G⅛	Adapter plate for EN pressure gauge G¼	Pressure sensor	Rotary knob with detent, lockable via accessories	Rotary knob with integrated lock	Silencer	Flow direction from right to left	
Code		R	U	VS	AG	A8	A4	AD...	AS	E11	S	Z	
Individual devices													
Pressure regulators **MS-LR**	4	–	–	■	■	■	■	■	■	■	–	■	ms4-lr
	6	–	–	■	■	–	■	■	■	■	–	■	ms6-lr
	9	–	–	■	■	–	■	■	■	■	–	■	ms9-lr
	12	–	–	■	■	–	■	–	■	■	–	■	ms12-lr
Pressure regulators **MS-LRB**	4	–	–	■	■	■	■	■	■	■	–	■	ms4-lrb
	6	–	–	■	■	–	■	■	■	■	–	■	ms6-lrb
	9	–											–
	12	–											–
Precision pressure regulators **MS-LRP**	4	–											–
	6	–	–	■	–	■	■	■	■	■	–	■	ms6-lrp
	9	–											–
	12	–											–
Precision pressure regulators **MS-LRPB**	4	–											–
	6	–	–	■	–	■	■	■	■	■	–	■	ms6-lrpb
	9	–											–
	12	–											–
Electrical pressure regulators **MS-LRE**	4	–											–
	6	–	–	■	■	–	■	–	–	–	–	■	ms6-lre
	9	–											–
	12	–											–
Lubricators **MS-LOE**	4	■	■	–	–	–	–	–	–	–	–	■	ms4-loe
	6	■	■	–	–	–	–	–	–	–	–	■	ms6-loe
	9	–	■	–	–	–	–	–	–	–	–	■	ms9-loe
	12	–	■	–	–	–	–	–	–	–	–	■	ms12-loe
On-off valves, manually actuated **MS-EM(1)**	4	–	–	■	■	■	■	■	–	–	■	■	ms4-em1
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-em1
	9	–	–	■	■	–	■	–	–	–	■	■	ms9-em
	12	–	–	■	■	–	■	–	–	–	■	■	ms12-em
On-off valves, electrically actuated **MS-EE**	4	–	–	■	■	■	■	■	–	–	■	■	ms4-ee
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-ee
	9	–	–	■	■	–	■	■	–	–	■	■	ms9-ee
	12	–	–	■	■	–	■	–	–	–	■	■	ms12-ee
Soft-start valves, pneumatically actuated **MS-DL**	4	–	–	■	■	■	■	■	–	–	–	■	ms4-dl
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-dl
	9	–											–
	12	–	–	■	■	–	■	–	–	–	–	■	ms12-dl
Soft-start valves, electrically actuated **MS-DE**	4	–	–	■	■	■	■	■	–	–	–	■	ms4-de
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-de
	9	–											–
	12	–	–	■	■	–	■	–	–	–	–	■	ms12-de

Service unit combinations MSB, MS series

Product range overview – MS series service units

Type		Size	Pneumatic connection in housing	Connecting plate	Performance Level			Supply voltage				
					Category 1, 1-channel	Category 3, 2-channel	Category 4, 2-channel with self-monitoring	24 V DC, Sub-D, 9-pin	24 V DC, connection pattern to EN 175301	24 V DC, connection M12 to IEC 61076-2-101	110/230 V AC, connection pattern to EN 175301	22 … 31.6 V DC, connection M12, AS-i Safety at Work
Code				AG…/AQ…	C	D	E	10V24	10V24/ V24	10V24P	V110/ V230	ASIS
Individual devices												
Soft start and exhaust valves **MS-SV-C**		4	–									
		6	G½	G¼, G⅜, G½, G¾	■	–	–	–	■	■	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	■	–	–	–	■	■	■	–
		12	–									
Soft start and exhaust valves **MS-SV-D**		4	–									
		6	G½	G¼, G⅜, G½, G¾	–	■	–	–	■	■	–	–
		9	–									
		12	–									
Soft start and exhaust valves **MS-SV-E**		4	–									
		6	G½	G¼, G⅜, G½, G¾	–	–	■	■	–	–	–	■
		9	–									
		12	–									
Membrane air dryers **MS-LDM1**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–
		9	–									
		12	–									
Branching modules **MS-FRM**		4	G⅛, G¼	G⅛, G¼, G⅜	–	–	–	–	–	–	–	–
		6	G¼, G⅜, G½	G¼, G⅜, G½, G¾	–	–	–	–	–	–	–	–
		9	G¾, G1	G½, G¾, G1, G1¼, G1½	–	–	–	–	–	–	–	–
		12	–	G1, G1¼, G1½, G2	–	–	–	–	–	–	–	–
Distributor blocks **MS-FRM-FRZ**		4	G¼	–	–	–	–	–	–	–	–	–
		6	G½	–	–	–	–	–	–	–	–	–
		9	–									
		12	–									
Flow sensors **SFAM**		4	–									
		6	G½	G½	–	–	–	–	–	–	–	–
		9	–	G1, G1½	–	–	–	–	–	–	–	–
		12	–									

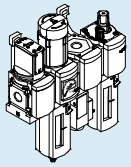
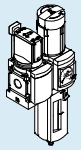
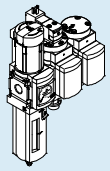
Service unit combinations MSB, MS series

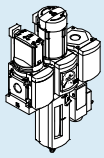
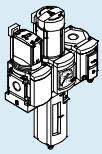
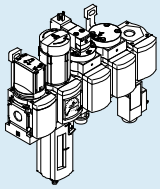
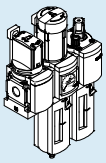
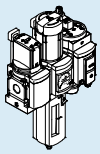
Product range overview – MS series service units

Type	Size	Bowl guard		Pressure indicator					Switch output		Options		➔ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	2x PNP or NPN, 1 analogue output 4 ... 20 mA	2x PNP or NPN, 1 analogue output 0 ... 10 V	Silencer	Flow direction from right to left	
Code		R	U	VS	AG	A8	A4	AD...	2SA	2SV	S	Z/R	
Individual devices													
Soft start and exhaust valves **MS-SV-C**	4	–											–
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-sv
	9	–	–	■	■	–	■	■	–	–	■	■	ms9-sv
	12	–											–
Soft start and exhaust valves **MS-SV-D**	4	–											–
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-sv
	9	–											–
	12	–											–
Soft start and exhaust valves **MS-SV-E**	4	–											–
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-sv
	9	–											–
	12	–											–
Membrane air dryers **MS-LDM1**	4	–	■	–	–	–	–	–	–	–	–	■	ms4-ldm1
	6	–	■	–	–	–	–	–	–	–	–	■	ms6-ldm1
	9	–											–
	12	–											–
Branching modules **MS-FRM**	4	–	–	■	■	■	■	■	–	–	–	■	ms4-frm
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-frm
	9	–	–	■	■	–	■	■	–	–	–	■	ms9-frm
	12	–	–	■	–	–	–	–	–	–	–	–	ms12-frm
Distributor blocks **MS-FRM-FRZ**	4	–	–	–	–	–	–	–	–	–	–	■	ms4-frm
	6	–	–	–	–	–	–	–	–	–	–	■	ms6-frm
	9	–											–
	12	–											–
Flow sensors **SFAM**	4	–											–
	6	–	–	–	–	–	–	–	■	■	–	■	sfam-62
	9	–	–	–	–	–	–	–	■	■	–	■	sfam-90
	12	–											–

Service unit combinations MSB4/MSB6, MS series

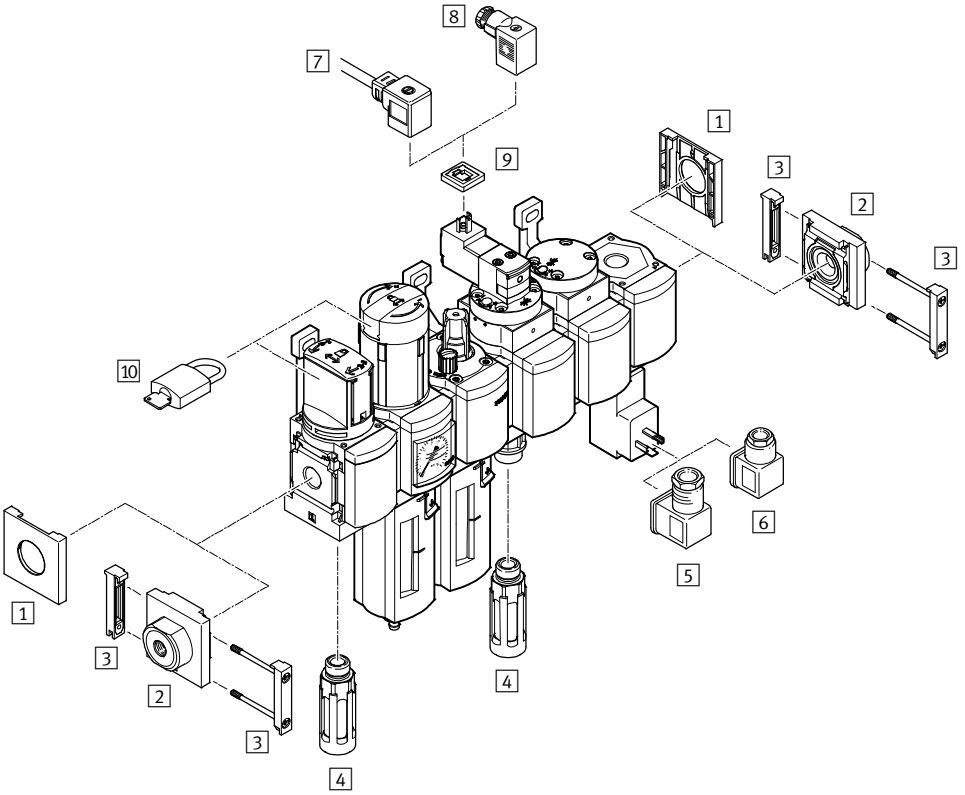
Product range overview

Combinations Comprising:		Combination 1	Combination 2	Combination 3
				
Manually operated on-off valve	EM1	■	■	–
Filter regulator with pressure gauge, lockable	LFR	■	■	■
Lubricator	LOE	■	–	–
Solenoid actuated on-off valve	EE	–	–	■
Solenoid actuated on-off valve, with pressure sensor	EE	–	–	–
Pneumatically actuated soft-start valve	DL	–	–	■
Branching module with pressure switch	FRM	■	–	–
Branching module with pressure sensor	FRM	–	–	–
Mounting bracket	WP	■	■	■
Type codes ➔ Page		10	10	10
Technical data ➔ Page		11	14	18

Combinations Comprising:		Combination 4		Combination 5	Combination 6	Combination 7
						
Manually operated on-off valve	EM1	■	■	■	■	■
Filter regulator with pressure gauge, lockable	LFR	■	■	■	■	■
Lubricator	LOE	–	–	–	■	–
Solenoid actuated on-off valve	EE	–	–	■	–	–
Solenoid actuated on-off valve, with pressure sensor	EE	–	–	–	–	■
Pneumatically actuated soft-start valve	DL	–	–	■	–	–
Branching module with pressure switch	FRM	■	–	■	–	–
Branching module with pressure sensor	FRM	–	■	–	–	–
Mounting bracket	WP	■	■	■	■	■
Type codes ➔ Page		10	10	10	10	10
Technical data ➔ Page		21	21	26	29	32

Service unit combinations MSB4/MSB6, MS series

Peripherals overview



Note

The choice of accessories depends on the selected service unit combination.

Range of accessories

➔ Peripherals pages of the individual devices

Mounting attachments and accessories		➔ Page/Internet
1	Cover cap MS4/6-END	ms4-end, ms6-end
2	Connecting plate-SET MS4/6-AG...	ms4-ag, ms6-ag
3	Module connector MS4/6-MV	ms4-mv, ms6-mv
4	Silencer U	36
5	Angled socket PEV-¼-WD-LED	36
6	Plug socket MSSD-C-4P	36
7	Plug socket with cable KMEB	36
8	Plug socket MSSD-EB	36
9	Illuminating seal MEB-LD	36
10	Padlock LRVS-D	36
–	Mounting bracket MS4/6-WP/WPB/WPE/WPM	ms4-wp, ms6-wp

New
MSB4/6-...J120

Service unit combinations MSB4/MSB6, MS series

Type codes

MSB	6	–	½	:	C3	J1	D1	A1	F3	–	WP

Series	
MSB	Service unit combination

Size	
4	Grid dimension 40 mm
6	Grid dimension 62 mm

Pneumatic connection	
MSB4	
¼	Thread G¼
MSB6	
½	Thread G½

Service unit combination	
On-off valve	➔ Internet: ms4-em1, ms6-em1
C3	MS...-EM1
Filter regulator	➔ Internet: ms4-lfr, ms6-lfr
J1	MS...-LFR-D7-ERM-AS
J2	MS...-LFR-D7-ERV-AS
J3	MS...-LFR-D7-CRM-AS
J4	MS...-LFR-D7-CRV-AS
J120	MS...-LFR-D6-ERM-MPAAS
Soft-start valve	➔ Internet: ms4-dl, ms6-dl
A1	MS...-DL
Lubricator	➔ Internet: ms4-loe, ms6-loe
M1	MS...-LOE-R
On-off valve	➔ Internet: ms4-ee, ms6-ee
D1	MS...-EE-V24
D14	MS...-EE-10V24P-AD7
Branching module	➔ Internet: ms4-frm, ms6-frm
F3	MS...-FRM-Y
F12	MS...-FRM-AD7

Type of mounting	
WP	Mounting bracket

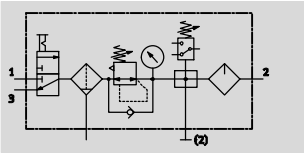
Further variants can be ordered using the modular system ➔ www.festo.com

- Connection size
- Connecting plates
- Service unit equipment
- Alternative flow direction

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 1

Function
With condensate drain
manual rotary



- On-off valve MS...-EM1 manually actuated
- Filter regulator MS...-LFR-D7 with pressure gauge
- Branching module MS...-FRM-Y with pressure switch without display
- Lubricator MS...-LOE-R
- Mounting bracket MS...-WP

Flow rate
950 l/min

Temperature range
–10 ... +60 °C

Pressure regulation range
1 ... 12 bar

www.festo.com

- For filtered and lubricated compressed air
- Supply pressure can be opened and closed
- Output pressure is infinitely adjustable within the pressure regulation range
- The unit is vented when switched off
- Electrical pressure monitoring with adjustable switching pressure
- Removal of filtered and unlubricated compressed air at the branching module connections

General technical data	
Size	MSB4
Pneumatic connection 1, 2, 3	G¼
Regulating function	Output pressure constant, with primary pressure compensation, with return flow function, with secondary venting
Type of mounting	Via accessories
Assembly position	Vertical ±5°
Grade of filtration [µm]	40
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:4:4] (grade of filtration 40 µm)
Bowl guard	Plastic bowl guard
Condensate drain	Manual rotary
Actuator lock	Rotary knob with detent, lockable with accessories
Pressure regulation range [bar]	1 ... 12
Pressure indicator	With pressure gauge

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate qnN [l/min]	
Size	MSB4
Grade of filtration 40 µm	950

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 1

Operating and environmental conditions		
Condensate drain		Manual rotary
Size		MSB4
Operating pressure	[bar]	1.5 … 14
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
		Inert gases
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)
Ambient temperature	[°C]	–10 … +60
Temperature of medium	[°C]	–10 … +60
Storage temperature	[°C]	–10 … +60
Corrosion resistance	CRC[1)]	2

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weights [g]	
Size	MSB4
Service unit combination	1,700
Mounting bracket	40

Note

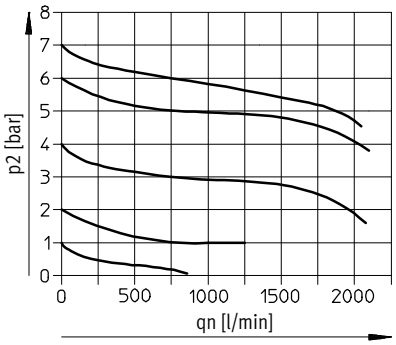
Materials ➔ Technical data of the individual devices

Standard flow rate qn as a function of output pressure p2

Pressure regulation range 1 … 12 bar Grade of filtration 40 µm

MSB4-¼

Primary pressure p1 = 10 bar

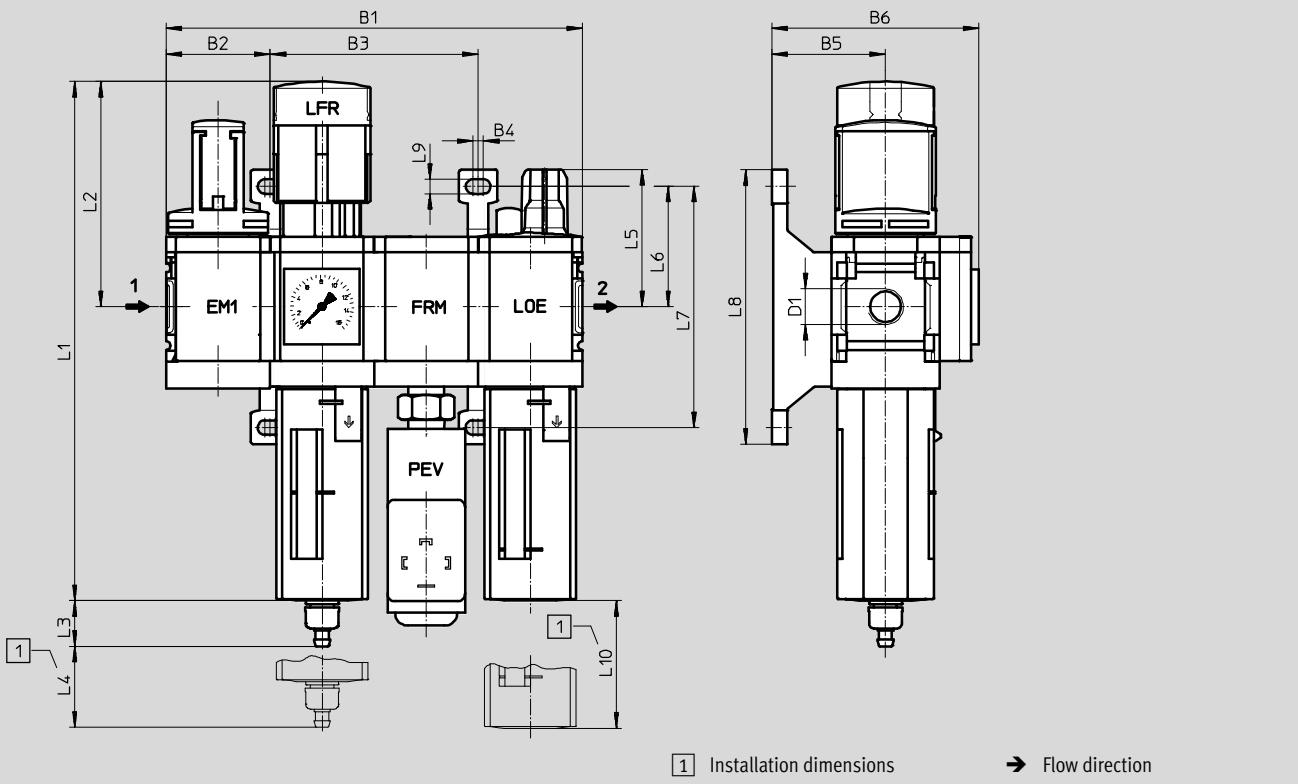


Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 1

Dimensions Download CAD data ➔ **www.festo.com**

Manually actuated on-off valve, filter regulator with pressure gauge, branching module with pressure switch, lubricator



Type	B1	B2	B3	B4	B5	B6	D1	L1	L2
MSB4	160.8	40.2	80.4	4	44	80	G¼	201	87

Type	L3	L4	L5	L6	L7	L8	L9	L10
MSB4	17.7	25	53	46.5	93.2	106	5.6	80

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

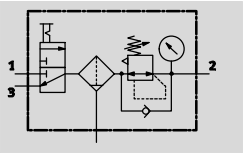
Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 1 … 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G¼	Manual rotary	40	**542295**	**MSB4-¼:C3J1F3M1-WP**

New
MSB4/6-...J120

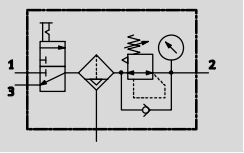
Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 2

Function
With condensate drain
manual rotary



With condensate drain
fully automatic



- On-off valve MS...-EM1 manually actuated
- Filter regulator MS...-LFR with pressure gauge
- Mounting bracket MS...-WP

Flow rate
950 ... 5,500 l/min

Temperature range
–10 ... +60 °C

Pressure regulation range
0.5 ... 12 bar

www.festo.com

- For filtered and unlubricated compressed air
- Supply pressure can be opened and closed
- Output pressure is infinitely adjustable within the pressure regulation range

General technical data		
Size	MSB4	MSB6
Pneumatic connection 1, 2, 3	G¼	G½
Regulating function	Output pressure constant, with primary pressure compensation, with return flow function, with secondary venting	
Type of mounting	Via accessories	
Assembly position	Vertical ±5°	
Grade of filtration [µm]	5	
	40	
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [6:4:4] (grade of filtration 5 µm)	
	Compressed air in accordance with ISO 8573-1:2010 [7:4:4] (grade of filtration 40 µm)	
Bowl guard	Plastic bowl guard	
Condensate drain	Manual rotary	
	Fully automatic	
Actuator lock	Rotary knob with detent, lockable with accessories	
Pressure regulation range [bar]	0.5 ... 7	
	0.5 ... 12	
Pressure indicator	With pressure gauge	

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate qnN [l/min]					
Condensate drain		Manual rotary		Fully automatic	
Size		MSB4	MSB6	MSB4	MSB6
Pressure regulation range 0.5 ... 7 bar					
Grade of filtration	40 µm	1,150	5,500	–	–
Pressure regulation range 0.5 ... 12 bar					
Grade of filtration	5 µm	950	4,800	950	4,800
	40 µm	1,700	5,100	1,000	5,100

125 l/min must be available for the fully automatic condensate drain to close correctly.

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 2

Operating and environmental conditions					
Condensate drain		Manual rotary		Fully automatic	
Size		MSB4	MSB6	MSB4	MSB6
Operating pressure	[bar]	0.8 ... 14	0.8 ... 18	2 ... 12	2 ... 12
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
		Inert gases			
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)			
Ambient temperature	[°C]	−10 ... +60		+5 ... +60	
Temperature of medium	[°C]	−10 ... +60		+5 ... +60	
Storage temperature	[°C]	−10 ... +60		−10 ... +60	
Corrosion resistance	CRC[1)]	2			

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weights [g]		
Size	MSB4	MSB6
Service unit combination	1,300	1,100
Mounting bracket	40	76

Note

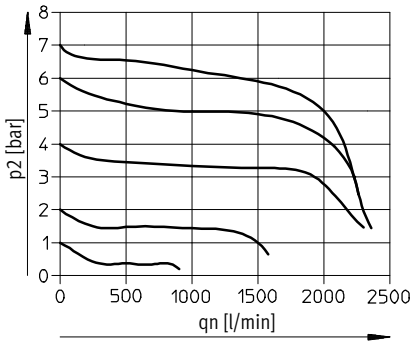
Materials ➔ Technical data of the individual devices

Standard flow rate qn as a function of output pressure p2

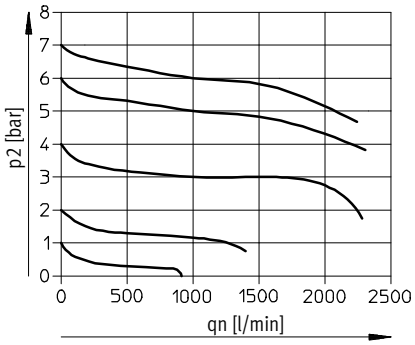
Pressure regulation range 0.5 ... 12 bar
MSB4-¼

Grade of filtration 5 µm

Primary pressure p1 = 10 bar

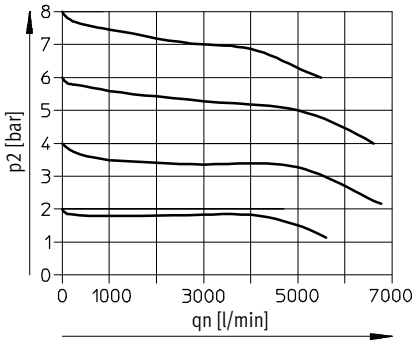


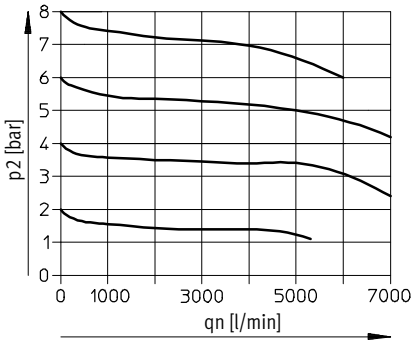
Grade of filtration 40 µm



MSB6-½

Primary pressure p1 = 10 bar





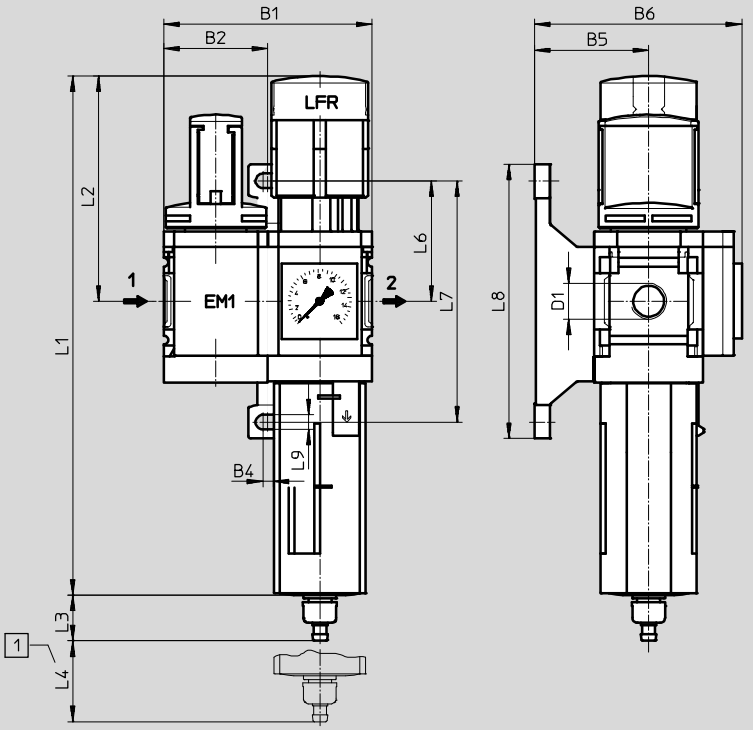
Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 2

FESTO

Dimensions Download CAD data ➔ **www.festo.com**

Manually actuated on-off valve, filter regulator with pressure gauge



1 Installation dimensions ➔ Flow direction

Type	B1	B2	B4	B5	B6	D1	L1	L2
MSB4	80.4	40.2	4	44	80	G¼	201	87
MSB6	124	62	4.5	54	100	G½	285	134.5

Type	L3 Condensate drain		L4	L6	L7	L8	L9
	Manual rotary	Fully automatic					
MSB4	17.7	20.4	25	46.5	93.2	106	5.6
MSB6	15.8	18.5	68	71	142	158	6.6

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 2

FESTO

★ Core product range

Ordering data					
Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 0.5 ... 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G¼	Manual rotary	40	★ **8025354**	**MSB4-¼:C3:J1-WP**
MSB6	G½	Manual rotary	40	★ **8025355**	**MSB6-½:C3:J1-WP**

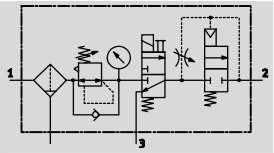
Ordering data					
Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 0.5 ... 7 bar, pressure gauge with outer scale in MPa					
MSB4	G¼	Manual rotary	40	**8042668**	**MSB4-¼:C3:J120-WP**
MSB6	G½	Manual rotary	40	**8042672**	**MSB6-½:C3:J120-WP**
Pressure regulation range 0.5 ... 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G¼	Manual rotary	5	**542304**	**MSB4-¼:C3J3-WP**
		Fully automatic	40	**542298**	**MSB4-¼:C3J2-WP**
			5	**542310**	**MSB4-¼:C3J4-WP**
MSB6	G½	Manual rotary	5	**542280**	**MSB6-½:C3J3-WP**
		Fully automatic	40	**542274**	**MSB6-½:C3J2-WP**
			5	**542286**	**MSB6-½:C3J4-WP**

Festo core product range	★ Ready for dispatch from the Festo factory in 24 hours ☆ Ready for dispatch in 5 days maximum from stock

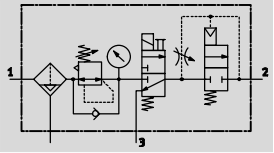
Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 3

Function
With condensate drain
manual rotary



With condensate drain
fully automatic



- Filter regulator MS...-LFR-D7 with pressure gauge
- On-off valve MS...-EE-V24 solenoid actuated
- Soft-start valve MS...-DL pneumatically actuated
- Mounting bracket MS...-WP

Flow rate
750 ... 3,100 l/min

Temperature range
–10 ... +60 °C

Pressure regulation range
4 ... 12 bar

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- For filtered and unlubricated compressed air
- Output pressure is infinitely adjustable within the pressure regulation range
- Gradual pressure build-up prevents sudden, unpredictable movements
- When supply pressure is closed, quick venting ensures rapid pressure reduction

General technical data		
Size	MSB4	MSB6
Pneumatic connection 1, 2, 3	G¼	G½
Regulating function	Output pressure constant, with primary pressure compensation, with return flow function, with secondary venting	
Type of mounting	Via accessories	
Assembly position	Vertical ±5°	
Grade of filtration [µm]	40	
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:4:–] (grade of filtration 40 µm)	
Bowl guard	Plastic bowl guard	
Condensate drain	Manual rotary	
	–	Fully automatic
Actuator lock	Rotary knob with detent, lockable with accessories	
Pressure regulation range [bar]	4 ... 12	
Pressure indicator	With pressure gauge	
Coil characteristics	24 V DC: 1.5 W	24 V DC: 1.5 W

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate qnN [l/min]		
Size	MSB4	MSB6
Grade of filtration 40 µm	750	3,100

125 l/min must be available for the fully automatic condensate drain to close correctly.

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 3

Operating and environmental conditions			
Condensate drain	Manual rotary		Fully automatic
Size	MSB4	MSB6	MSB6
Operating pressure [bar]	4.5 … 14	4.5 … 18	4.5 … 12
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [–:4:–]		Compressed air in accordance with ISO 8573-1:2010 [7:4:–]
	Inert gases		
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)		
Ambient temperature [°C]	–10 … +60		+5 … +60
Temperature of medium [°C]	–10 … +60		+5 … +60
Storage temperature [°C]	–10 … +60		–10 … +60
Corrosion resistance CRC[1)]	2		

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weights [g]		
Size	MSB4	MSB6
Service unit combination	1,600	2,400
Mounting bracket	40	76

Note

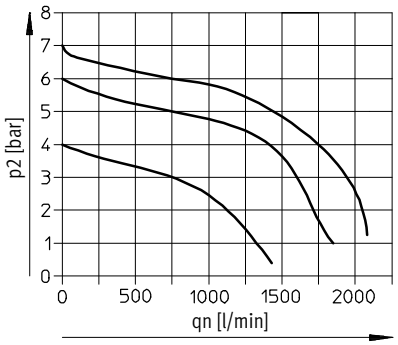
Materials ➔ Technical data of the individual devices

Standard flow rate qn as a function of output pressure p2

Pressure regulation range
4 … 12 bar
MSB4-¼

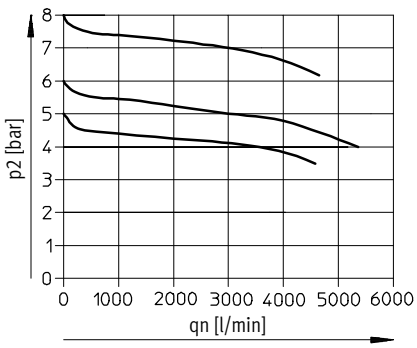
Grade of filtration 40 µm

Primary pressure p1 = 10 bar



MSB6-½

Primary pressure p1 = 10 bar

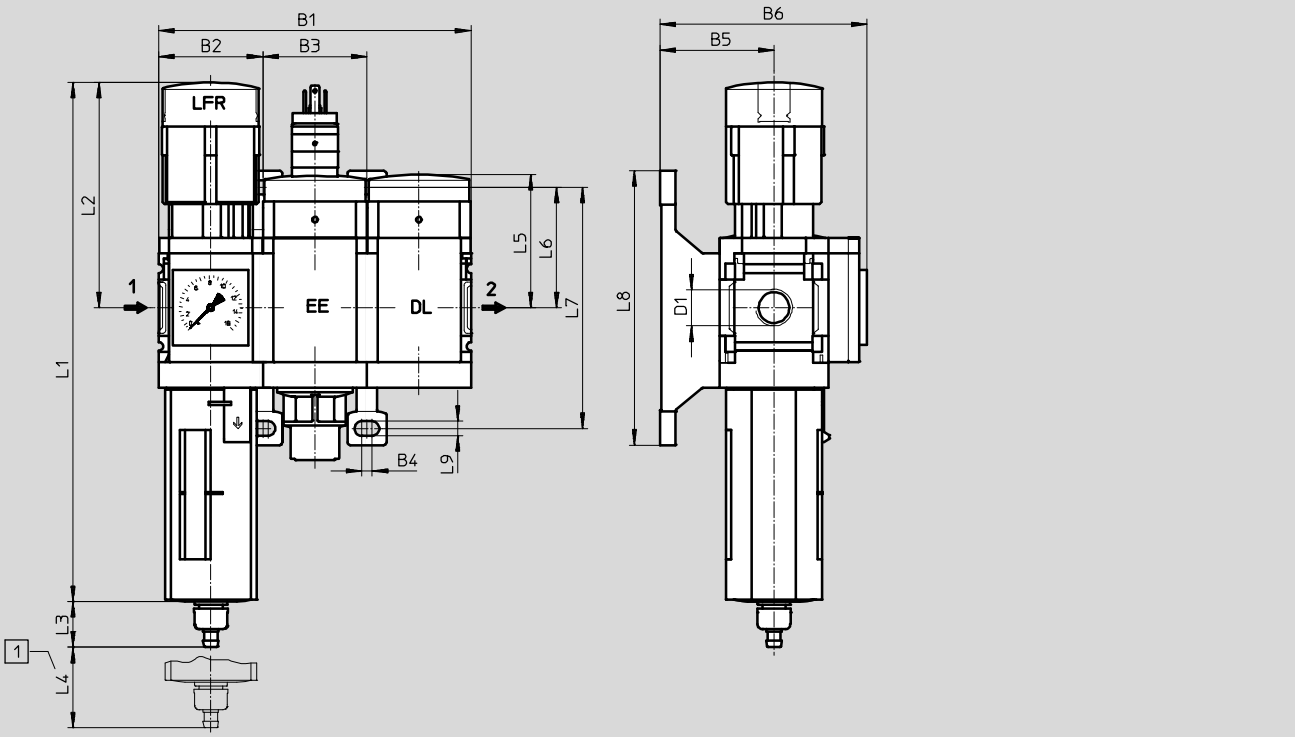


Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 3

Dimensions Download CAD data ➔ **www.festo.com**

Filter regulator with pressure gauge, solenoid actuated on-off valve, pneumatically actuated soft-start valve



Type	B1	B2	B3	B4	B5	B6	D1	L1	L2
MSB4	120.6	40.2	40.2	4	44	80	G¼	201	87
MSB6	186	62	62	4.5	54	100	G½	285	134.5

Type	L3 Condensate drain		L4	L5	L6	L7	L8	L9
	Manual rotary	Fully automatic						
MSB4	17.7	–	25	51.7	46.5	93.2	106	5.6
MSB6	15.8	18.5	68	71	71	142	158	6.6

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 4 … 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G¼	Manual rotary	40	**531101**	**MSB4-¼:J1D1A1-WP**
MSB6	G½	Manual rotary	40	**530222**	**MSB6-½:J1D1A1-WP**
		Fully automatic	40	**530224**	**MSB6-½:J2D1A1-WP**

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 4

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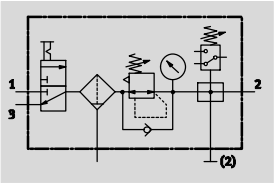
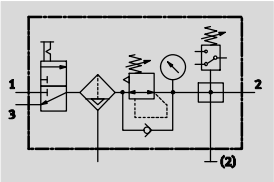
Function
With condensate drain,
manual rotary



With condensate drain,
fully automatic



Flow rate
1,300 ... 5,300 l/min

Temperature range
–10 ... +60 °C

Pressure regulation range
0.5 ... 12 bar

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- For filtered and unlubricated compressed air supply
- Supply pressure can be opened and closed
- Output pressure is infinitely adjustable within the pressure regulation range
- Electrical pressure monitoring with adjustable switching pressure

- Manually operated on-off valve MS...-EM1
- Filter regulator MS...-LFR with pressure gauge
- Branching module MS...-FRM-Y with pressure switch or MS...-FRM-AD7 with pressure sensor for displaying output pressure via operational status indicator
- Mounting bracket MS...-WP

General technical data				
Size	MSB4		MSB6	
Branching module with	Pressure switch	Pressure sensor	Pressure switch	Pressure sensor
Pneumatic connection 1, 2, 3	G¼		G½	
Regulator function	Output pressure constant, with primary pressure compensation, with return flow, with secondary venting			
Type of mounting	Via accessories			
Mounting position	Vertical ±5°			
Grade of filtration [µm]	40			
Air purity class at the output	Compressed air according to ISO 8573-1:2010 [7:4:4] (grade of filtration 40 µm)			
Bowl guard	Plastic bowl guard			
Condensate drain	Manual rotary	Manual rotary	Manual rotary	Manual rotary
	Fully automatic	–	Fully automatic	–
Actuation security	Rotary knob with detent, can be locked using accessories			
Pressure regulation range [bar]	–	0.5 ... 7	–	0.5 ... 7
	0.5 ... 12	0.5 ... 10	0.5 ... 12	0.5 ... 10
Pressure indication	Via pressure gauge for displaying output pressure			

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate qnN [l/min]				
Size	MSB4		MSB6	
Branching module with	Pressure switch	Pressure sensor	Pressure switch	Pressure sensor
Pressure regulation range 0.5 ... 7 bar				
Grade of filtration 40 µm	–	1,750	–	5,300
Pressure regulation range 0.5 ... 10 bar				
Grade of filtration 40 µm	–	1,600	–	4,500
Pressure regulation range 0.5 ... 12 bar				
Grade of filtration 40 µm	1,300	–	4,500	–

125 l/min must be available for the fully automatic condensate drain to close correctly.

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 4

Operating and environmental conditions							
Condensate drain		Manual rotary				Fully automatic	
Size		MSB4		MSB6		MSB4	MSB6
Branching module with		Pressure switch	Pressure sensor	Pressure switch	Pressure sensor	Pressure switch	Pressure switch
Operating pressure	[bar]	0.8 ... 14		0.8 ... 18		2 ... 12	2 ... 12
Operating medium		Compressed air according to ISO 8573-1:2010 [7:4:4]					
		Inert gases					
Note on operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)					
Ambient temperature	[°C]	–10 ... +60	0 ... +50	–10 ... +60	0 ... +50	+5 ... +60	
Temperature of medium	[°C]	–10 ... +60	0 ... +50	–10 ... +60	0 ... +50	+5 ... +60	
Storage temperature	[°C]	–10 ... +60				–10 ... +60	
Corrosion resistance class	CRC[1)]	2					

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weight [g]		
Size	MSB4	MSB6
Service unit combination	1,500	2,000
Mounting bracket	40	76

Note

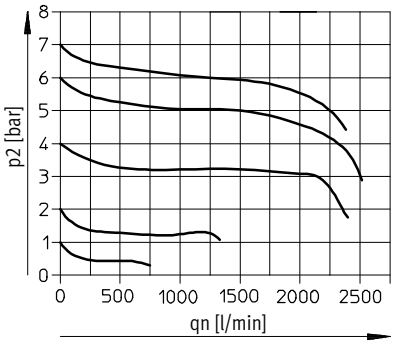
Materials ➔ Technical data of the individual devices

Standard flow rate qn as a function of output pressure p2

Pressure regulation range 0.5 ... 12 bar Grade of filtration 40 µm

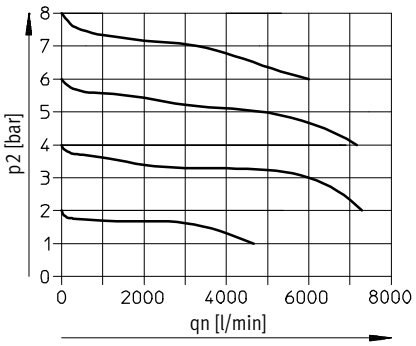
MSB4-¼

Primary pressure p1 = 10 bar



MSB6-½

Primary pressure p1 = 10 bar



Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 4

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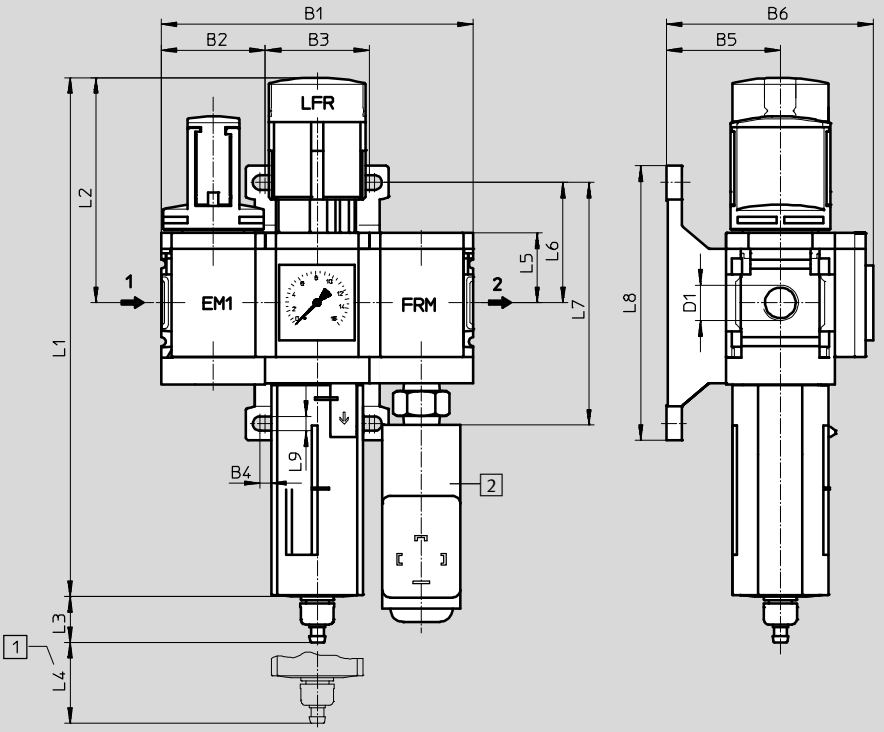
Dimensions Download CAD data ➔ **www.festo.com**

Manually actuated on-off valve, filter regulator with pressure gauge, branching module with pressure switch



1 Installation dimensions
2 Pressure switch PEV-¼-B-0D with adjustable pressure switching point; plug, square design to EN 175 301, type A
➔ Internet: pev

➔ Flow direction

Type	B1	B2	B3	B4	B5	B6	D1	L1	L2
MSB4	120.6	40.2	40.2	4	44	80	G¼	201	87
MSB6	186	62	62	4.5	54	100	G½	285	134.5

Type	L3 Condensate drain		L4	L5	L6	L7	L8	L9
	Manual rotary	Fully automatic						
MSB4	17.7	20.4	25	27	46.5	93.2	106	5.6
MSB6	15.8	18.5	68	39	71	142	158	6.6

Note: This product conforms to ISO 1179-1 and to ISO 228-1

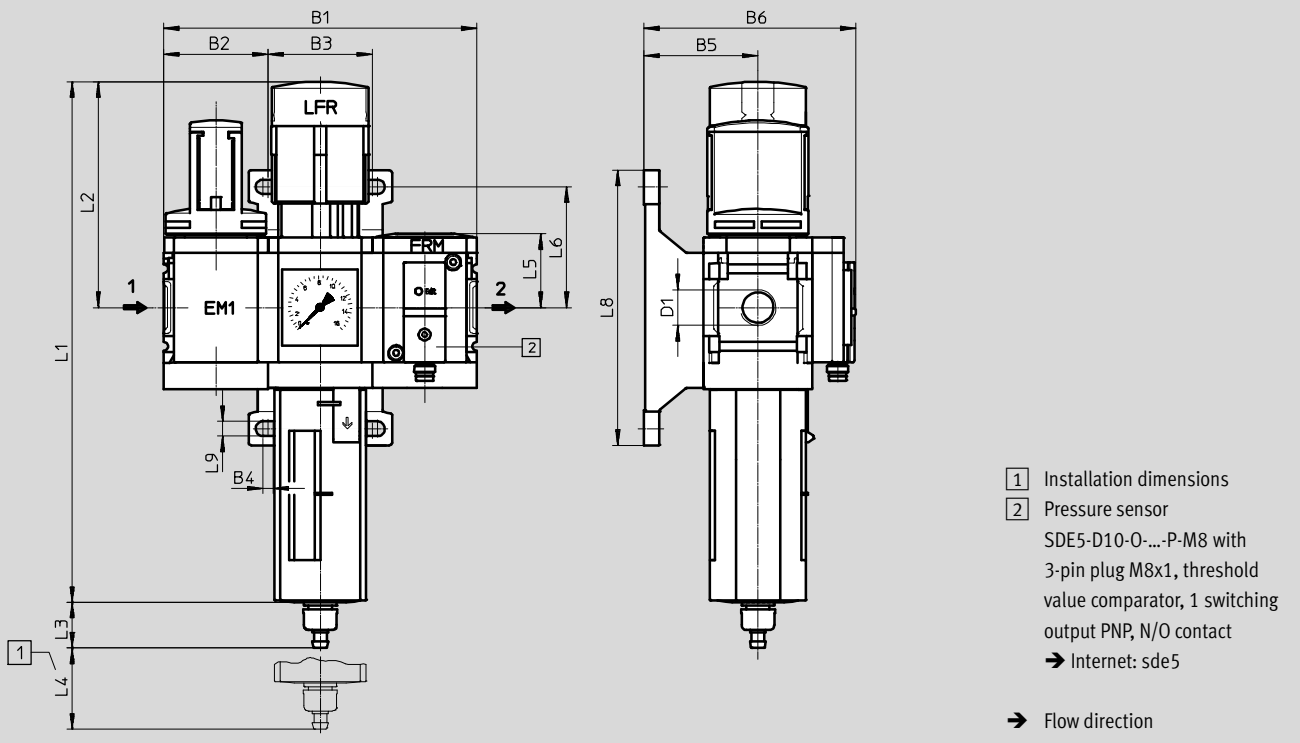
Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 4

FESTO

Dimensions Download CAD data ➔ **www.festo.com**

Manually actuated on-off valve, filter regulator with pressure gauge, branching module with pressure sensor



Type	B1	B2	B3	B4	B5	B6	D1
MSB4	120.6	40.2	40.2	4	44	82	G¼
MSB6	186	62	62	4.5	54	102	G½

Type	L1	L2	L3	L4	L5	L6	L8	L9
MSB4	201	87	17.7	25	29.4	46.5	106	5.6
MSB6	285	134.5	15.8	68	41.7	71	158	6.6

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 4

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★ Core product range

Ordering data					
Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 0.5 ... 10 bar, pressure gauge with outer scale in bar and inner scale in psi, branching module with pressure sensor					
MSB4	G¼	Manual rotary	40	★ **8025356**	**MSB4-¼:C3:J1:F12-WP**
MSB6	G½	Manual rotary	40	★ **8025357**	**MSB6-½:C3:J1:F12-WP**

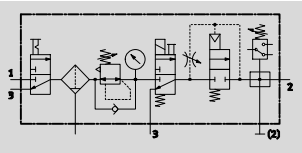
Ordering data					
Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 0.5 ... 7 bar, pressure gauge with outer scale in MPa, branching module with pressure sensor					
MSB4	G¼	Manual rotary	40	**8042667**	**MSB4-¼:C3:J120:F12-WP**
MSB6	G½	Manual rotary	40	**8042671**	**MSB6-½:C3:J120:F12-WP**
Pressure regulation range 0.5 ... 12 bar, pressure gauge with outer scale in bar and inner scale in psi, branching module with pressure switch					
MSB4	G¼	Manual rotary	40	**542294**	**MSB4-¼:C3J1F3-WP**
		Fully automatic	40	**542300**	**MSB4-¼:C3J2F3-WP**
MSB6	G½	Manual rotary	40	**542270**	**MSB6-½:C3J1F3-WP**
		Fully automatic	40	**542276**	**MSB6-½:C3J2F3-WP**

Festo core product range	★ Ready for dispatch from the Festo factory in 24 hours ☆ Ready for dispatch in 5 days maximum from stock

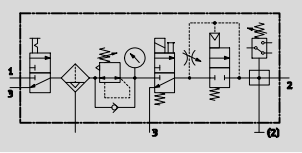
Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 5

Function
With condensate drain
manual rotary



With condensate drain
fully automatic



Flow rate
750 … 3,100 l/min

Temperature range
–10 … +60 °C

Pressure regulation range
4 … 12 bar

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- On-off valve MS…-EM1 manually actuated
- Filter regulator MS…-LFR-D7 with pressure gauge
- On-off valve MS…-EE-V24 solenoid actuated
- Soft-start valve MS…-DL pneumatically actuated
- Branching module MS…-FRM-Y with pressure switch without display
- Mounting bracket MS…-WP
- For filtered and unlubricated compressed air
- Supply pressure can be opened and closed
- Output pressure is infinitely adjustable within the pressure regulation range
- Gradual pressure build-up prevents sudden, unpredictable movements
- To shut-off and vent the following device or the system
- Electrical pressure monitoring with adjustable switching pressure

General technical data		
Size	MSB4	MSB6
Pneumatic connection 1, 2, 3	G¼	G½
Regulating function	Output pressure constant, with primary pressure compensation, with return flow function, with secondary venting	
Type of mounting	Via accessories	
Assembly position	Vertical ±5°	
Grade of filtration [µm]	–	5
	40	
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [6:4:4] (grade of filtration 5 µm)	
	Compressed air in accordance with ISO 8573-1:2010 [7:4:4] (grade of filtration 40 µm)	
Bowl guard	Plastic bowl guard	
Condensate drain	Manual rotary	
	Fully automatic	
Actuator lock	Rotary knob with detent, lockable with accessories	
Pressure regulation range [bar]	4 … 12	
Pressure indicator	With pressure gauge	
Coil characteristics	24 V DC: 1.5 W	24 V DC: 1.5 W

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate qnN [l/min]		
Size	MSB4	MSB6
Grade of filtration 5 µm	–	3,000
40 µm	750	3,100

125 l/min must be available for the fully automatic condensate drain to close correctly.

Operating and environmental conditions					
Condensate drain		Manual rotary		Fully automatic	
Size		MSB4	MSB6	MSB4	MSB6
Operating pressure	[bar]	4.5 … 14	4.5 … 18	4.5 … 12	4.5 … 12
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
		Inert gases			
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)			
Ambient temperature	[°C]	−10 … +60		+5 … +60	
Temperature of medium	[°C]	−10 … +60		+5 … +60	
Storage temperature	[°C]	−10 … +60		−10 … +60	
Corrosion resistance	CRC[1)]	2			

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weights [g]		
Size	MSB4	MSB6
Service unit combination	2,200	3,500
Mounting bracket	40	76

Note

Materials ➔ Technical data of the individual devices

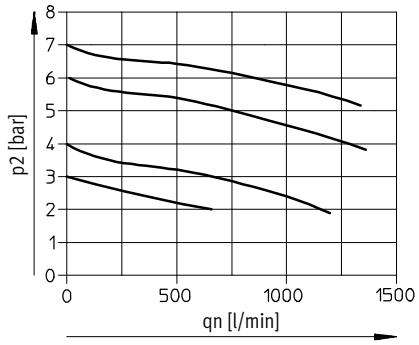
Standard flow rate qn as a function of output pressure p2

Pressure regulation range
4 … 12 bar
MSB4-¼

Grade of filtration 5 µm

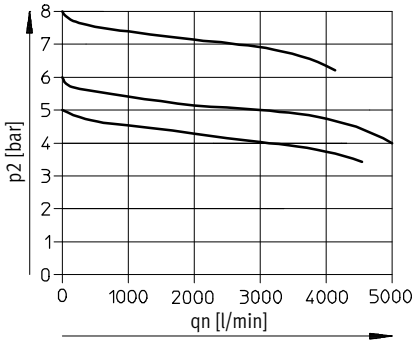
Grade of filtration 40 µm

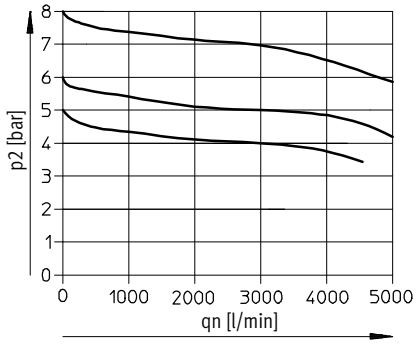
Primary pressure p1 = 10 bar



MSB6-½

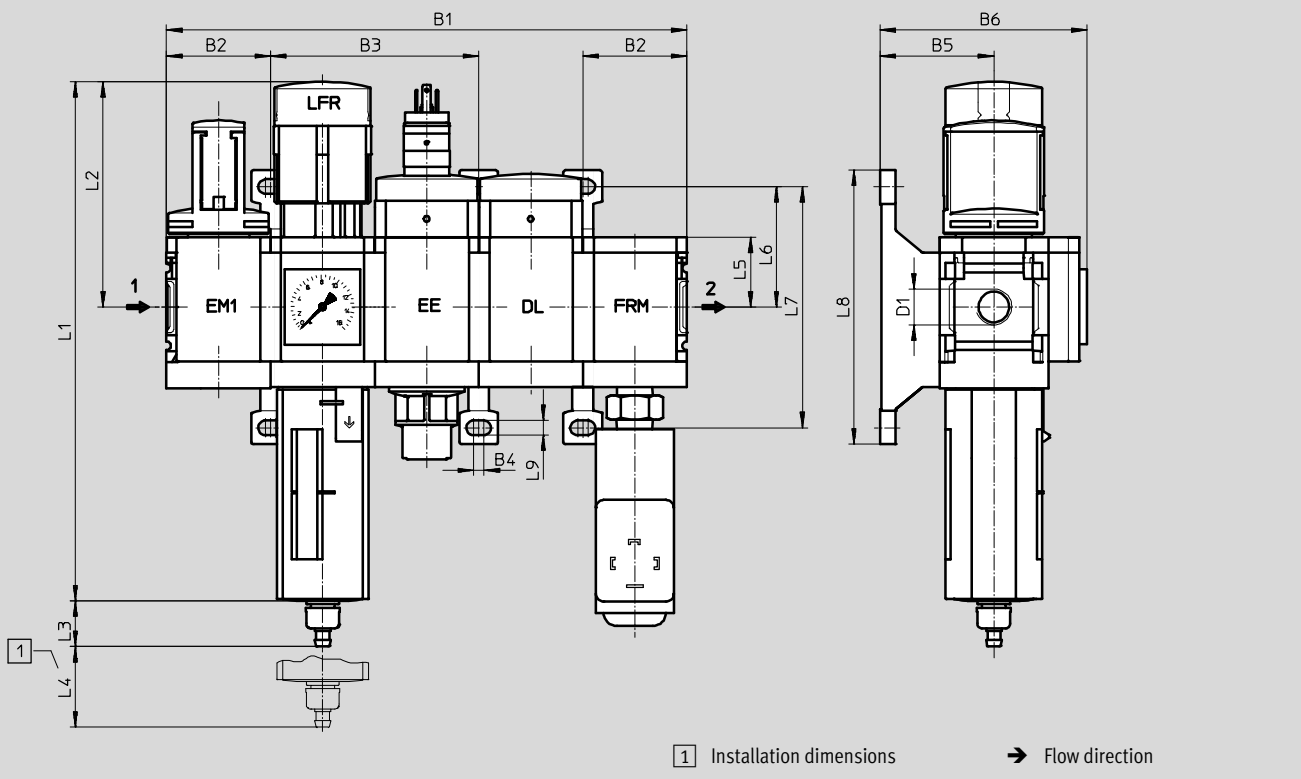
Primary pressure p1 = 10 bar





Dimensions Download CAD data ➔ **www.festo.com**

Manually actuated on-off valve, filter regulator with pressure gauge, solenoid actuated on-off valve, pneumatically actuated soft-start valve, branching module with pressure switch



Type	B1	B2	B3	B4	B5	B6	D1	L1	L2
MSB4	201	40.2	80.4	4	44	80	G¼	201	87
MSB6	310	62	124	4.5	54	100	G½	285	134.5

Type	L3 Condensate drain		L4	L5	L6	L7	L8	L9
	Manual rotary	Fully automatic						
MSB4	17.7	20.4	25	27	46.5	93.2	106	5.6
MSB6	15.8	18.5	68	39	71	142	158	6.6

Note: This product conforms to ISO 1179-1 and to ISO 228-1

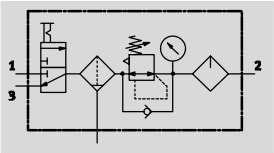
Ordering data

Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 4 … 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G¼	Manual rotary	40	**542293**	**MSB4-¼:C3J1D1A1F3-WP**
		Fully automatic	40	**542299**	**MSB4-¼:C3J2D1A1F3-WP**
MSB6	G½	Manual rotary	40	**542269**	**MSB6-½:C3J1D1A1F3-WP**
			5	**542281**	**MSB6-½:C3J3D1A1F3-WP**
		Fully automatic	40	**542275**	**MSB6-½:C3J2D1A1F3-WP**
			5	**542287**	**MSB6-½:C3J4D1A1F3-WP**

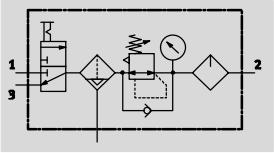
Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 6

Function
With condensate drain
manual rotary



With condensate drain
fully automatic



- On-off valve MS...-EM1 manually actuated
- Filter regulator MS...-LFR-D7 with pressure gauge
- Lubricator MS...-LOE-R
- Mounting bracket MS...-WP

Flow rate
750 ... 3,100 l/min

Temperature range
–10 ... +60 °C

Pressure regulation range
1 ... 12 bar

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- For filtered and lubricated compressed air
- Supply pressure can be opened and closed
- Output pressure is infinitely adjustable within the pressure regulation range

General technical data		
Size	MSB4	MSB6
Pneumatic connection 1, 2, 3	G¼	G½
Regulating function	Output pressure constant, with primary pressure compensation, with return flow function, with secondary venting	
Type of mounting	Via accessories	
Assembly position	Vertical ±5°	
Grade of filtration [µm]	40	
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:4:4] (grade of filtration 40 µm)	
Bowl guard	Plastic bowl guard	
Condensate drain	Manual rotary	
	–	Fully automatic
Actuator lock	Rotary knob with detent, lockable with accessories	
Pressure regulation range [bar]	1 ... 12	
Pressure indicator	With pressure gauge	

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate qnN [l/min]		
Size	MSB4	MSB6
Grade of filtration 40 µm	750	3,100

125 l/min must be available for the fully automatic condensate drain to close correctly.

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 6

Operating and environmental conditions				
Condensate drain		Manual rotary		Fully automatic
Size		MSB4	MSB6	MSB6
Operating pressure	[bar]	1.5 … 14	1.5 … 18	2 … 12
Operating medium		Compressed air in accordance with ISO 8573-1:2010 [7:4:4]		
		Inert gases		
Note on operating/pilot medium		Operation with lubricated medium possible (in which case lubricated operation will always be required)		
Ambient temperature	[°C]	–10 … +60		+5 … +60
Temperature of medium	[°C]	–10 … +60		+5 … +60
Storage temperature	[°C]	–10 … +60		–10 … +60
Corrosion resistance	CRC[1)]	2		

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weights [g]		
Size	MSB4	MSB6
Service unit combination	1,500	1,750
Mounting bracket	40	76

Note

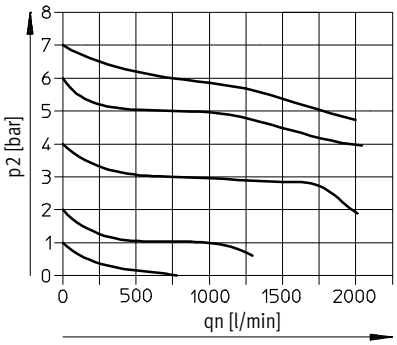
Materials ➔ Technical data of the individual devices

Standard flow rate qn as a function of output pressure p2

Pressure regulation range 1 … 12 bar Grade of filtration 40 µm Grade of filtration 5 µm

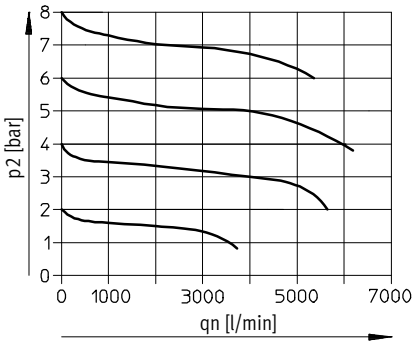
MSB4-¼

Primary pressure p1 = 10 bar



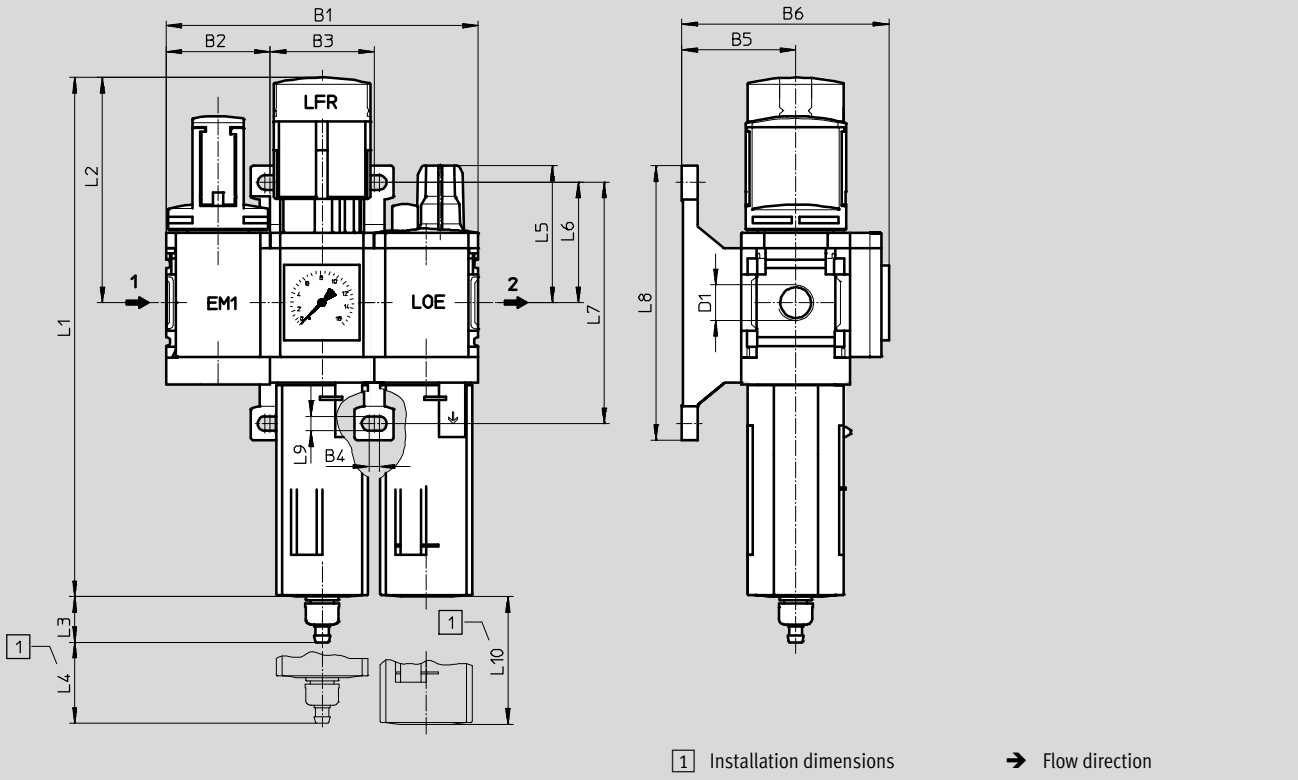
MSB6-½

Primary pressure p1 = 10 bar



Dimensions Download CAD data ➔ **www.festo.com**

Manually actuated on-off valve, filter regulator with pressure gauge, lubricator



Type	B1	B2	B3	B4	B5	B6	D1	L1	L2
MSB4	120.6	40.2	40.2	4	44	80	G¼	201	87
MSB6	186	62	62	4.5	54	100	G½	285	134.5

Type	L3 Condensate drain		L4	L5	L6	L7	L8	L9	L10
	Manual rotary	Fully automatic							
MSB4	17.7	–	25	53	46.5	93.2	106	5.6	80
MSB6	15.8	18.5	68	66	71	142	158	6.6	130

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Ordering data

Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 1 … 12 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G¼	Manual rotary	40	**542296**	**MSB4-¼:C3J1M1-WP**
MSB6	G½	Manual rotary	40	**542272**	**MSB6-½:C3J1M1-WP**
		Fully automatic	40	**542278**	**MSB6-½:C3J2M1-WP**

New
MSB4/6-...J120

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 7

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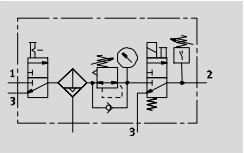
Function
With condensate drain,
manual rotary



- Manually operated on-off valve MS...-EM1
- Filter regulator MS...-LFR with pressure gauge
- Solenoid actuated on-off valve MS...-EE-10V24P-AD7, with pressure sensor for displaying output pressure via operational status indicator
- Mounting bracket MS...-WP

Flow rate
1,400 ... 4,400 l/min

Temperature range
0 ... +50 °C

Pressure regulation range
0.5 ... 10 bar

- For filtered and unlubricated compressed air supply
- Supply pressure can be opened and closed
- Output pressure is infinitely adjustable within the pressure regulation range
- When the supply pressure is closed, quick venting ensures rapid pressure reduction
- Electrical pressure monitoring with adjustable switching pressure

General technical data		
Size	MSB4	MSB6
Pneumatic connection 1, 2, 3	G¼	G½
Regulator function	Output pressure constant, with primary pressure compensation, with return flow, with secondary venting	
Type of mounting	Via accessories	
Mounting position	Vertical ±5°	
Grade of filtration [µm]	40	
Air purity class at the output	Compressed air according to ISO 8573-1:2010 [7:4:4]	
Bowl guard	Plastic bowl guard	
Condensate drain	Manual rotary	
Actuation security	Rotary knob with detent, can be locked using accessories	
Pressure regulation range [bar]	0.5 ... 7	
	0.5 ... 10	
Pressure indication	Via pressure sensor for displaying output pressure via operational status indicator and electrical output	
	Via pressure gauge for displaying output pressure	

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Electrical data – On-off valve MS...-EE-10V24P-AD7	
Coil characteristics	24 V DC: 1.8 W; permissible voltage fluctuations –15%/+10%
Electrical connection	M12x1 to IEC 61076-2-101
Protection class for solenoid coil	IP65
Duty cycle [%]	100

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 7

Standard nominal flow rate qnN [l/min]		
Size	MSB4	MSB6
Pressure regulation range 0.5 ... 7 bar		
Grade of filtration 40 µm	1,600	4,400
Pressure regulation range 0.5 ... 10 bar		
Grade of filtration 40 µm	1,400	4,000

Operating and environmental conditions		
Condensate drain	Manual rotary	
Size	MSB4	MSB6
Operating pressure [bar]	0.8 ... 14	0.8 ... 18
Operating medium	Compressed air according to ISO 8573-1:2010 [7:4:4]	
	Inert gases	
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)	
Ambient temperature [°C]	0 ... +50	
Temperature of medium [°C]	0 ... +50	
Storage temperature [°C]	−10 ... +60	
Corrosion resistance class CRC[1)]	2	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weight [g]		
Size	MSB4	MSB6
Service unit combination	1,600	2,000
Mounting bracket	40	76

Note

Materials ➔ Technical data of the individual devices

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 7

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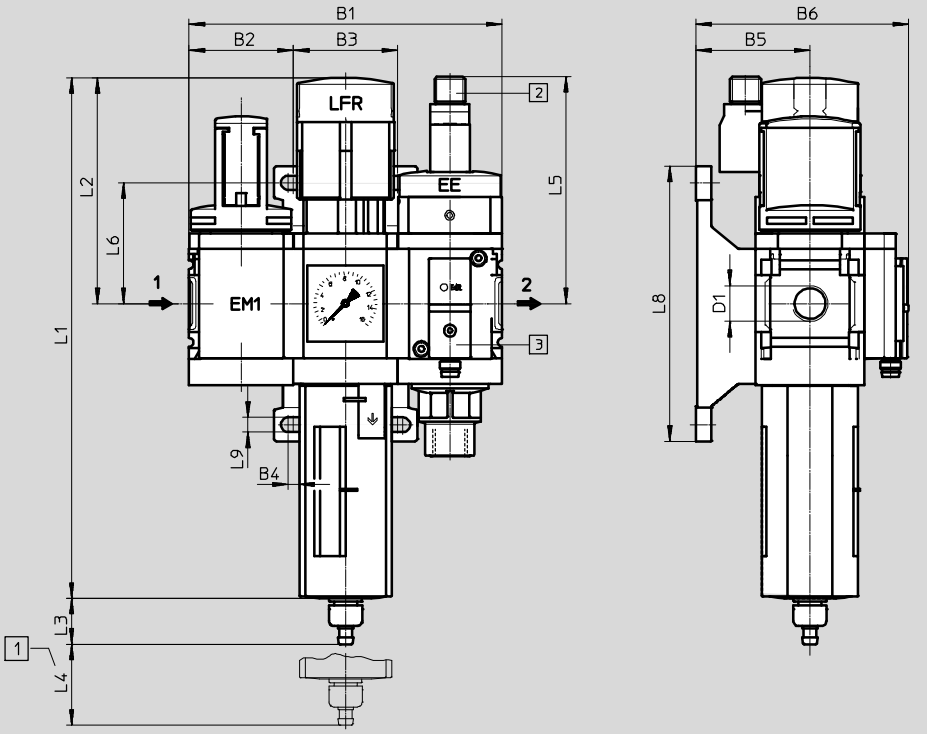
Dimensions Download CAD data ➔ **www.festo.com**

Manually actuated on-off valve, filter regulator with pressure gauge, solenoid actuated on-off valve with pressure sensor



1 = not in use
2 = not in use
3 = com (–)
4 = Signal (+) solenoid 14

1 Installation dimensions
2 Electrical connection to IEC 61076-2-101, plug M12x1, 2-pin for NEBU-M12
3 Pressure sensor SDE5-D10-O-...-P-M8 with 3-pin plug M8x1, threshold value comparator, 1 switching output PNP, N/O contact
➔ Internet: sde5

➔ Flow direction

Type	B1	B2	B3	B4	B5	B6	D1
MSB4	120.6	40.2	40.2	4	44	82	G¼
MSB6	186	62	62	4.5	54	102	G½

Type	L1	L2	L3	L4	L5	L6	L8	L9
MSB4	201	87	17.7	25	86.3	46.5	106	5.6
MSB6	285	134.5	15.8	68	104	71	158	6.6

Note: This product conforms to ISO 1179-1 and to ISO 228-1

Service unit combinations MSB4/MSB6, MS series

Technical data – Combination 7

★ Core product range

Ordering data					
Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 0.5 ... 10 bar, pressure gauge with outer scale in bar and inner scale in psi					
MSB4	G¼	Manual rotary	40	★ **8025358**	**MSB4-¼:C3:J1:D14-WP**
MSB6	G½	Manual rotary	40	★ **8025359**	**MSB6-½:C3:J1:D14-WP**

Ordering data					
Size	Connection	Condensate drain	Grade of filtration [µm]	Part No.	Type
Pressure regulation range 0.5 ... 7 bar, pressure gauge with outer scale in MPa					
MSB4	G¼	Manual rotary	40	**8042666**	**MSB4-¼:C3:J120:D14-WP**
MSB6	G½	Manual rotary	40	**8042670**	**MSB6-½:C3:J120:D14-WP**

Festo core product range	★ Ready for dispatch from the Festo factory in 24 hours ☆ Ready for dispatch in 5 days maximum from stock

Ordering data – Silencer U — Technical data ➔ Internet: u

	Description	Pneumatic connection	Part No.	Type
	for MS4-EM1/EE	G¼	★ **6842**	**U-¼-B**
	for MS6-EM1/EE	G½	★ **6844**	**U-½-B**

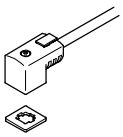
Ordering data – Angled socket PEV — Technical data ➔ Internet: pev

	Description	Operating voltage range	Electrical connection	Switching status display	Part No.	Type
	for PEV-¼-...-OD	15 .... 30 V DC	4-pin	Yellow LED	**164274**	**PEV-¼-WD-LED-24**
		≤ 230 V AC ≤ 180 V DC	4-pin	Yellow LED	**164275**	**PEV-¼-WD-LED-230**

Ordering data – Plug socket MSSD — Technical data ➔ Internet: mssd

	Description	Operating voltage range	Electrical connection	Type of mounting cable connection	Part No.	Type
	for PEV-¼-...-OD	≤ 250 V AC/DC	3-pin	Clamping screws	**171157**	**MSSD-C-4P**
	for MS4/6-EE/DE	≤ 250 V AC/DC	3-pin	Clamping screws	★ **151687**	**MSSD-EB**
			4-pin	Insulation displacement technology	**192745**	**MSSD-EB-S-M14**

Ordering data – Plug socket with cable KMEB — Technical data ➔ Internet: kmeb

	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	**547268**	**KMEB-3-24-2,5-LED**
					5	**547269**	**KMEB-3-24-5-LED**
				–	2.5	**547270**	**KMEB-3-24-2,5**
					5	**547271**	**KMEB-3-24-5**
			3-pin	LED	2.5	★ **151688**	**KMEB-1-24-2,5-LED**
					5	**151689**	**KMEB-1-24-5-LED**
					10	**193457**	**KMEB-1-24-10-LED**
		230 V AC	3-pin	–	2.5	**151690**	**KMEB-1-230AC-2,5**
					5	**151691**	**KMEB-1-230AC-5**

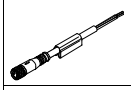
Ordering data – Illuminating seal MEB-LD — Technical data ➔ Internet: meb

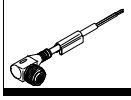
	Description	Operating voltage range	Part No.	Type
	for plug socket with cable KMEB and plug socket MSSD-EB	12 ... 24 V DC	**151717**	**MEB-LD-12-24DC**
		230 V DC/AC ±10%	**151718**	**MEB-LD-230AC**

Ordering data – Padlock LRVS-D

	Description	Weight [g]	Part No.	Type
	for filter or pressure regulators	120	**193786**	**LRVS-D**

Festo core product range
★ Ready for dispatch from the Festo factory in 24 hours
☆ Ready for dispatch in 5 days maximum from stock

Ordering data – Connecting cable NEBU-M8					Technical data ➔ Internet: nebu
	Electrical connection	Number of wires	Cable length [m]	Part No.	Type
	M8x1, straight socket	3	2.5	★ **541333**	**NEBU-M8G3-K-2.5-LE3**
			5	★ **541334**	**NEBU-M8G3-K-5-LE3**
	M8x1, angled socket	3	2.5	★ **541338**	**NEBU-M8W3-K-2.5-LE3**
			5	★ **541341**	**NEBU-M8W3-K-5-LE3**

Ordering data – Connecting cable NEBU-M12					Technical data ➔ Internet: nebu
	Electrical connection	Number of wires	Cable length [m]	Part No.	Type
	M12x1, straight socket	4	2.5	★ **550326**	**NEBU-M12G5-K-2.5-LE4**
			5	★ **541328**	**NEBU-M12G5-K-5-LE4**
	M12x1, angled socket	4	2.5	**550325**	**NEBU-M12W5-K-2.5-LE4**
			5	**541329**	**NEBU-M12W5-K-5-LE4**

Festo core product range
★ Ready for dispatch from the Festo factory in 24 hours
☆ Ready for dispatch in 5 days maximum from stock