

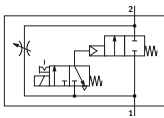
Soft-start valve MS6N-DE

FESTO



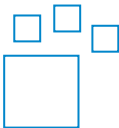
Characteristics

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 [ms6n_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

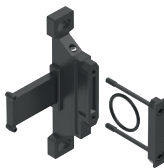
Type of mounting

[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

Type code

001	Series	
MS	MS series	
002	Size	
6	Width dimension 62 mm	
003	Thread type	
N	NPT thread	
004	Function	
DE	Soft-start valve, electric	
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	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	
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	
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⁾	1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 2	1/4 NPT	3/8 NPT	1/2 NPT
Structural design	Piston seat		
Type of mounting	Alternatively: In-line installation With accessories		
Mounting position ²⁾	Any		
Valve function	2/2		
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...]: 1/4 NPT, 3/8 NPT, 1/2 NPT or 3/4 NPT

2) The on/off valve must in a vertical mounting position when combined with a pressure sensor as condensate should not collect in the pressure sensor.

Electrical data

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	1/4 NPT	3/8 NPT	1/2 NPT
Normal nominal flow rate (normalized to DIN 1343) ¹⁾	2,700 l/min	5,050 l/min	6,450 l/min
C value	11.22 l/sbar	21.05 l/sbar	28.97 l/sbar
b-value	0.54	0.48	0.39

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

Operating and environmental conditions

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/M6n-de

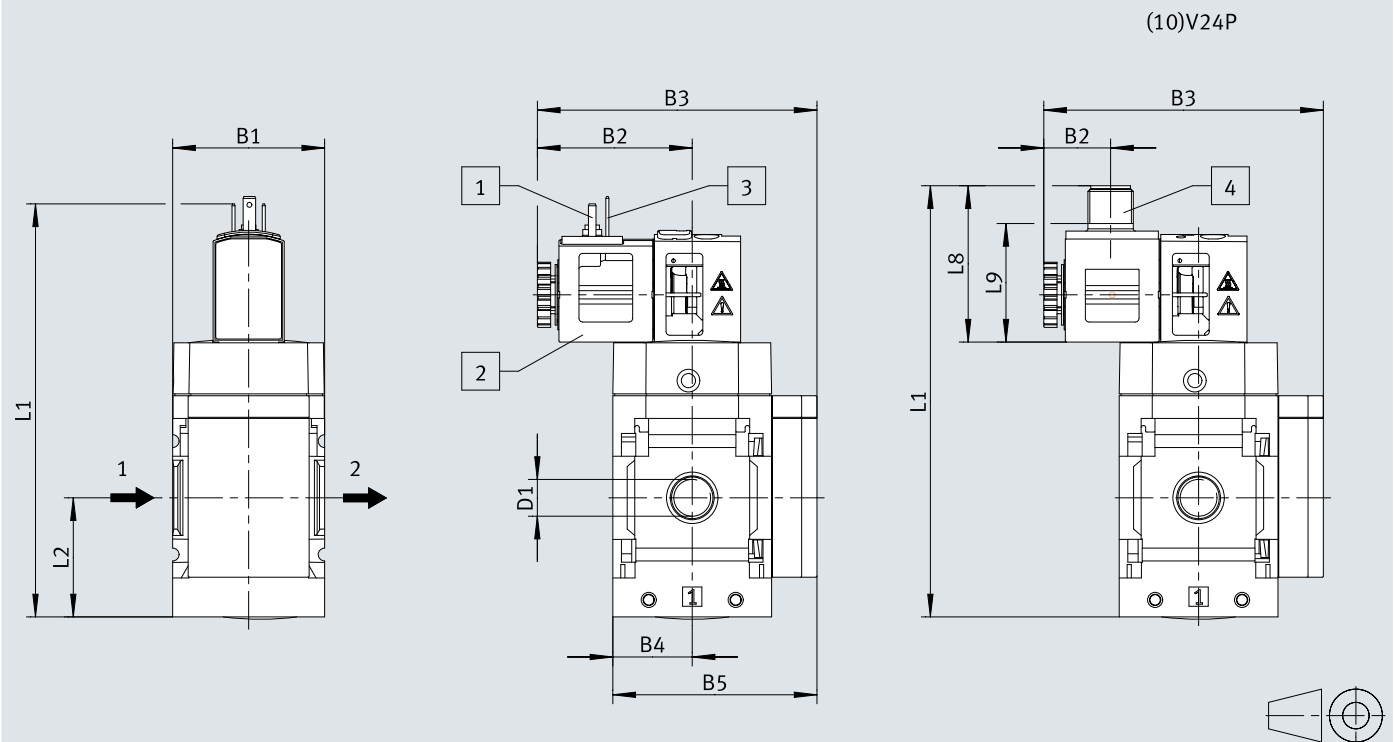
Materials

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

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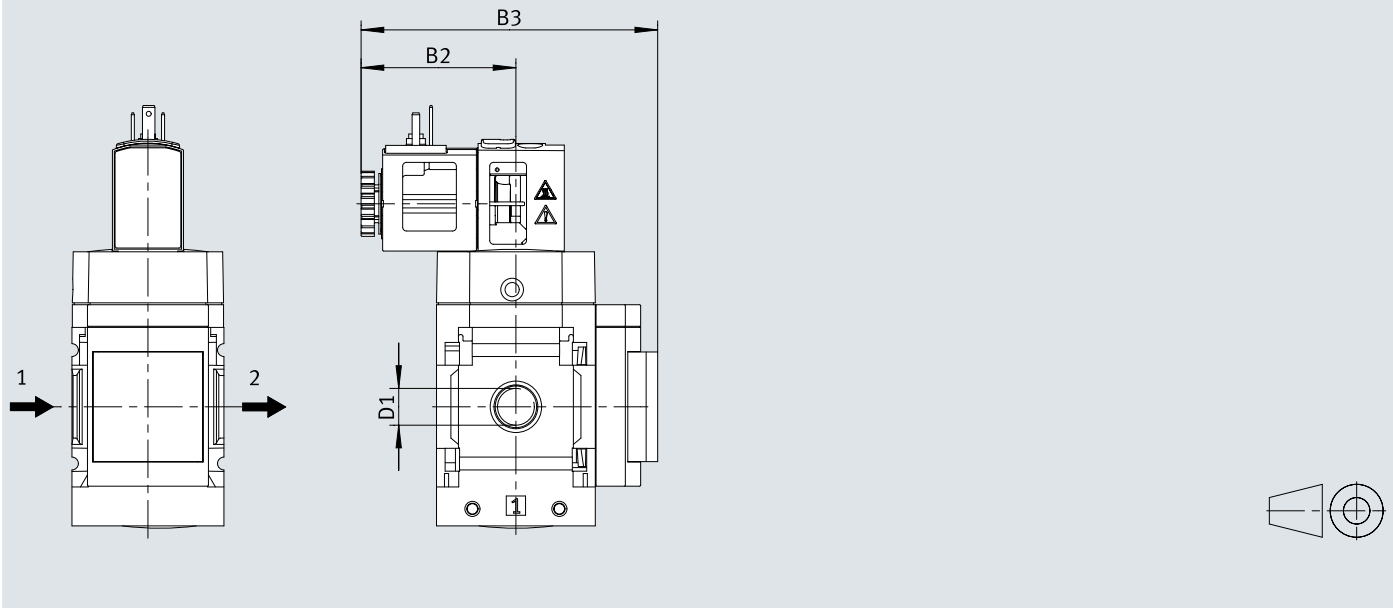
- [1] Plug connection according to EN 175301-803
 [2] Solenoid actuator can be repositioned 180°, i.e. solenoid faces forward
 [3] PIN only for solenoid actuators 110 V and 230 V
 [4] Electrical connection M12x1 according to ISO 20401 suitable to EN 61076-2-101, 4-pole version for connecting cable NEBU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

	B1	B2	B3	B4	B5	D1	L1	
							[V24], [V110], [V230], [10V24]	[10V24P]
	[inch]	[inch]	[inch]	[inch]	[inch]		[inch]	
MS6N-EE-1/4	2,44	~1,37	~3,14	1,22	2,99	1/4 NPT	5,63	5,81
MS6N-EE-3/8						3/8 NPT		
MS6N-EE-1/2						1/2 NPT		

	L2	L8		L9	
		[V24], [V110], [V230], [10V24]	[10V24P]	[V24], [V110], [V230], [10V24]	[10V24P]
	[inch]	[inch]		[inch]	
MS6N-EE-1/4	1,86	~1,45	~1,64	–	1,24
MS6N-EE-3/8					
MS6N-EE-1/2					

Dimensions

Dimensions – Integrated MS pressure gauge with standard scale/with red-green scale Download CAD data www.festo.com

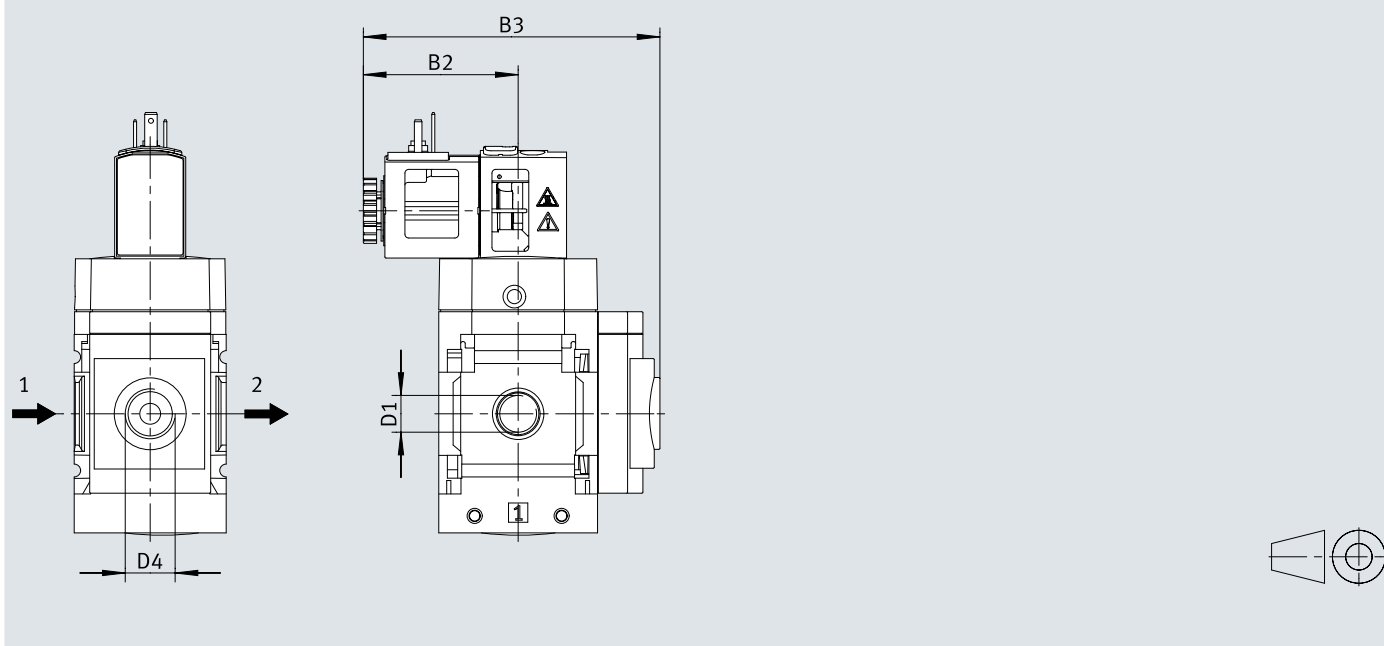


	B2 [inch]	B3 [inch]	D1
MS6N-EE-1/4-...-AG	~1,37	3,18	1/4 NPT
MS6N-EE-3/8-...-AG			3/8 NPT
MS6N-EE-1/2-...-AG			1/2 NPT
MS6N-EE-1/4-...-RG		3,25	1/4 NPT
MS6N-EE-3/8-...-RG			3/8 NPT
MS6N-EE-1/2-...-RG			1/2 NPT

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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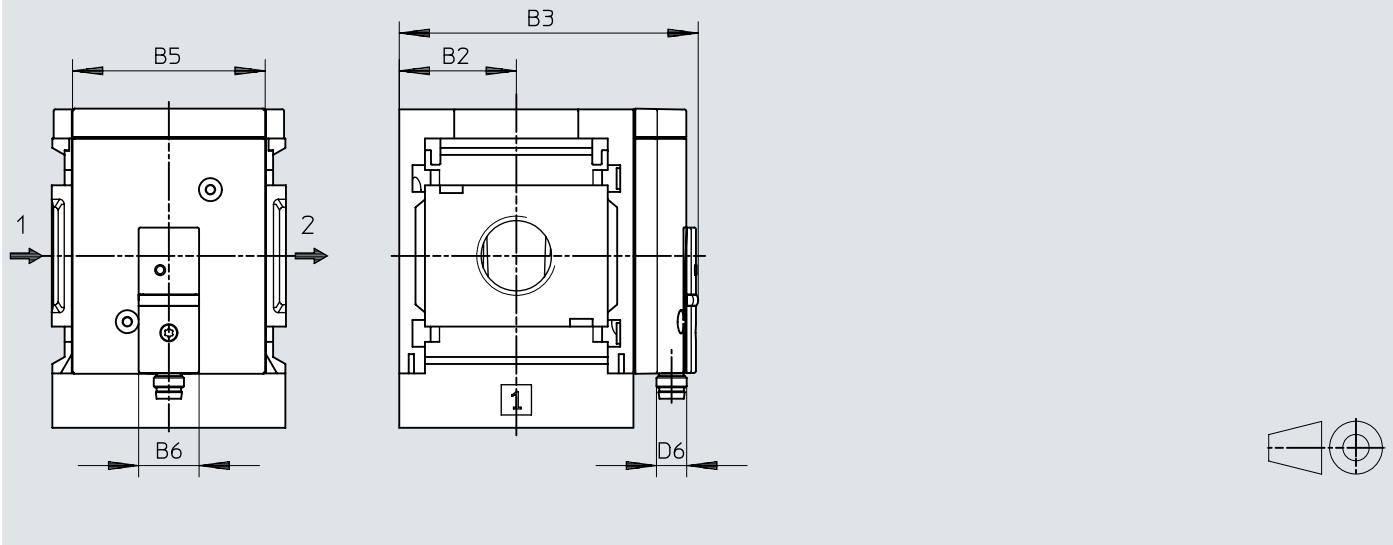


	B2 [inch]	B3 [inch]	D1	D4
MS4N-EE-1/8-...-A8	1,61	3,09	1/8 NPT	G1/4
MS4N-EE-1/4-...-A8			1/4 NPT	
MS4N-EE-1/8-...-A4			1/8 NPT	G1/8
MS4N-EE-1/4-...-A4			1/4 NPT	

Dimensions

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

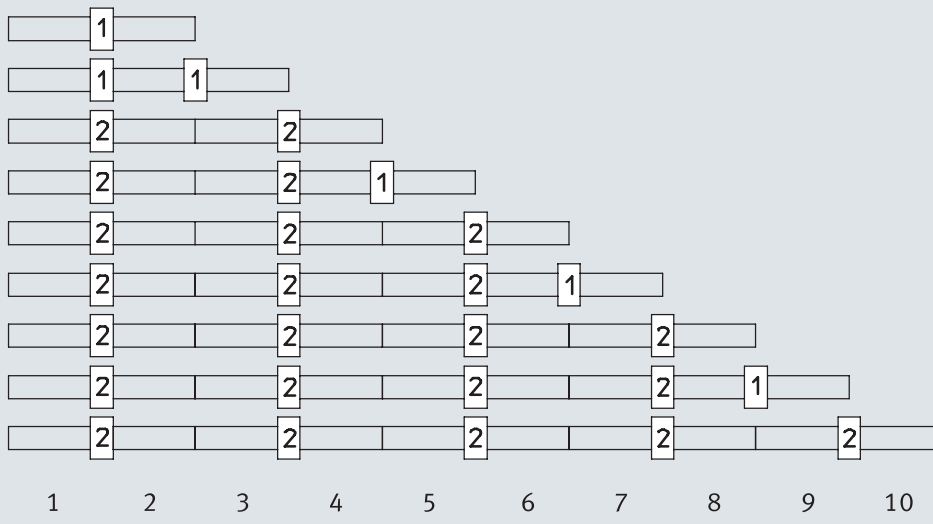
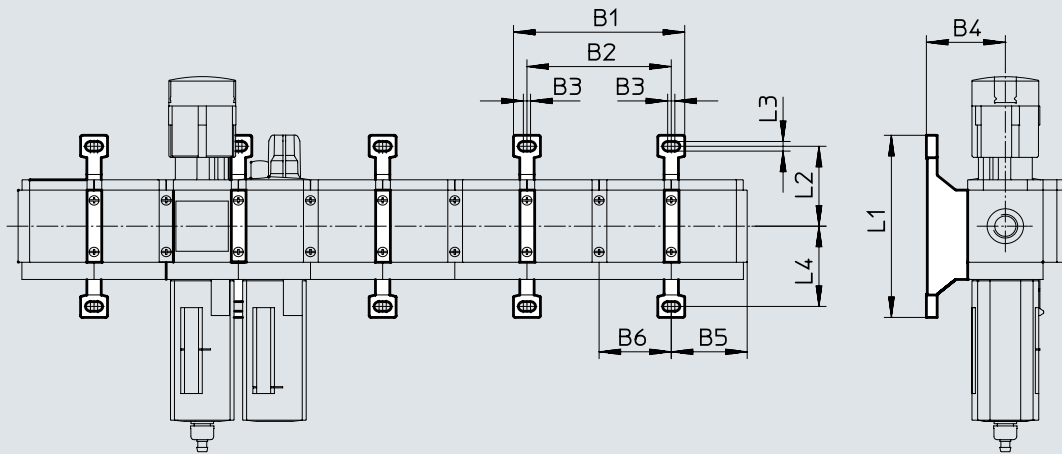
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	B2 [inch]	B3 [inch]	B5 [inch]	B6 [inch]	D6
MS6N-...-AD7, AD8, AD9, AD10	1,22	3,11	~2,01	0,63	M8x1

Dimensions

Dimensions –

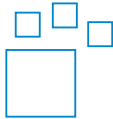
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- [1] Mounting bracket WP, WPB, WPE, or WPM-D
 [2] Mounting bracket WP, WPB, WPE, or WPM-2D
 [3] Number of devices

	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

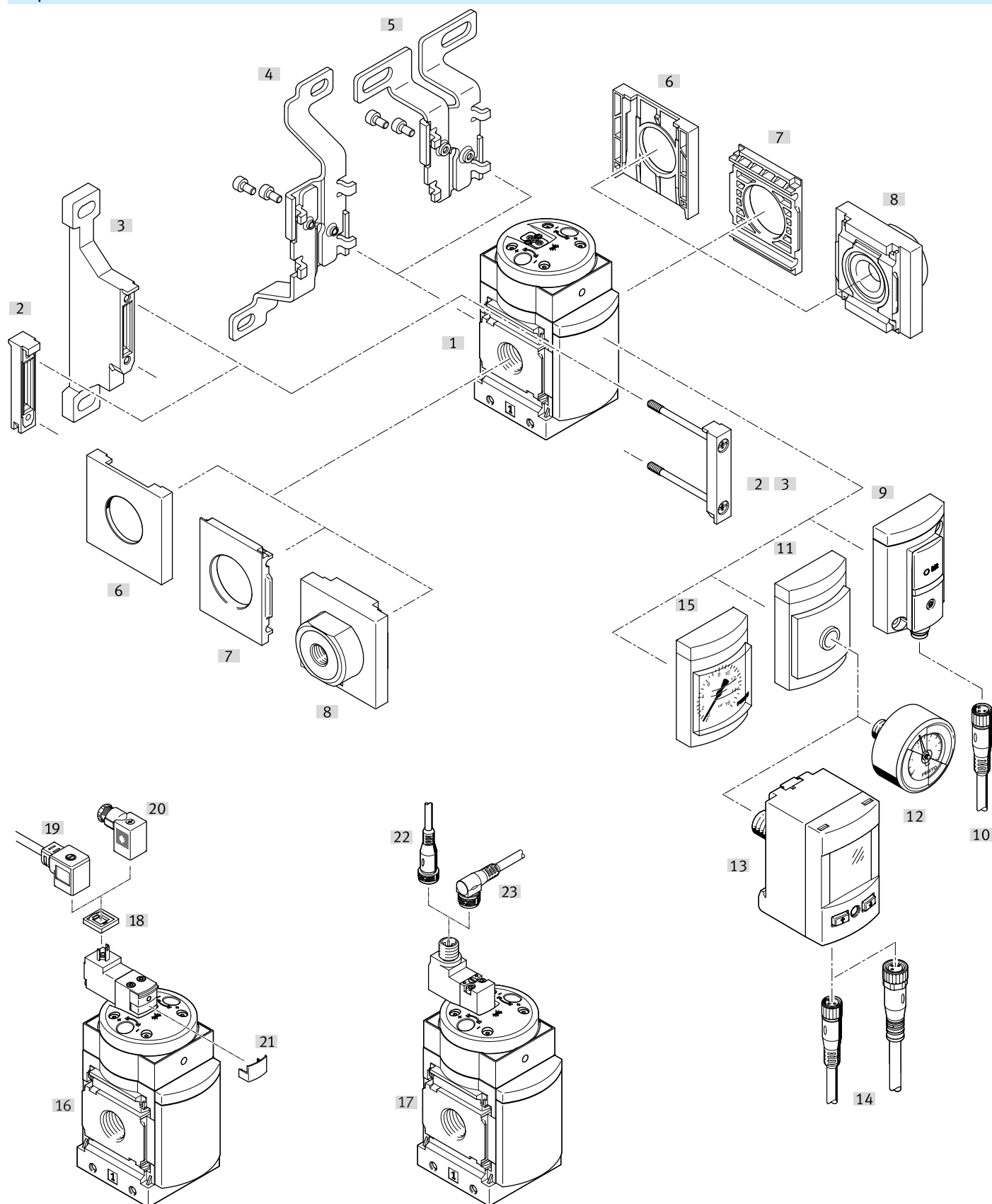
Ordering data

Ordering data							
	Pneumatic connection 1	Nominal operating voltage	Flow direction	Product weight	Part no.	Type	
	1/4 NPT	24 V DC	From left to right	680 g	542572	MS6N-DE-1/4-10V24	
	3/8 NPT					542574	MS6N-DE-3/8-10V24
					From right to left		542577
	1/2 NPT		From left to right			542573	MS6N-DE-1/2-10V24
			From right to left			542576	MS6N-DE-1/2-10V24-Z

Ordering information – Modular product system			
	Type code	Part no.	Type
	MS6N-DE	527687	MS6N-DE

Peripherals overview

Peripherals overview



Accessories

Type/order code	Description	→ Page/Internet
[1] On/off valve MS6N-EE	On/off valve	ms6n-de

Peripherals overview

Accessories		→ Page/Internet
Type/order code	Description	
[2] Module connector MS6-MV1	For connection of the modules	13
[3] Mounting bracket MS6-WP	Order code [WP]	13
[3] Mounting bracket MS6-WPM	Order code [WPM] (not shown)	13
[4] Mounting bracket MS4-WB	Order code [WB]	
[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.	14
[7] Mounting plate MS6-AEND	Module connector MS4-MV1 [2] or mounting bracket MS4-WP, WPB, WPE, WPM [3] is required for mounting.	14
[8] Sub-base SET MS6-AQ...	Order code [AQ...]	14
[9] Pressure sensor with switching indication SDE5	• Display module • Order code [AD7], [AD8], [AD9], [AD10]	↗ ms6n-de
[10] Connecting cable NEBA-M...G...-LE3, straight	Connecting cable for display module	15
[11] Adapter for EN pressure gauge 1/8, 1/4	Order code [A8], [A4]	↗ ms6n-de
[12] Pressure gauge MA	Built-in pressure indicator	14
[13] Pressure sensor SPAU-...-T	Display module	15
[14] Connecting cable NEBA-M...G...-LE4, straight	Connecting cable for display module	15
[14] Connecting cable NEBA-M...G...-LE4, angled	Connecting cable for display module	15
[15] Pressure gauge MS	Order code [AG], [RG]	↗ ms6n-de
[16] On/off valve MS6-EE	Supply voltage [V24], [V24P], [10V24], [10V24C], [V110], [V230]	↗ ms6n-de
[17] On/off valve MS6-EE	Supply voltage [10V24D], [10V24F], [10V24P]	↗ ms6n-de
[18] Illuminating seal MEB-LD	Sensing status indication	15
[19] Plug socket with cable KMEB	Connecting cable for valve coil	16
[20] Plug socket MSSD-EB	Terminal box for valve coil	16
[21] Locking clip CPV18-HV	Prevents the manual override from being activated	16
[22] Connecting cable NEBA-M12G5-LE4, straight	Connecting cable for valve coil	15
[23] Connecting cable NEBA-M12W5-LE4, angled	Connecting cable for valve coil	15

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

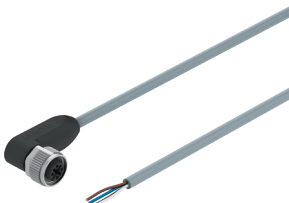
Pressure gauge MA						
	Pneumatic connection	Display range	Display range	Product weight	Part no.	Type
	R1/8	0 ... 232 psi	0 ... 16 bar	60 g	525726	MA-40-16-R1/8-E-RG
	R1/4			75 g	525729	MA-50-16-R1/4-E-RG
				70 g	187080	MA-40-16-R1/4-EN

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						
	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						
	Electrical connection	DC operating voltage range	Nominal operating voltage AC	Product weight	Part no.	Type
	Type C, As per DIN EN 175301-803, Rectangular design MSEB	12 ... 24 V	230 V	0.6 g	151718	MEB-LD-230AC
					151717	MEB-LD-12-24DC

Accessories

Plug socket with cable KMEB 230V AC

	Nominal operating voltage AC	Electrical connection 1	Electrical connection 1, number of pins/wires	Cable length	Part no.	Type
	230 V	Socket, as per EN 175301-803, form C	3	2.5 m	151690	KMEB-1-230AC-2.5
				5 m	151691	KMEB-1-230AC-5

Plug socket with cable KMEB 24 VDC

	Nominal operating voltage DC	Electrical connection 1	Electrical connection 1, number of pins/wires	Cable length	Part no.	Type
	24 V	Socket, as per EN 175301-803, form C	2	2.5 m	547268	KMEB-3-24-2.5-LED
					547270	KMEB-3-24-2.5
				5 m	547271	KMEB-3-24-5
			3		547269	KMEB-3-24-5-LED
				2.5 m	151688	KMEB-1-24-2.5-LED
				5 m	151689	KMEB-1-24-5-LED

Plug socket MSSD-EB

	Electrical connection	Degree of protection	Product weight	Part no.	Type
		IP67	11 g	539712	MSSD-EB-M12
	3-pin, Socket, Angled socket, Type C, As per DIN EN 175301-803, As per DIN EN 61984, Rectangular design MSEB, Rectangular design MSN2	IP65, As per IEC 60529		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