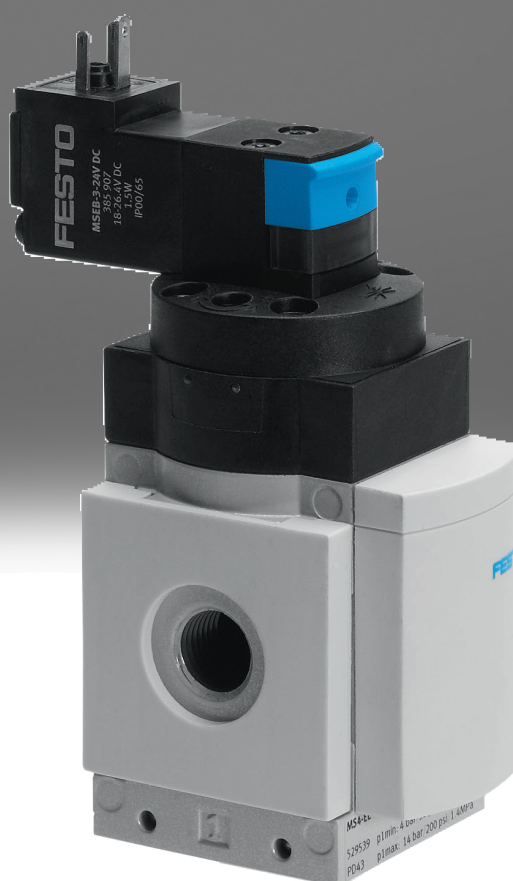


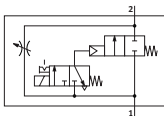
Soft-start valve MS4N-DE

FESTO



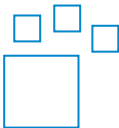
Characteristics

At a glance



- The duration of the pressure build-up is set via the flow control attached to the valve cap. According to the set flow control position, the output pressure p2 increases slowly. As long as the solenoid valve is not actuated, only the flow rate of the flow control is available. The main seat is not opened until the solenoid valve is energized.
- When the solenoid valve is switched off, the main seat is closed and only the flow rate of the flow control is available. For exhausting a system, the solenoid valve should remain switched on, this increases the volumetric flow rate from 2 to 1 and shortens the exhaust time.
- The actuators move slowly and safely to the initial position
- Sudden and unpredictable movements are avoided
- Adjustable switch-through time delay
- Solenoid actuator can be repositioned 180°
- Optional pressure sensor

Ordering data - modular system Link [ms4n_de](#)



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

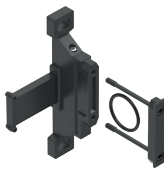
Type of mounting

[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

[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

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



For wall mounting

[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	
DE	Soft-start 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	
10V24P	24 V DC, 10 bar, M12 (connection pattern to IEC 61076-2-101)	
V24	24 V DC (connection arrangement to EN 175301)	
V110	110 V AC (connection arrangement in accordance with EN 175301)	
V230	230 V AC (connection arrangement in accordance with EN 175301)	

007	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	
AG	MS pressure gauge	
RG	Integrated pressure gauge, red/green scale	

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

009	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	

010	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	Positive overlap	
Type of mounting	Alternatively: In-line installation With accessories	
Mounting position ²⁾	Any	
Valve function	3/2-way, closed, monostable	
Exhaust air function	Cannot be throttled	
Manual override	Detenting, Non-detenting	
Actuation type	Electrical	
Reset method	Mechanical spring	
Type of control	Piloted	
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	
Coil characteristics	24 V DC: 1.8 W	
Electrical connection	Type 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	4.6 l/sbar	9.6 l/sbar
b-value	0.5	0.45

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 [10V24]	
Operating pressure	4 ... 10 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	
Temperature of medium	-10 ... 50°C	
Corrosion resistance class (CRC) ¹⁾	2 - Moderate corrosion stress	
For use in the food industry ²⁾	See supplementary material information	

1) More information at www.festo.com/x/topic/kbk

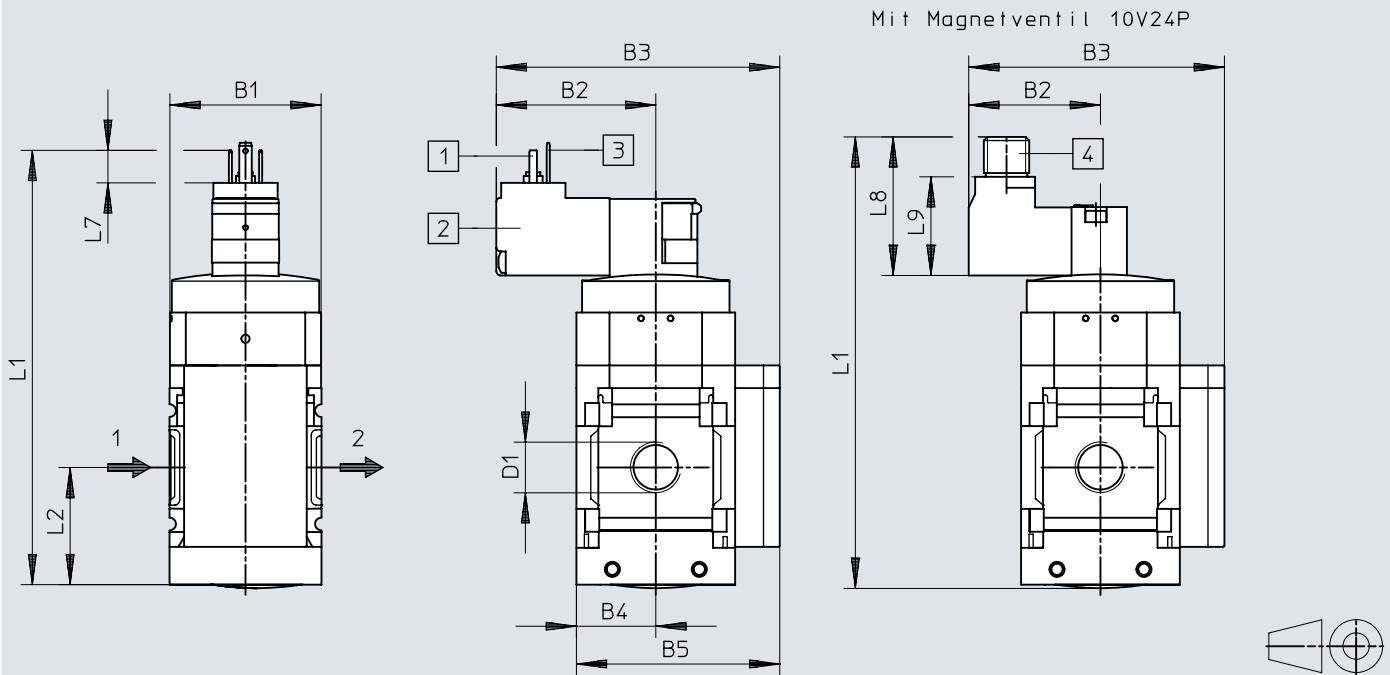
2) For more information, visit www.festo.com/certificates/M4n-de

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 internal thread, with cover plate

[Download CAD data](#) www.festo.com


- [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

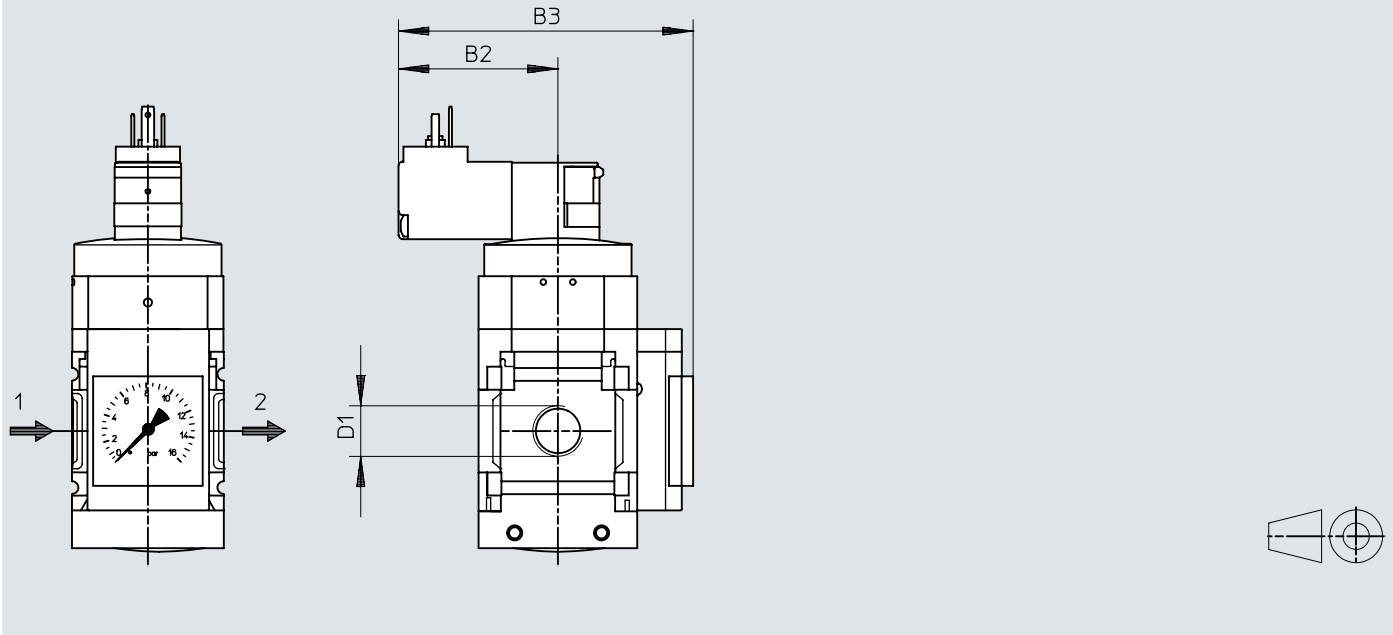
	B1	B2		B3		B4	B5	D1
		[V24] [V110] [V230]	[10V24] [10V24P]	[V24] [V110] [V230]	[10V24] [10V24P]			
	[inch]	[inch]		[inch]		[inch]	[inch]	
MS4N-DE-1/8	1,57	1,66	1,37	2,96	2,67	0,83	2,13	1/8 NPT
MS4N-DE-1/4								1/4 NPT

	L1			L2	L7	L8	L9
	[V24] [V110] [V230]	[10V24]	[10V24P]				
	[inch]			[inch]	[inch]	[inch]	[inch]
MS4N-DE-1/8	4,54	4,44	4,64	1,24	0,34	1,44	1,03
MS4N-DE-1/4							

Dimensions

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

Download CAD data www.festo.com

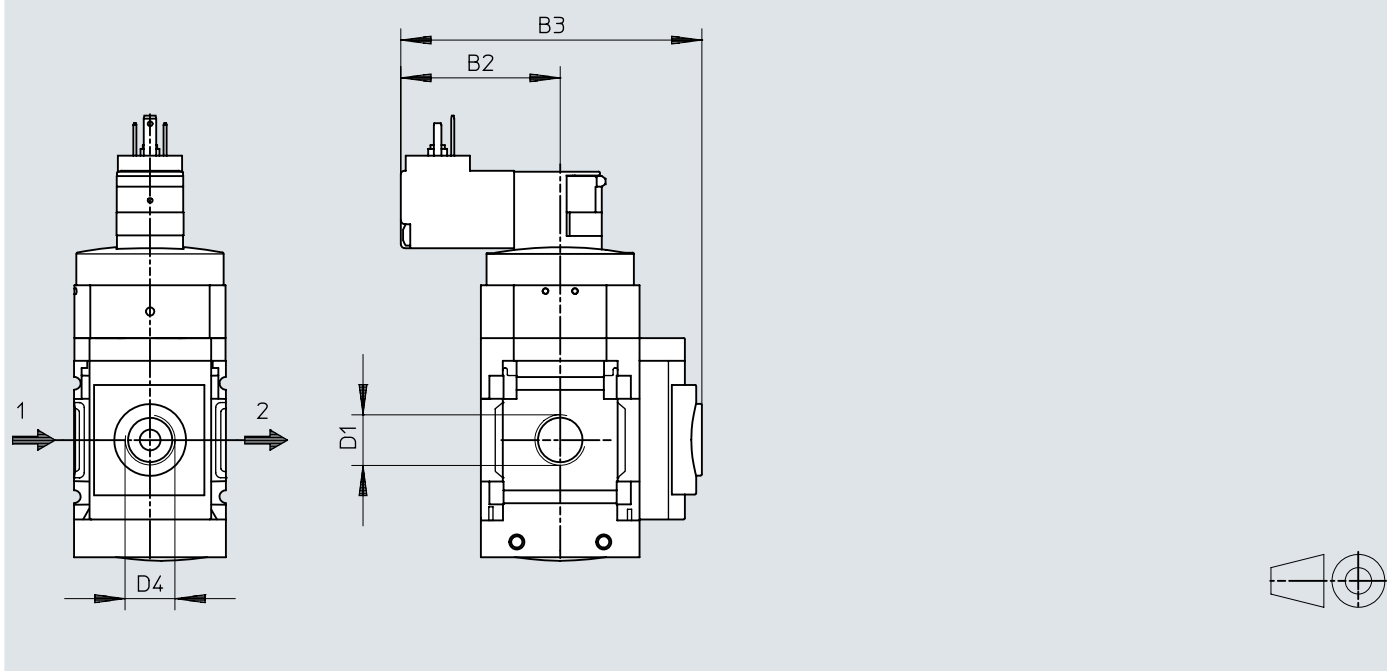


	B2		B3		D1
	[V24] [V110] [V230]	[10V24] [10V24P]	[V24] [V110] [V230]	[10V24] [10V24P]	
	[inch]		[inch]		[inch]
MS4N-DE-1/8-...-AG	1,66	1,37	3,08	2,79	1/8 NPT
MS4N-DE-1/4-...-AG					1/4 NPT
MS4N-DE-1/8-...-RG	1,66	1,37	3,14	2,85	1/8 NPT
MS4N-DE-1/4-...-RG					1/4 NPT

Dimensions

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

Download CAD data www.festo.com

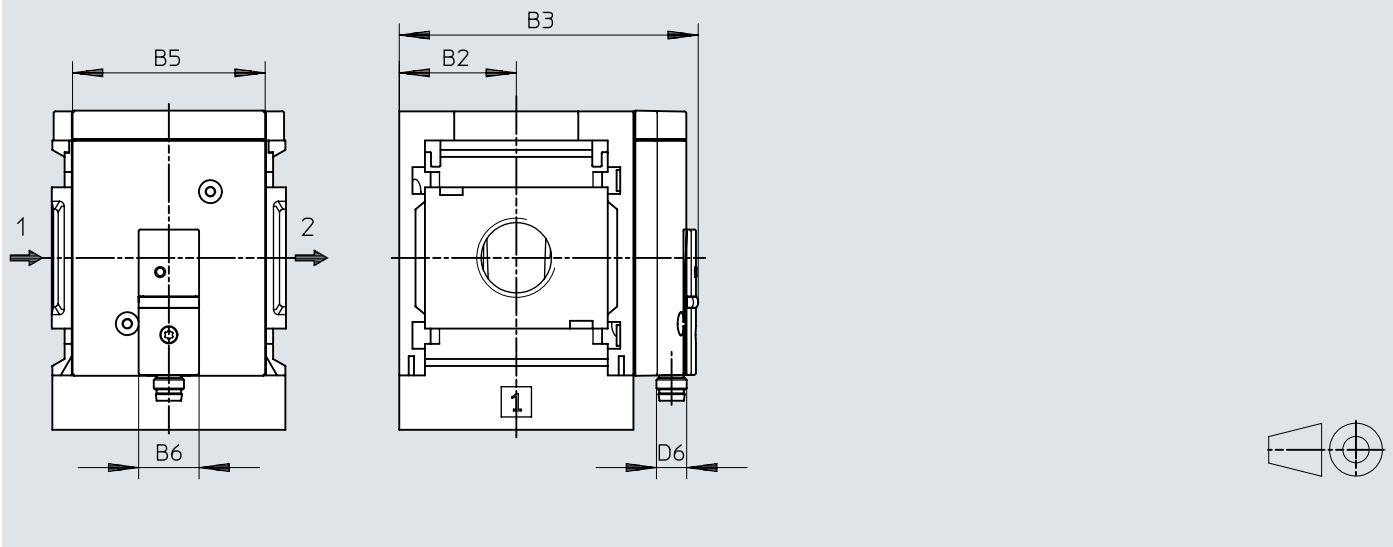


	B2		B3		D1	D4
	[V24] [V110] [V230]	[10V24] [10V24P]	[V24] [V110] [V230]	[10V24] [10V24P]		
	[inch]		[inch]			
MS4N-DE-1/8-...-A8	1,66	1,37	3,14	2,85	1/8 NPT	1/8 NPT
MS4N-DE-1/4-...-A8					1/4 NPT	
MS4N-DE-1/8-...-A4	1,66	1,37	3,14	2,85	1/8 NPT	1/4 NPT
MS4N-DE-1/4-...-A4					1/4 NPT	

Dimensions

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

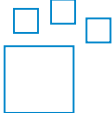
Download CAD data www.festo.com



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

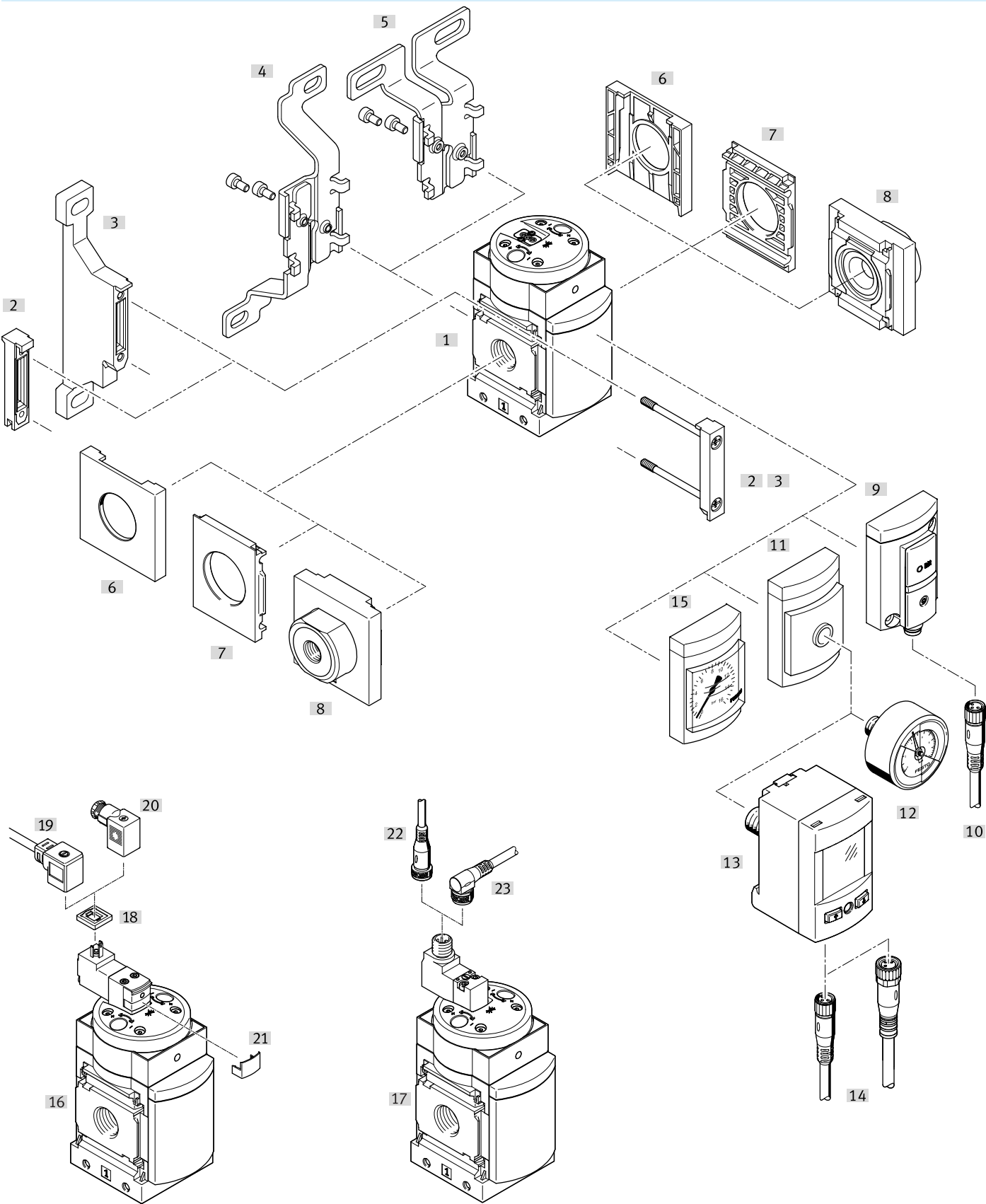
Ordering data

Ordering data						
	Pneumatic connection 1	Nominal operating voltage	Flow direction	Product weight	Part no.	Type
	1/8 NPT	24 V DC	From right to left	263 g	542571	MS4N-DE-1/8-10V24-Z
	1/4 NPT		From left to right		542569	MS4N-DE-1/8-10V24
			From right to left		542568	MS4N-DE-1/4-10V24
					542570	MS4N-DE-1/4-10V24-Z

Ordering information – Modular product system			
	Type code	Part no.	Type
	MS4N-DE	527714	MS4N-DE

Peripherals overview

Peripherals overview



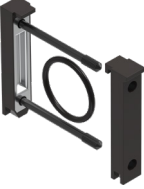
Accessories		→ Page/Internet
Type/order code	Description	
[1] On/off valve MS4-EE		ms4n-de

Peripherals overview

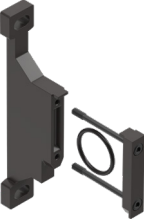
Accessories		→ Page/Internet
Type/order code	Description	
[2] Module connector MS4-MV1		12
[3] Mounting bracket MS4-WP	Order code [WP]	12
[3] Mounting bracket MS4-WPM	Order code [WPM] (not shown)	12
[4] Mounting bracket MS4-WB	Order code [WB]	12
[5] Mounting bracket MS4-WBM	Order code [WBM]	13
[6] Cover cap MS4-END		13
[7] Mounting plate MS4-AEND	Module connector MS4-MV1 [2] or mounting bracket MS4-WP, WPB, WPE, WPM [3] is required for mounting.	13
[8] Sub-base-SET MS4-AQ...	Order code [AQ...]	13
[9] Pressure sensor with switching indication SDE5	Order code [AD7], [AD8], [AD9], [AD10]	ms4n-de
[10] Connecting cable NEBU-M8...-LE3		14
[11] Adapter for EN pressure gauge 1/8, 1/4	Order code [A8], [A4]	ms4n-de
[12] Pressure gauge MA		13
[13] Pressure sensor SPAU-...-T		14
[14] Connecting cable NEBU-M8...-LE3		14
[14] Connecting cable NEBU-M8...-LE3		14
[15] Pressure gauge MS	Order code [AG], [RG]	ms4n-de
[16] On/off valve MS4-EE	Supply voltage [V24], [V24P], [10V24], [10V24C], [V110], [V230]	ms4n-de
[17] On/off valve MS4-EE	Supply voltage [10V24D], [10V24F], [10V24P]	ms4n-de
[18] Illuminating seal MEB-LD		14
[19] Plug socket with cable KMEB		15
[20] Plug socket MSSD-EB	For MS...-V24P and MS...-V24-...-EX2 on/off valves, the plug socket is included in the scope of delivery.	15
[21] Locking clip CPV18-HV		15
[22] Connecting cable NEBU-M12G5		14
[23] Connecting cable NEBU-M12W5		14

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-AG...					
	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

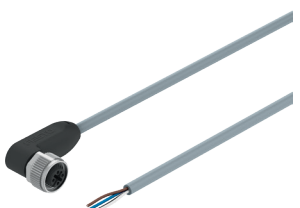
Accessories

	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

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 M8W4, 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 230 VAC					
	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
		5 m	125 g	151688	KMEB-1-24-2.5-LED
			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
	3-pin, Socket, Angled socket, Type C, As per DIN EN 175301-803, As per DIN EN 61984, Rectangular design MSEB, Rectangular design MSN2	Pg7	11 g	539712	MSSD-EB-M12
				151687	MSSD-EB

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