

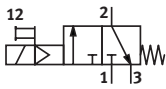
On/off valve MS4N-EE

FESTO



Characteristics

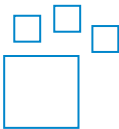
At a glance



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

- Electric 3/2-way valve for pressurizing and venting pneumatic installations
- A muffler can be attached or the exhaust air can be ducted at port 3
- Supply voltage 24 V DC, 110, 230 V AC
- With optional pressure gauge and pressure sensor
- With solenoid coil, without plug socket

Ordering data - modular system Link [ms4n-ee](#)



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

Pneumatic connection

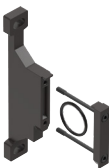
The installation of connection plates makes it easier to replace the module if necessary (e.g., when using piping).

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



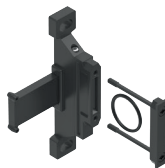
- For connecting the modules for wall mounting
- In conjunction with sub-base for wall mounting of a single device
- in conjunction with mounting plate MS-AEND for wall mounting of a single device
- Same wall distance for mixed combination with series MS4 and MS6

[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

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



- For wall mounting

Type code

001	Series	
MS	MS series	
002	Size	
4	Width dimension 40 mm	
003	Thread type	
N	NPT thread	
004	Function	
EE	On/off valve, electric	
005	Pneumatic connection, inch	
1/8	Internal thread NPT 1/8	
1/4	Internal thread NPT 1/4	
AQK	Sub-base NPT1/8	
AQN	Sub-base NPT1/4	
AQP	Sub-base NPT3/8	
006	Supply voltage	
10V24	24 V DC, 10 bar, connection arrangement to EN 175301	
10V24C	24 V DC, 10 bar (connection arrangement to EN 175301) without manual override	
10V24D	24 V DC, 10 bar, M12 (port pattern to IEC 61076-2-101) without manual override	
10V24F	24 V DC, 10 bar, M12 (connection pattern to IEC 61076-2-101). Manual override on the pilot actuator non-detenting	
10V24P	24 V DC, 10 bar, M12 (connection pattern to IEC 61076-2-101)	
V24	24 V DC (connection arrangement to EN 175301)	
V24P	24 V DC plug, M12 socket adapter (connection pattern according to IEC 61076-2-101)	
V110	110 V AC (connection arrangement in accordance with EN 175301)	
V230	230 V AC (connection arrangement in accordance with EN 175301)	
007	Pneumatic muffler	
	Without	
S	Pneumatic muffler	

008	Pressure gauge alternatives	
	Without	
A4	Adapter plate for EN pressure gauge 1/4, without pressure gauge	
A8	Adapter plate for EN pressure gauge 1/8, 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	
WBM	Mounting centrally at rear (wall mounting top), 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⁾	1/8 NPT	1/4 NPT
Pneumatic connection 2	1/8 NPT	1/4 NPT
Pneumatic connection 3	G1/4	
Structural design	Piston gate valve	
Lap	Overlap	
Type of mounting	Optionally: Line installation With accessories	
Mounting position ²⁾	Any	
Valve function	3/2, closed, monostable	
Exhaust air function	Without flow control option	
Manual override	Detenting, Non-detenting	
Actuation type	Electrical	
Reset method	Mechanical spring	
Type of control	Pilot-controlled	
Pilot air supply port	Internal	
Flow direction	Non-reversible	

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

Electrical data

Supply voltage	24 V DC, 10 bar, connection arrangement to EN 175301	110 V AC (connection arrangement in accordance with EN 175301)	230 V AC (connection arrangement in accordance with EN 175301)
Coil characteristics	24 V DC: 1.8 W	110 V AC: 50/60 Hz, initial power 3.0 VA, holding power 2.4 VA	230 V AC: 50/60 Hz, initial power 3.0 VA, holding power 2.4 VA
Electrical connection	Form C, Plug, as per DIN EN 175301-803, Rectangular design		
Degree of protection	IP65		
Duty cycle	100%		

Flow characteristics

Pneumatic connection 1	1/8 NPT	1/4 NPT
Normal nominal flow rate (normalized to DIN 1343) ¹⁾	1,000 l/min	2,000 l/min
C value	4.5 l/sbar	9.5 l/sbar
b-value	0.5	0.44

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

Operating and environmental conditions

Supply voltage	24 V DC, 10 bar, connection arrangement to EN 175301	110 V AC (connection arrangement in accordance with EN 175301)	230 V AC (connection arrangement in accordance with EN 175301)
Operating pressure	4 ... 10 bar	4 ... 14 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 ... 50°C	-10 ... 60°C	
Temperature of medium	-10 ... 50°C	-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/ms4-ee

Materials

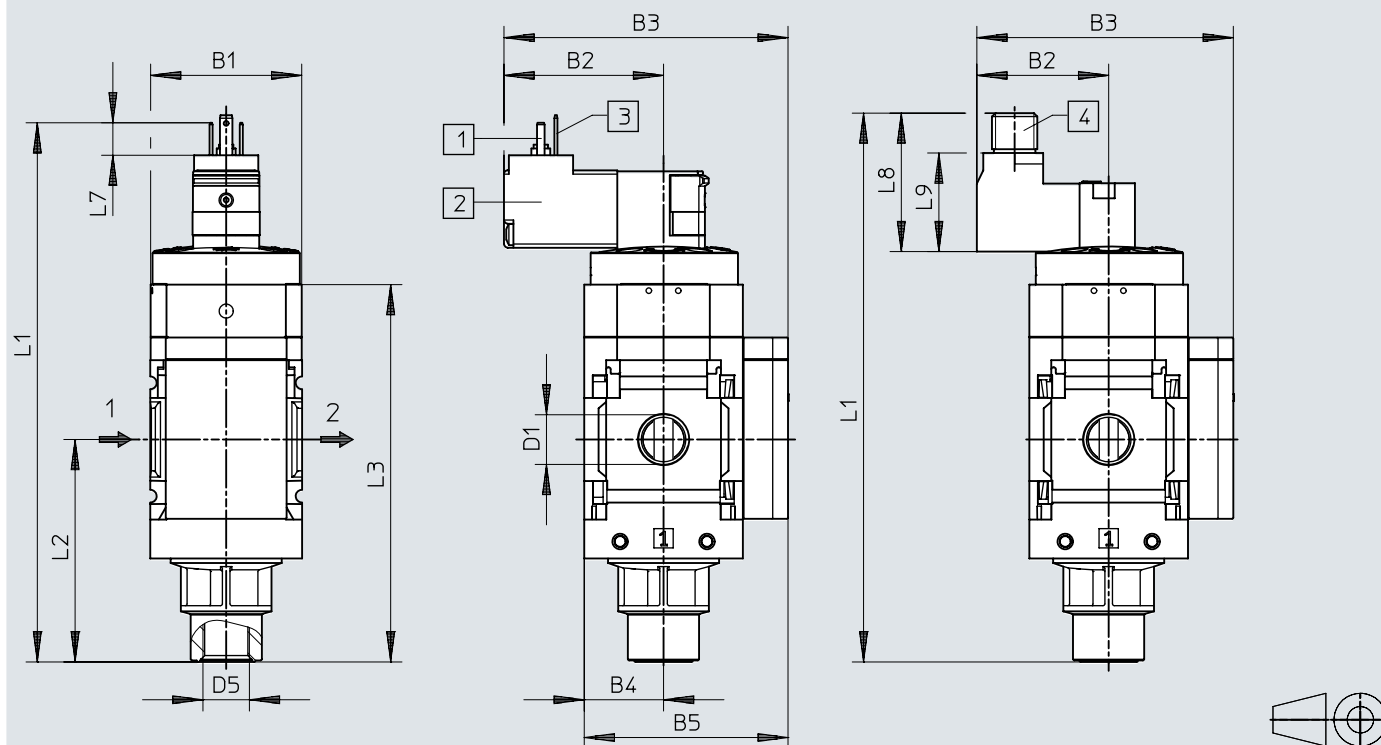
Housing material	Die-cast aluminum
Seals material	NBR
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Dimensions

Dimensions – Basic type with female thread, with cover plate

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10V24D / 10V24F / 10V24P



- [1] Plug connection according to EN 175301-803
 [2] Solenoid actuator can be repositioned 180°, i.e. solenoid faces forward
 [3] PIN only for solenoid actuators 110 V and 230 V
 [4] Electrical connection M12x1 according to ISO 20401 suitable to EN 61076-2-101, 4-pole version for connecting cable NEBU M12
 [5] 1 -> 2: Flow direction

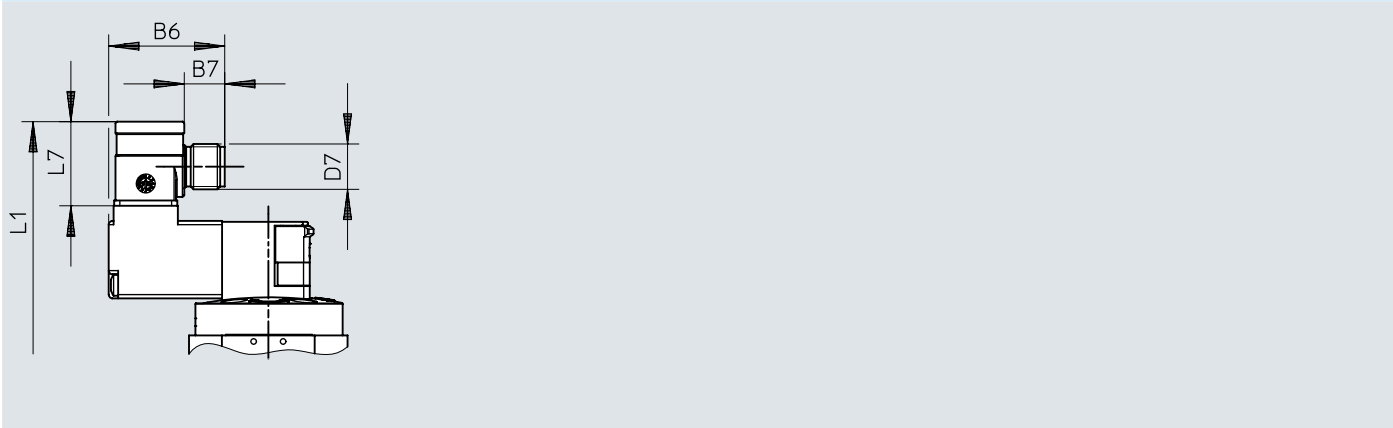
	B1	B2		B3		B4	B5	B6	B7	D1	D5	D7
		[V24] [V110] [V230]	[10V24] [10V24C] [10V24D] [10V24F] [10V24P]	[V24] [V110] [V230]	[10V24] [10V24C] [10V24D] [10V24F] [10V24P]							
	[inch]	[inch]		[inch]		[inch]	[inch]	[inch]	[inch]			
MS4N-EE-1/8	1,57	1,65	1,38	2,95	2,68	0,83	2,13	1,22	0,43	1/8 NPT	1/4 NPT	M12x1
MS4N-EE-1/4										1/4 NPT		

	L1				L2	L3	L7	L8	L9
	[V24] [V110] [V230]	[V24-EX2]	[10V24] [10V24C]	[10V24D] [10V24F] [10V24P]					
	[inch]				[inch]	[inch]	[inch]	[inch]	[inch]
MS4N-EE-1/8	5,62	6,30 ¹⁾	5,51	5,71	2,32	3,94	0,34	1,46	1,02
MS4N-EE-1/4									

1) Measured with plug socket MSSD-EB (included in the scope of delivery).

Dimensions

Dimensions – Basic type with female thread, with cover plate, V24P Download CAD data www.festo.com



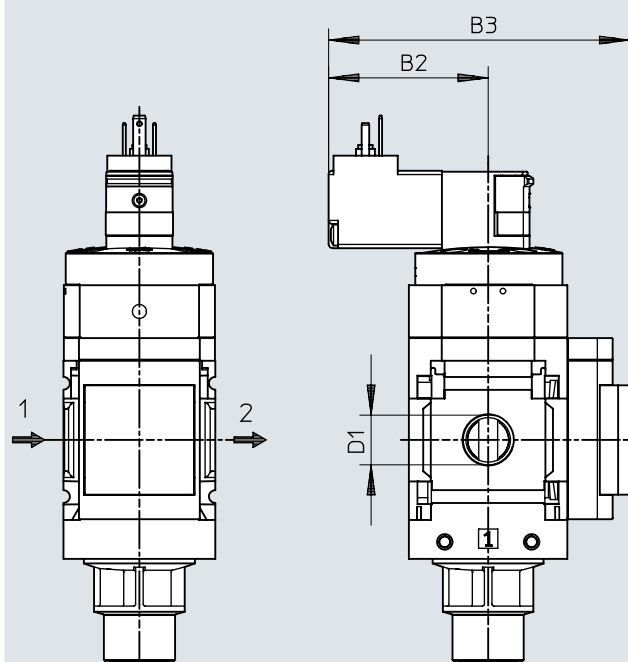
	B6 [inch]	B7 [inch]	D7	L1 [inch]	L7 [inch]
MS4N-EE-1/8	1,22	0,43	M12x1	6,30 ¹⁾	0,87 ¹⁾
MS4N-EE-1/4					

1) Measured with plug socket MSSD-EB (included in the scope of delivery).

Dimensions

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

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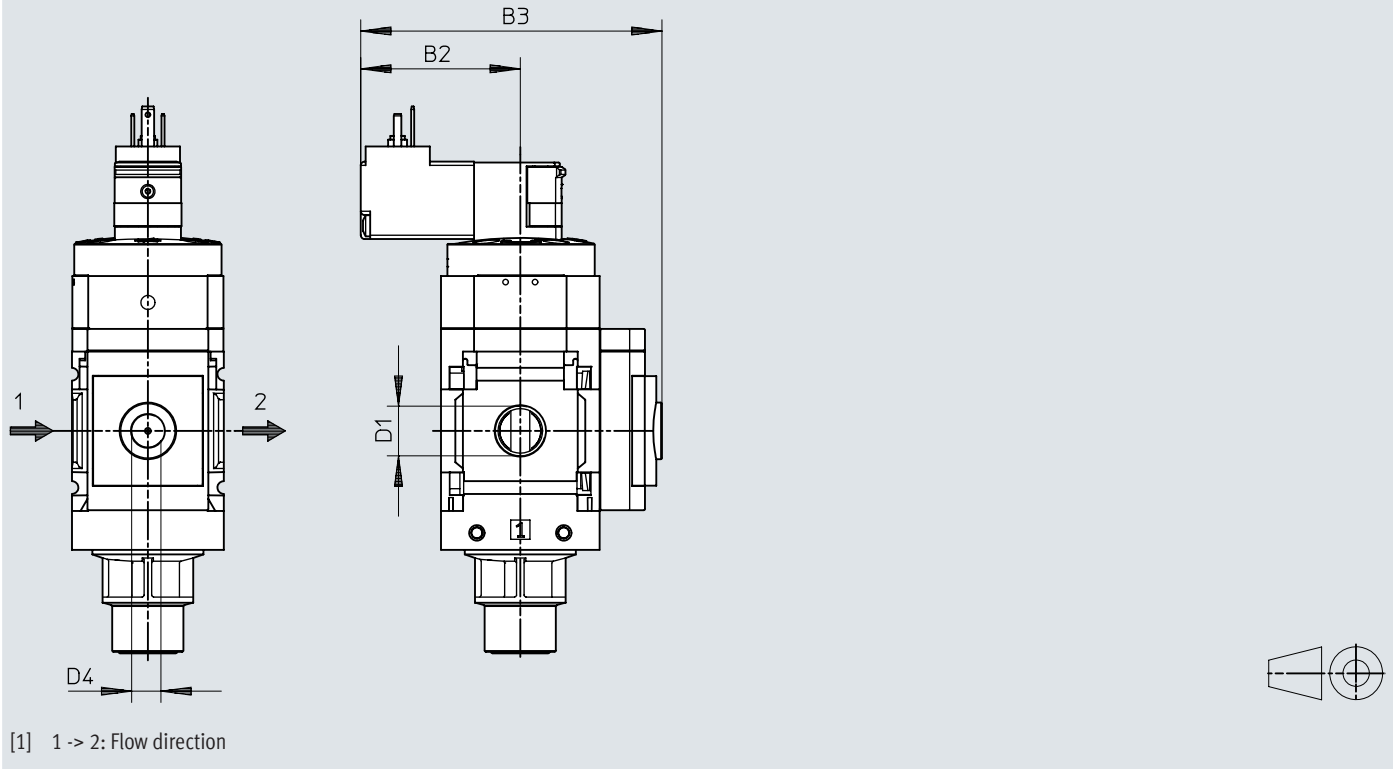
[1] 1 -> 2: Flow direction

	B2		B3		D1
	[V24] [V24P] [V110] [V230]	[10V24] [10V24C] [10V24D] [10V24F] [10V24P]	[V24] [V24P] [V110] [V230]	[10V24] [10V24C] [10V24D] [10V24F] [10V24P]	
	[inch]		[inch]		[inch]
MS4N-EE-1/8-...-AG	1,65	1,38	3,39	3,11	1/8 NPT
MS4N-EE-1/4-...-AG					1/4 NPT
MS4N-EE-1/8-...-RG	1,65	1,38	3,44	3,17	1/8 NPT
MS4N-EE-1/4-...-RG					1/4 NPT

Dimensions

Dimensions – Adapter for EN pressure gauge 1/8, without pressure gauge /
adapter for EN pressure gauge 1/4, without pressure gauge

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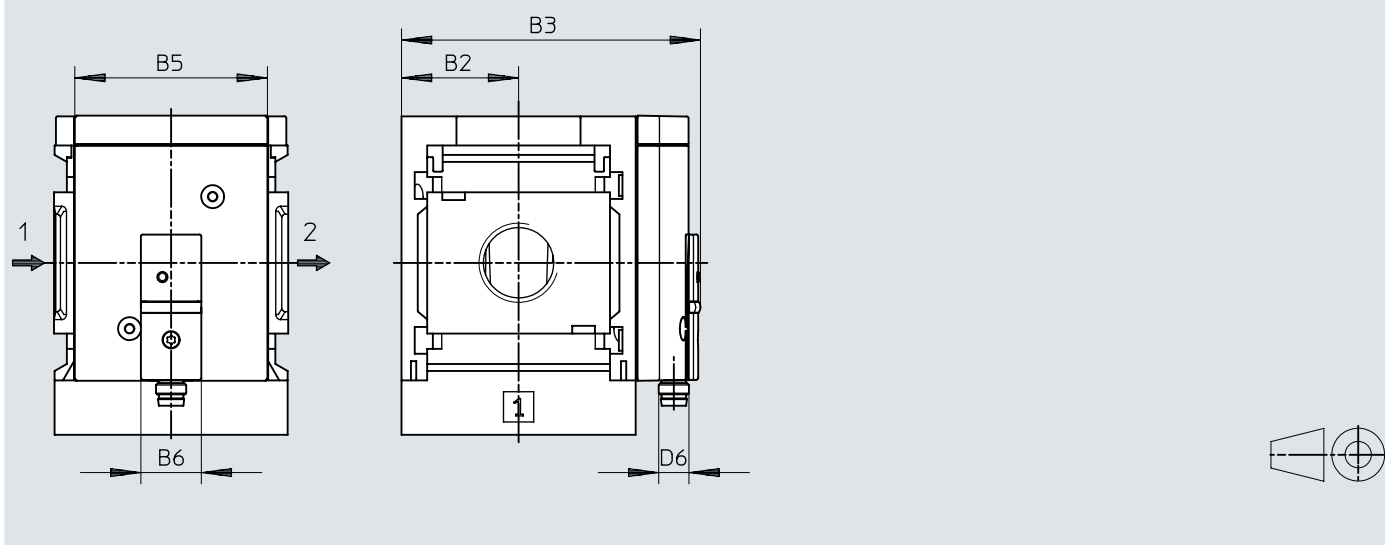


	B2		B3		D1	D4
	[V24] [V24P] [V110] [V230]	[10V24] [10V24C] [10V24D] [10V24F] [10V24P]	[V24] [V24P] [V110] [V230]	[10V24] [10V24C] [10V24D] [10V24F] [10V24P]		
	[inch]		[inch]			
MS4N-EE-1/8-...-A8	1,65	1,38	3,13	2,85	1/8 NPT	1/8 NPT
MS4N-EE-1/4-...-A8					1/4 NPT	
MS4N-EE-1/8-...-A4	1,65	1,38	3,13	2,85	1/8 NPT	1/4 NPT
MS4N-EE-1/4-...-A4					1/4 NPT	

Dimensions

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

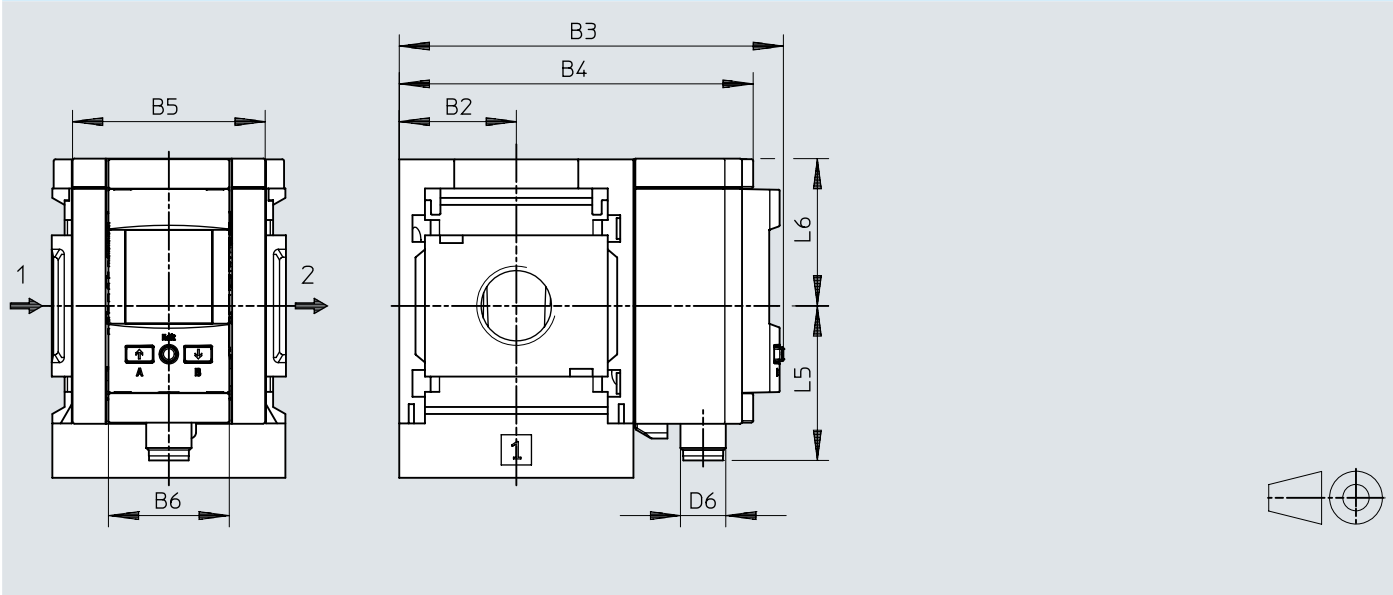
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	B2 [inch]	B3 [inch]	B5 [inch]	B6 [inch]	D6
MS4N-...-AD7, AD8, AD9, AD10	0,83	2,33	~1,26	0,63	M8x1

Dimensions

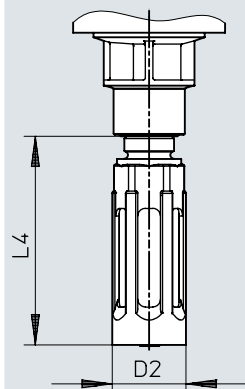
Dimensions – Pressure sensor with LCD display AD11, AD12 Download CAD data www.festo.com



	B2 [inch]	B3 [inch]	B4 [inch]	B5 [inch]	B6 [inch]	D6	L5 [inch]	L6 [inch]
MS4N-...-AD11	0,83	3,20	2,89	1,26	1,26	M12x1	1,62	1,53
MS4N-...-AD12						M8x1	1,49	

Dimensions

Dimensions – Silencer

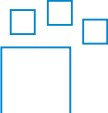
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	D2 [inch]	L4 [inch]
MS4N-EE-....S	0,79	2,17

Ordering data

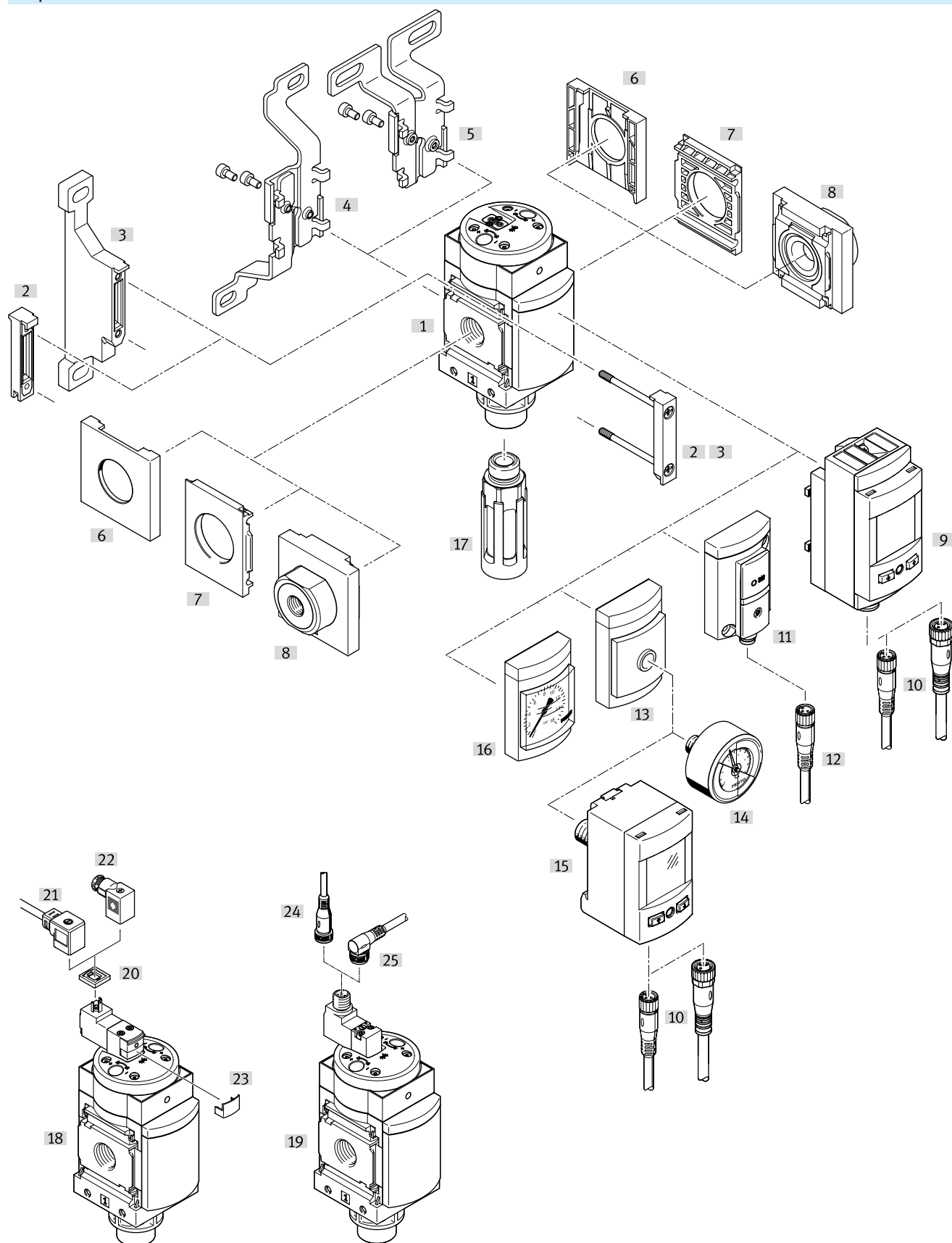
Ordering information - without muffler						
	Pneumatic connection 1	Nominal operating voltage	Flow direction	Product weight	Part no.	Type
	1/8 NPT	24 V DC	From right to left	273 g	542591	MS4N-EE-1/8-10V24-Z
		110 V AC/50-60 Hz	From left to right		542589	MS4N-EE-1/8-10V24
					532084	MS4N-EE-1/8-V110
	1/4 NPT	230 V AC/50-60 Hz			532088	MS4N-EE-1/8-V230
		24 V DC	From right to left		542588	MS4N-EE-1/4-10V24
		110 V AC/50-60 Hz	From left to right		542590	MS4N-EE-1/4-10V24-Z
					532083	MS4N-EE-1/4-V110
		230 V AC/50-60 Hz			532087	MS4N-EE-1/4-V230

Ordering information - with muffler						
	Pneumatic connection 1	Nominal operating voltage	Flow direction	Product weight	Part no.	Type
	1/8 NPT	24 V DC	From left to right	289 g	542610	MS4N-EE-1/8-10V24-S
		110 V AC/50-60 Hz	From right to left		542611	MS4N-EE-1/8-10V24-S-Z
			From left to right		538755	MS4N-EE-1/8-V110-S
	1/4 NPT	230 V AC/50-60 Hz			538757	MS4N-EE-1/8-V230-S
		24 V DC	From right to left		542609	MS4N-EE-1/4-10V24-S-Z
		110 V AC/50-60 Hz	From left to right		542608	MS4N-EE-1/4-10V24-S
					538749	MS4N-EE-1/4-V110-S
		230 V AC/50-60 Hz			538751	MS4N-EE-1/4-V230-S

Ordering data – modular product system			
	Type code	Part no.	Type
	MS4N-EE	527710	MS4N-EE

Peripherals overview

Peripherals overview

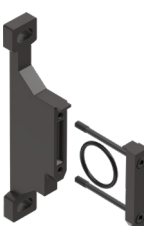


Peripherals overview

Accessories		→ Page/Internet
Type/order code	Description	
[1] On/off valve MS4N-EE	On/off valve	ms4n-ee
[2] Module connector MS4-MV1	For connection of the modules	15
[3] Mounting bracket MS4-WP	Order code [WP]	15
[3] Mounting bracket MS4-WPM	Order code [WPM] (not shown)	15
[4] Mounting bracket MS4-WB	Order code [WB]	15
[5] Mounting bracket MS4-WBM	Order code [WBM]	16
[6] Cover cap MS4-END	Can be used to cover the sides of the housing for the first and last modules if no sub-bases are used.	16
[7] Mounting plate MS4-AEND	Module connector MS4-MV1 [2] or mounting bracket MS4-WP, WPB, WPE, WPM [3] is required for mounting.	16
[8] Sub-base SET MS4-AQ...	Order code [AQ...]	16
[9] Pressure sensor with LCD display SPAU	• Display module • Order code [AD11], [AD12]	ms4n-ee
[10] Connecting cable NEBA-M...G...-LE4, angled	Connecting cable for display module	17
[10] Connecting cable NEBA-M...G...-LE4, straight	Connecting cable for display module	17
[11] Pressure sensor with switching indication SDE5	• Display module • Order code [AD7], [AD8], [AD9], [AD10]	ms4n-ee
[12] Connecting cable NEBA-M...G...-LE3, straight	Connecting cable for display module	17
[13] Adapter for EN pressure gauge 1/8, 1/4	Order code [A8], [A4]	ms4n-ee
[14] Pressure gauge MA	Built-in pressure indicator	16
[15] Pressure sensor SPAU-...-T	Display module	17
[16] Pressure gauge MS	Order code [AG], [RG]	ms4n-ee
[17] Muffler U	-	18
[17] Muffler S	Order code [S]	ms4n-ee
[18] On/off valve MS4-EE	Supply voltage [V24], [V24P], [10V24], [10V24C], [V110], [V230]	ms4n-ee
[19] On/off valve MS4-EE	Supply voltage [10V24D], [10V24F], [10V24P]	ms4n-ee
[20] Illuminating seal MEB-LD	Sensing status indication	17
[21] Plug socket with cable KMEB	Connecting cable for valve coil	18
[22] Plug socket MSSD-EB	Terminal box for valve coil	18
[23] Locking clip CPV18-HV	Prevents the manual override from being activated	18
[24] Connecting cable NEBA-M12G5-LE4, straight	Connecting cable for valve coil	17
[25] Connecting cable NEBA-M12W5-LE4, angled	Connecting cable for valve coil	17

Accessories

Module connector MS4-MV1						
	Size	Module connector material	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	POM, High-alloy stainless steel	VDMA24364-B1/B2-L	13 g	8119201	MS4-MV1

Mounting bracket MS4-WP...						
	Size	Bracket material	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	Die-cast aluminum	VDMA24364-B1/B2-L	39 g	532184	MS4-WP

Mounting bracket MS4-WPM						
	Size	Module connector material	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	POM, Steel	VDMA24364-B1/B2-L	45 g	526060	MS4-WPM-D

Mounting bracket MS4-WB						
	Size	Bracket material	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	Steel	VDMA24364-B1/B2-L	46 g	532185	MS4-WB

Accessories

Mounting bracket MS4-WBM

	Size	Bracket material	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	Steel	VDMA24364-B1/B2-L	48 g	526062	MS4-WBM

Cover cap MS4-END

	Size	Housing material	Part no.	Type
	4	PA-reinforced	538779	MS4-END

Mounting plate MS4-AEND

	Size	Product weight	Part no.	Type
	4	4 g	542966	MS4-AEND

Sub-base SET MS4-AQ...

	Size	Pneumatic connection 1	Product weight	Part no.	Type
	4	1/8 NPT	128 g	526065	MS4N-AQK
		1/4 NPT		526066	MS4N-AQN
		3/8 NPT		526067	MS4N-AQP

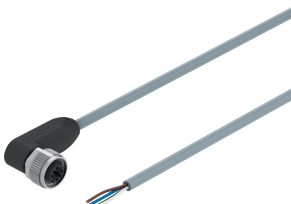
Pressure gauge MA

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

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	M12x1 A-coded as per EN 61076-2-101	70 g	8001206	SPAU-P10R-T-R18M-L-PNLK-PNVBA-M12D
			M8x1 A-coded as per EN 61076-2-104		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						
	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						
	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

Illuminating seal MEB-LD					
	DC operating voltage range	Nominal operating voltage AC	Product weight	Part no.	Type
		230 V	0.6 g	151718	MEB-LD-230AC
	12 ... 24 V			151717	MEB-LD-12-24DC

Accessories

Plug socket with cable KMEB 230V AC					
	Nominal operating voltage AC	Cable length	Product weight	Part no.	Type
	230 V	2.5 m	125 g	151690	KMEB-1-230AC-2.5
		5 m	230 g	151691	KMEB-1-230AC-5

Plug socket with cable KMEB 24 VDC					
	Nominal operating voltage DC	Cable length	Product weight	Part no.	Type
	24 V	2.5 m	120 g	547268	KMEB-3-24-2.5-LED
				547270	KMEB-3-24-2.5
			125 g	151688	KMEB-1-24-2.5-LED
	5 m	230 g		547271	KMEB-3-24-5
				151689	KMEB-1-24-5-LED
				547269	KMEB-3-24-5-LED

Plug socket MSSD-EB					
	Electrical connection	Cable fitting	Product weight	Part no.	Type
		Pg7	11 g	539712	MSSD-EB-M12
	3-pin, Socket, Socket, angled, Form C, as per DIN EN 175301-803, as per DIN EN 61984, Rectangular design MSEB, Rectangular design MSN2			151687	MSSD-EB

Muffler U						
	Pneumatic connection	Noise level	Flow rate with respect to atmosphere	Product weight	Part no.	Type
	G1/4	80 dB(A)	2,440 l/min	17 g	6842	U-1/4-B

Locking clip CPV18-HV					
	Type code	LABS (PWIS) conformity	Product weight	Part no.	Type
	CPV18	VDMA24364-B1/B2-L	0.53 g	530056	CPV18-HV