

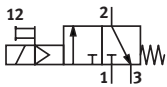
On/off valve MS6N-EM

FESTO



Characteristics

At a glance

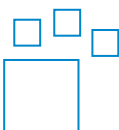


Solenoid manually actuated on/off valve for pressurizing and exhausting pneumatic systems.

- Turning the rotary knob switches the valve.
- A muffler can be attached or the exhaust air can be ducted at port 3
- With optional pressure gauge and pressure sensor

Ordering data - modular system

Link [ms6n_em1](#)



Configurable product

This product and all its product options can be ordered online via the configurator.

Pneumatic connection

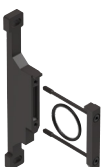
The installation of connection plates makes it easier to replace the module if necessary (e.g., when using piping).

Pressure gauge alternatives

- Features [AG]/[RG]: integrated pressure gauges
- Features [A4]/[A8]: Adapter for pressure gauge
- Features [AD7]/[AD8]/[AD9]/[AD10]: simple pressure sensors for monitoring the system
- Features [AD11]/[AD12]: functional pressure sensors for monitoring the system

Type of mounting

[WP] Mounting bracket standard design



- For connecting the modules for wall mounting
- In conjunction with sub-base for wall mounting of a single device
- in conjunction with mounting plate MS-AEND for wall mounting of a single device
- Same wall distance for mixed combination with series MS4 and MS6

[WB] Mounting centrally at rear (wall mounting top and bottom), sub-bases not required



- For wall mounting

[WPM] Mounting bracket for hooking in air preparation units



- For connecting the modules for wall mounting
- In conjunction with sub-base MS4-AG... for wall mounting of an individual device
- Fast hooking and unhooking

Type code

001	Series	
MS	MS series	
002	Size	
6	Width dimension 62 mm	
003	Thread type	
N	NPT thread	
004	Function	
EM1	On/off valve, manual	
005	Pneumatic connection, inch	
1/4	Internal thread NPT 1/4	
3/8	Internal thread NPT 3/8	
1/2	Internal thread NPT 1/2	
AQN	Sub-base NPT1/4	
AQP	Sub-base NPT3/8	
AQR	Sub-base NPT1/2	
AQS	Sub-base NPT3/4	
006	Rotary knob color	
	Standard (black/blue)	
R	Red	
007	Pneumatic muffler	
	Without	
S	Pneumatic muffler	

008	Pressure gauge alternatives	
	Without	
A4	Adapter plate for EN pressure gauge 1/4, without pressure gauge	
AD7	Pressure sensor with switching display, M8 plug, threshold value comparator, PNP, N/O	
AD8	Pressure sensor with switching display, M8 plug, threshold value comparator, PNP, N/C	
AD9	Pressure sensor with switching display, M8 plug, window comparator, PNP, N/O	
AD10	Pressure sensor with operational status indicator, M8 plug, window comparator, PNP, N/C	
AD11	Pressure sensor with LCD display, M12 4-pin plug, IO-Link®, PNP, NPN, 0...10 V, 1...5 V, 4...20 mA	
AD12	Pressure sensor with LCD display, M8 4-pin plug, IO-Link®, PNP, NPN, 0...10 V, 1...5 V, 4...20 mA	
AG	MS pressure gauge	
RG	Integrated pressure gauge, red/green scale	

009	Alternative pressure gauge scale	
	MS pressure gauge	
BAR	Bar	
MPA	MPa	

010	Type of mounting	
	Without mounting bracket	
WB	Mounting centrally at rear (wall mounting top and bottom), sub-bases not required	
WP	Mounting bracket standard design	
WPM	Mounting bracket for hooking in air preparation units	

011	Flow direction	
	Flow direction from left to right	
Z	Flow direction from right to left	

Datasheet

General technical data

Pneumatic connection 1 ¹⁾	1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 2	1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 3	1/2 NPT, Integrated muffler, Not ducted		
Structural design	Rotary vane		
Type of mounting	Alternatively: In-line installation With accessories		
Mounting position ²⁾	Any		
Valve function	3/2-way, bistable		
Exhaust air function	Cannot be throttled		
Actuation type	Manual		
Type of control	directly		
Flow direction	Non-reversible		

1) Via sub-base [AQ...]: 1/4 NPT, 3/8 NPT, 1/2 NPT or 3/4 NPT

2) Vertical mounting position for the on/off valve with pressure sensor, as condensation water must not be allowed to collect in the pressure sensor.

Flow characteristics

Pneumatic connection 1	1/4 NPT	3/8 NPT	1/2 NPT
Normal nominal flow rate (normalized to DIN 1343) ¹⁾	3,000 l/min	5,500 l/min	8,700 l/min
C value	10.7 l/sbar	21.2 l/sbar	30.8 l/sbar
b-value	0.56	0.49	0.57

1) Measured at p1 = 6 bar and p2 = 5 bar, Δp = 1 bar.

Operating and environmental conditions

Pneumatic connection 1	1/4 NPT	3/8 NPT	1/2 NPT
Operating pressure	0 ... 18 bar		
Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4], Inert gases		
Information on operating and pilot media	Operation with oil lubrication possible (required for further use)		
Ambient temperature	-10 ... 60°C		
Temperature of medium	-10 ... 60°C		
Corrosion resistance class (CRC) ¹⁾	2 - Moderate corrosion stress		
For use in the food industry ²⁾	See supplementary material information		

1) For more information, visit www.festo.com/x/topic/kbk

2) Further information www.festo.com/certificates/ms6n-em1

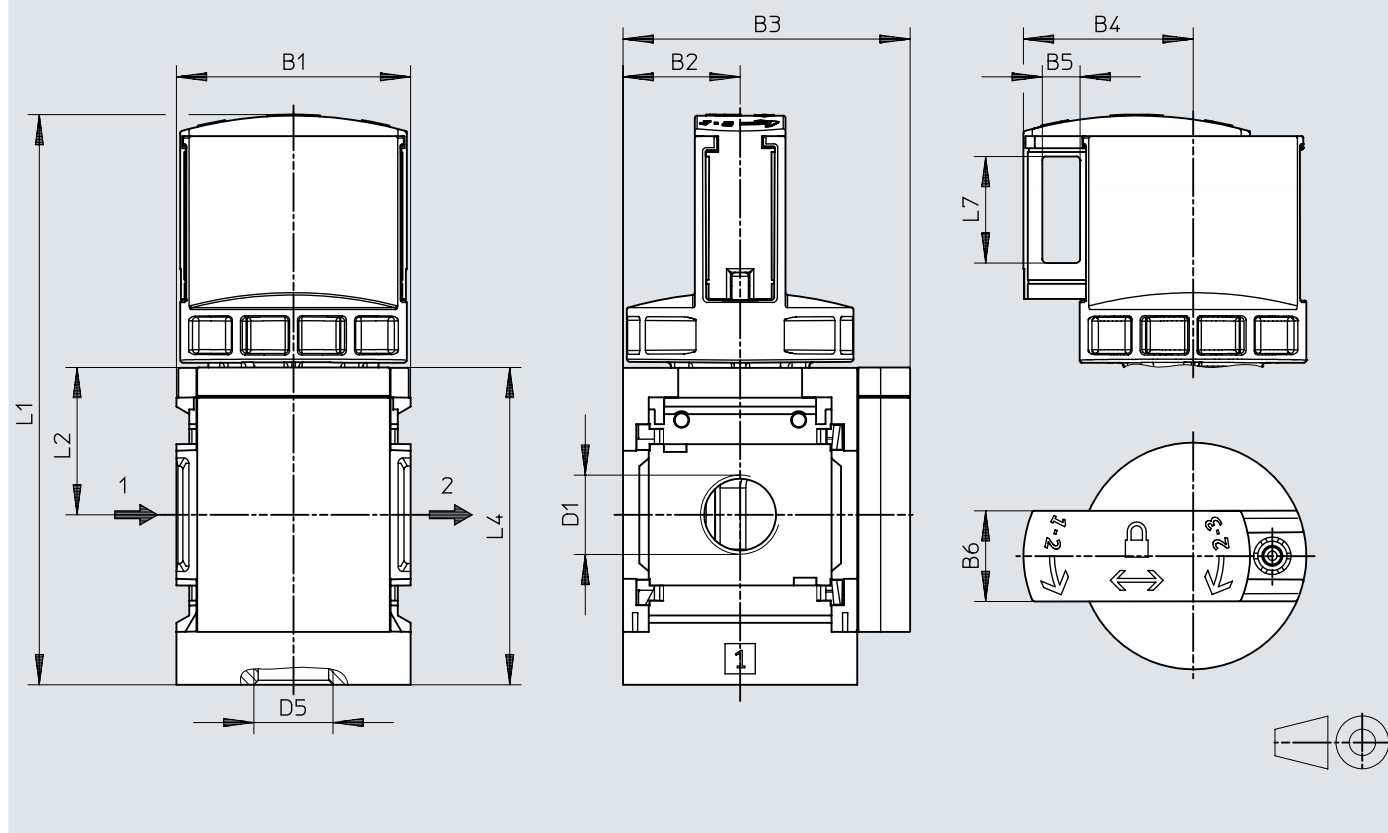
Materials

Housing material	Die-cast aluminum
Seals material	TPE-U(PU)
Note on materials	RoHS compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Dimensions

Dimensions – Basic type with female thread, with cover plate

Download CAD data www.festo.com

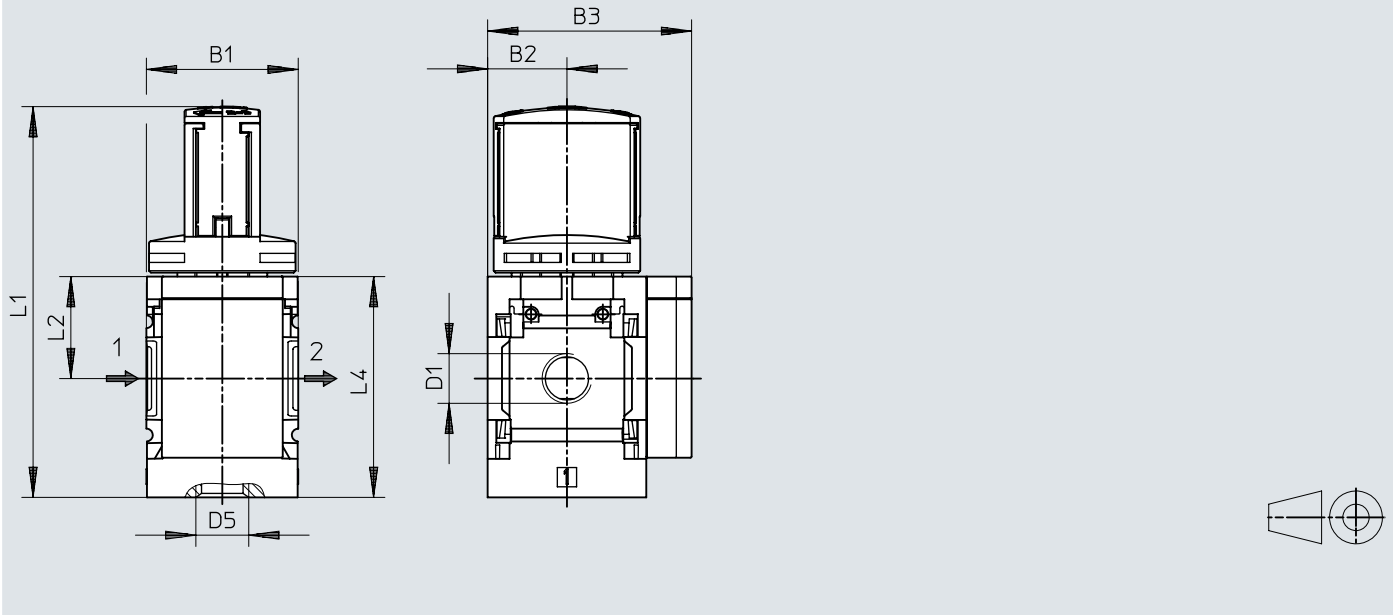


	B1 [inch]	B2 [inch]	B3 [inch]	B4 [inch]	B5 [inch]	B6 [inch]	D1	D5	L1 [inch]	L2 [inch]	L4 [inch]	L7 [inch]
MS6N-EM1-1/4	2,44	1,22	2,99	1,77	0,39	0,94	1/4 NPT	1/2 NPT	5,93	1,53	3,33	1,11
MS6N-EM1-3/8							3/8 NPT					
MS6N-EM1-1/2							1/2 NPT					

Dimensions

Dimensions – Integrated MS pressure gauge with standard scale / Integrated MS pressure gauge with red-green scale

Download CAD data www.festo.com

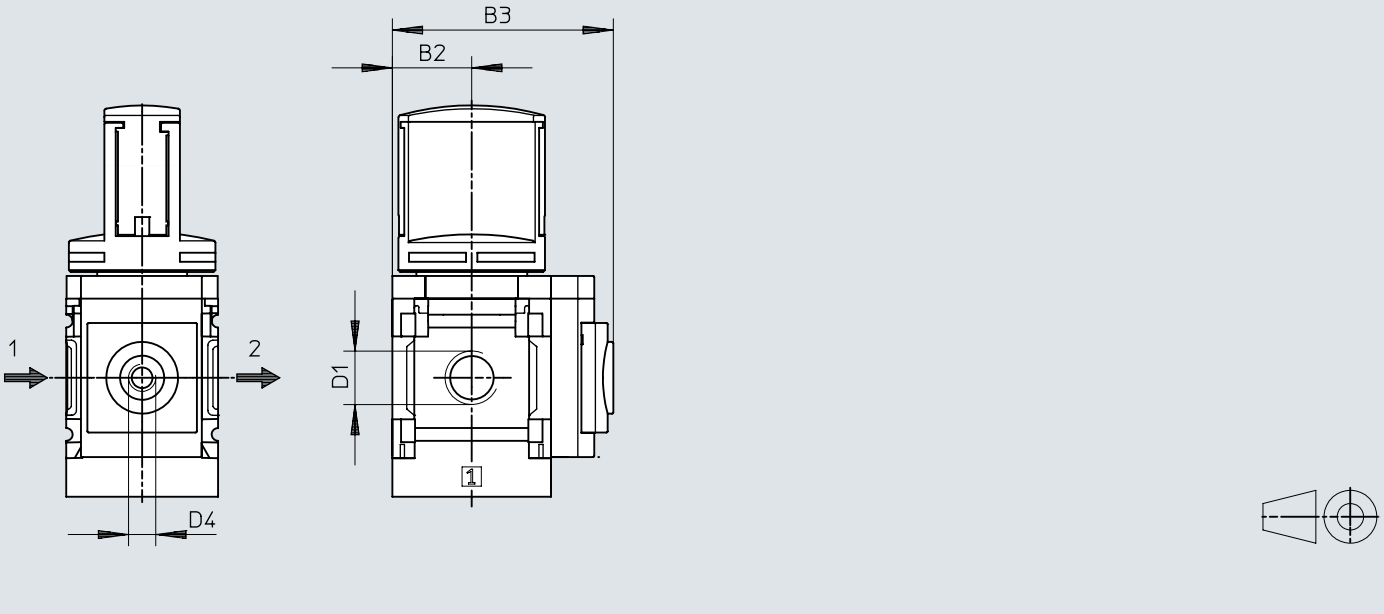


	B2 [inch]	B3 [inch]	D1
MS6N-EM1-1/4-...-AG	1,22	3,03	1/4 NPT
MS6N-EM1-3/8-...-AG			3/8 NPT
MS6N-EM1-1/2-...-AG			1/2 NPT
MS6N-EM1-1/4-...-RG	1,22	3,09	1/4 NPT
MS6N-EM1-3/8-...-RG			3/8 NPT
MS6N-EM1-1/2-...-RG			1/2 NPT

Dimensions

Dimensions – Adapter for EN pressure gauge 1/4, without pressure gauge

Download CAD data www.festo.com

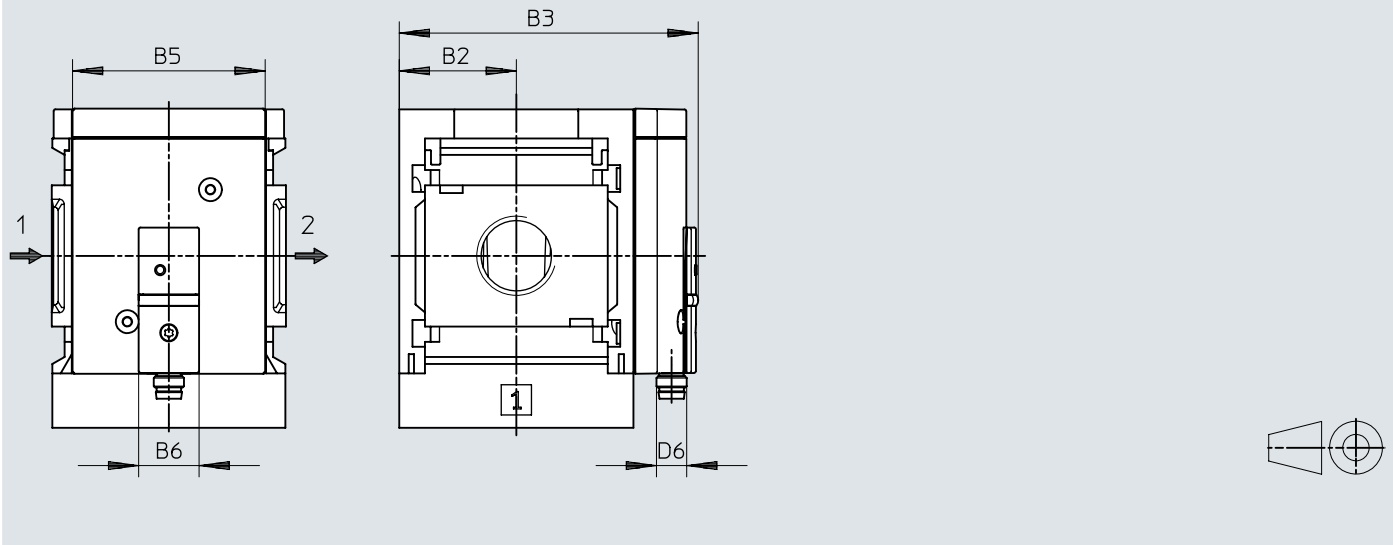


	B2 [inch]	B3 [inch]	D1	D4
MS6N-EM1-1/4-...-A4	1,22	3,09	1/4 NPT	1/4 NPT
MS6N-EM1-3/8-...-A4			3/8 NPT	
MS6N-EM1-1/2-...-A4			1/2 NPT	

Dimensions

Dimensions – Pressure sensor with switching indication AD7, AD8, AD9, AD10

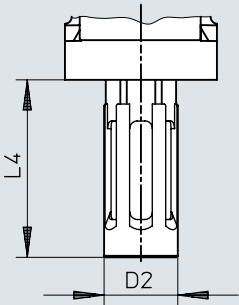
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	B2 [inch]	B3 [inch]	B5 [inch]	B6 [inch]	D6
MS6N-...-AD7, AD8, AD9, AD10	1,22	3,11	~2,01	0,63	M8x1

Dimensions

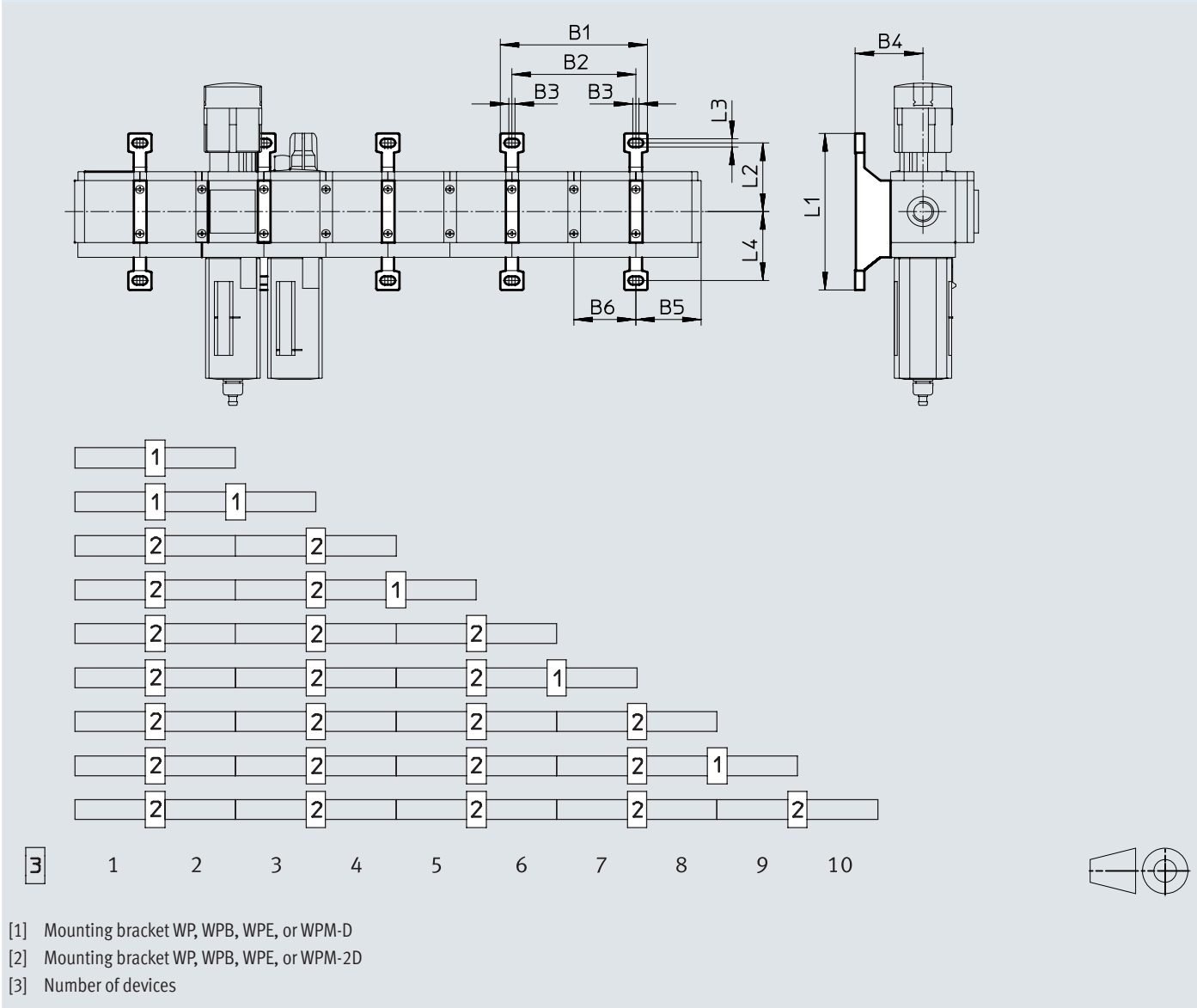
Dimensions – Silencer Download CAD data www.festo.com



	D2 [inch]	L4 [inch]
MS6N-EM1-....S	1,10	4,29

Dimensions

Dimensions – Download CAD data www.festo.com

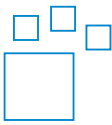


	B1 ¹⁾ [inch]	B2 ¹⁾ [inch]	B3 [inch]	B4 [inch]	B5 ¹⁾²⁾ [inch]	B6 ¹⁾ [inch]	L1 [inch]	L2 [inch]	L3 [inch]	L4 [inch]
MS6-WP	5,55	4,88	0,18	2,13	2,54	2,44	6,22	2,80	0,26	2,80
MS6-WPB/WPE				3,56						
MS6-WPM-...D	6,61	5,43	0,69	2,13	2,68	2,72	3,88	1,63		1,63

Ordering data

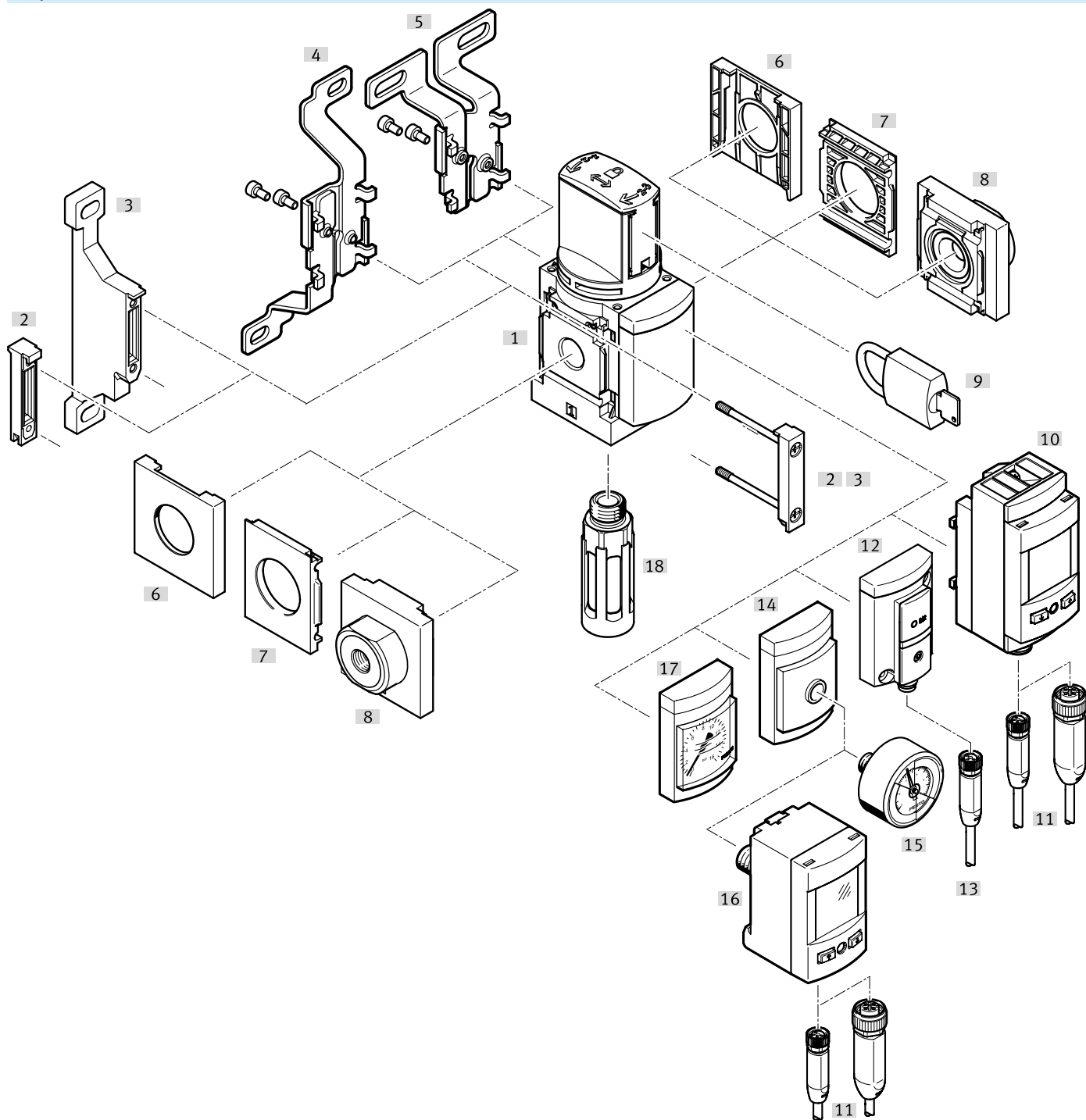
Ordering information - without muffler					
	Pneumatic connection 1	Flow direction	Product weight	Part no.	Type
	1/4 NPT	From right to left	580 g	541296	MS6N-EM1-1/4-Z
		From left to right		541293	MS6N-EM1-1/4
	3/8 NPT	From right to left		541297	MS6N-EM1-3/8
		From left to right		541300	MS6N-EM1-3/8-Z
	1/2 NPT	From left to right		541289	MS6N-EM1-1/2
		From right to left		541292	MS6N-EM1-1/2-Z

Ordering information - with muffler					
	Pneumatic connection 1	Flow direction	Product weight	Part no.	Type
	1/4 NPT	From right to left	655 g	541295	MS6N-EM1-1/4-S-Z
		From left to right		541294	MS6N-EM1-1/4-S
	3/8 NPT	From right to left		541298	MS6N-EM1-3/8-S
		From left to right		541299	MS6N-EM1-3/8-S-Z
	1/2 NPT	From left to right		541291	MS6N-EM1-1/2-S-Z
		From right to left		541290	MS6N-EM1-1/2-S

Ordering information – modular product system			
	Type code	Part no.	Type
	MS6N-EM1	541301	MS6N-EM1

Peripherals overview

Peripherals overview



Accessories		→ Page/Internet
Type/order code	Description	
[1] On/off valve MS6N-EM1	On/off valve	ms6n-em1
[2] Module connector MS6-MV1	For connection of the modules	14
[3] Mounting bracket MS6-WP	Order code [WP]	14
[3] Mounting bracket MS6-WPM	Order code [WPM] (not shown)	14
[4] Mounting bracket MS6-WB	Order code [WB]	14
[5] Mounting bracket MS4-WBM	Not available for this size	-
[6] Cover cap MS6-END	Can be used to cover the sides of the housing for the first and last modules if no sub-bases are used.	15
[7] Mounting plate MS6-AEND	Module connector MS4-MV1 [2] or mounting bracket MS4-WP, WPB, WPE, WPM [3] is required for mounting.	15
[8] Sub-base SET MS6-AQ...	Order code [AQ...]	15

Peripherals overview

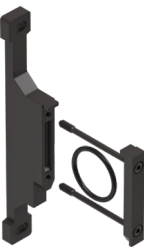
Accessories		→ Page/Internet
Type/order code	Description	
[9] Padlock LRVS-D	When closed, the rotary knob can be secured with a padlock.	17
[10] Pressure sensor with LCD display SPAU	• Display module • Order code [AD11], [AD12]	ms6n-em1
[11] Connecting cable NEBA-M...G...-LE4, straight	Connecting cable for display module	16
[11] Connecting cable NEBA-M...G...-LE4, angled	Connecting cable for display module	16
[12] Pressure sensor with switching indication SDE5	• Display module • Order code [AD7], [AD8], [AD9], [AD10]	ms6n-em1
[13] Connecting cable NEBA-M...G...-LE3, straight	Connecting cable for display module	16
[14] Adapter for EN pressure gauge 1/8, 1/4	Order code [A8], [A4]	ms6n-em1
[15] Pressure gauge MA	Built-in pressure indicator	15
[16] Pressure sensor SPAU-...-T	Display module	16
[17] Pressure gauge MS	Order code [AG], [RG]	ms6n-em1
[18] Muffler S	Order code [S]	ms6n-em1
[18] Muffler U	-	16

Accessories

Module connector MS6-MV1

	Size	Module connector material	LABS (PWIS) conformity	Product weight	Part no.	Type
	6	POM, high-alloy stainless steel	VDMA24364-B1/B2-L	33 g	8119204	MS6-MV1

Mounting bracket MS6-WP...

	Size	Bracket material	LABS (PWIS) conformity	Product weight	Part no.	Type
	6	Die-cast aluminum	VDMA24364-B1/B2-L	76 g	532195	MS6-WP

Mounting bracket MS6-WPM

	Size	Module connector material	LABS (PWIS) conformity	Product weight	Part no.	Type
	6	Die-cast aluminum	VDMA24364-B1/B2-L	144 g	526073	MS6-WPM-D
				154 g	532186	MS6-WPM-2D

Mounting bracket MS6-WB

	Size	Bracket material	LABS (PWIS) conformity	Product weight	Part no.	Type
	6	Steel	VDMA24364-B1/B2-L	121 g	532196	MS6-WB

Accessories

Cover cap MS6-END						
	Size	Housing material	LABS (PWIS) conformity	Part no.	Type	
	6	PA-reinforced	VDMA24364-B1/B2-L	538780	MS6-END	

Mounting plate MS6-AEND						
	Size	Housing material	LABS (PWIS) conformity	Product weight	Part no.	Type
	6	PA-reinforced	VDMA24364-B1/B2-L	11.1 g	535408	MS6-AEND1

Sub-base SET MS6-AQ...						
	Size	Pneumatic connection 1	Material of sub-base	Product weight	Part no.	Type
	6	1/4 NPT	Die-cast aluminum	300 g	526076	MS6N-AQN
		3/8 NPT			526077	MS6N-AQP
		1/2 NPT			526078	MS6N-AQR
		3/4 NPT			526079	MS6N-AQS

Pressure gauge MA						
	Pneumatic connection	Display range	Display range	Product weight	Part no.	Type
	R1/8	0 ... 232 psi	0 ... 16 bar	60 g	525726	MA-40-16-R1/8-E-RG
	R1/4			75 g	525729	MA-50-16-R1/4-E-RG
				70 g	187080	MA-40-16-R1/4-EN

Pressure sensor SPAU						
	Pneumatic connection	Switching output	Electrical connection 1, connection technology	Product weight	Part no.	Type
	R1/8	2 x PNP or 2 x NPN switchable	M12x1 A-coded as per EN 61076-2-101	70 g	8001206	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M12D

Accessories

Pressure sensor SPAU

	Pneumatic connection	Switching output	Electrical connection 1, connection technology	Product weight	Part no.	Type
	R1/8	2 x PNP or 2 x NPN switchable	M8x1 A-coded as per EN 61076-2-104	70 g	8001203	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M8D
	R1/4		M12x1 A-coded as per EN 61076-2-101		8001208	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M12D
			M8x1 A-coded as per EN 61076-2-104		8001209	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M8D

Connecting cable NEBA, straight

Connecting cable NEBA, straight						
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type
	M12x1 A-coded as per EN 61076-2-101	Open end	3	2.5 m	8078236	NEBA-M12G5-U-2.5-N-LE3
				5 m	8078237	NEBA-M12G5-U-5-N-LE3
			4	2.5 m	8078239	NEBA-M12G5-U-2.5-N-LE4
				5 m	8078240	NEBA-M12G5-U-5-N-LE4
	M8x1 A-coded as per EN 61076-2-104		3	2.5 m	8078223	NEBA-M8G3-U-2.5-N-LE3
				5 m	8078224	NEBA-M8G3-U-5-N-LE3
			4	2.5 m	8078227	NEBA-M8G4-U-2.5-N-LE4
				5 m	8078228	NEBA-M8G4-U-5-N-LE4

Connecting cable NEBA, angled

Connecting cable NEBA, angled						
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/wires	Cable length	Part no.	Type
	M12x1 A-coded as per EN 61076-2-101	Open end	3	2.5 m	8078245	NEBA-M12W5-U-2.5-N-LE3
				5 m	8078246	NEBA-M12W5-U-5-N-LE3
			4	2.5 m	8078248	NEBA-M12W5-U-2.5-N-LE4
				5 m	8078249	NEBA-M12W5-U-5-N-LE4
	M8x1 A-coded as per EN 61076-2-104		3	2.5 m	8078230	NEBA-M8W3-U-2.5-N-LE3
				5 m	8078231	NEBA-M8W3-U-5-N-LE3
			4	2.5 m	8078233	NEBA-M8W4-U-2.5-N-LE4
				5 m	8078234	NEBA-M8W4-U-5-N-LE4

Muffler U

	Pneumatic connection	Flow rate with respect to atmosphere	Noise level	Product weight	Part no.	Type
	G1/2	7,500 l/min	81 dB(A)	75 g	6844	U-1/2-B

Accessories

Padlock LRVS-D				
	LABS (PWIS) conformity	Product weight	Part no.	Type
	VDMA24364-B1/B2-L	120 g	193786	LRVS-D