

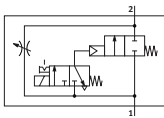
Soft-start valve MS6N-DE

FESTO



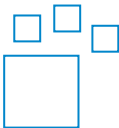
Characteristics

At a glance



- The duration of the pressure build-up is set using the restrictor attached to the valve cap. The output pressure p2 rises slowly in accordance with the restrictor setting. As long as the solenoid valve is not actuated, only the flow rate of the flow control is available. The main seat is only opened when the solenoid valve is energised.
- When the solenoid valve is switched off, the main seat is closed and only the flow rate of the flow control valve is available. When 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 drives move slowly and safely to the initial position
- Sudden and unpredictable movements are avoided
- Adjustable switching 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

By installing connecting plates it is easier to replace the module if necessary (e.g. when using piping).

Pressure gauge alternatives

- Key features [AG]/[RG]: integrated pressure gauges
- Key features [A4]/[A8]: Adapter for pressure gauge
- Key features [O.D7]/[O.D.8]/[O.D.9]/[O.D.10]: simple pressure sensors for monitoring the system

Type of mounting

[WP] Mounting bracket basic design



- For connecting the modules for wall mounting
- In combination with connecting plate for wall mounting an individual unit
- In conjunction with mounting plate MS-AEND or wall mounting a single device
- Same wall distance for combinations of series MS4 and MS6

[WB] Mounting centrally at rear (wall mounting top and bottom), connecting plates not required



For wall mounting

[WPM] Mounting bracket for hooking in service unit components



- For connecting the modules for wall mounting
- In combination with connecting plate MS4-AG... for mounting an individual device on a wall
- Fast hooking and unhooking

Type code

001	Series	
MS	MS series	
002	Size	
6	Grid dimension 62 mm	
003	Thread type	
N	NPT thread	
004	Function	
DE	Soft-start valve, electric	
005	Pneumatic connection, inch	
1/4	Female thread NPT 1/4	
3/8	Female thread NPT 3/8	
1/2	Female 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 pattern to EN 175301	
10V24P	24 V DC, 10 bar, M12 (connection pattern to IEC 61076-2-101)	
V24	24 V DC (connection pattern to EN 175301)	
V110	110 V AC (connection pattern to EN 175301)	
V230	230 V AC (connection pattern to EN 175301)	

007	Pressure gauge alternatives	
	None	
A4	Adapter 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), connecting plates not required	
WP	Mounting bracket basic design	
WPM	Mounting bracket for hooking in service unit components	

010	Flow direction	
	Flow direction from left to right	
Z	Flow direction from right to left	

Datasheet

General technical data

Pneumatic connection, port 1 ¹⁾	1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection, port 2	1/4 NPT	3/8 NPT	1/2 NPT
Design	Piston seat		
Type of mounting	Either: Inline installation With accessories		
Mounting position ²⁾	Any		
Valve function	2/2		
Manual override	Detenting, Non-detenting		
Type of actuation	Electrical		
Type of reset	Mechanical spring		
Type of piloting	Piloted		
Pilot air supply	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 must not collect in the pressure sensor.

Electrical data

Characteristic coil data	24 V DC: 1.8 W
Electrical connection	Type C, Plug, To DIN EN 175301-803, Square design
Degree of protection	IP65
Duty cycle	100%

Flow characteristics

Pneumatic connection, port 1	1/4 NPT	3/8 NPT	1/2 NPT
Standard nominal flow rate (standardised 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 to ISO 8573-1:2010 [7:4:4], Inert gas
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature	-10 ... 50°C
Media temperature	-10 ... 50°C
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress
Suitable for use with food ²⁾	See supplementary material information

1) More information www.festo.com/x/topic/crc

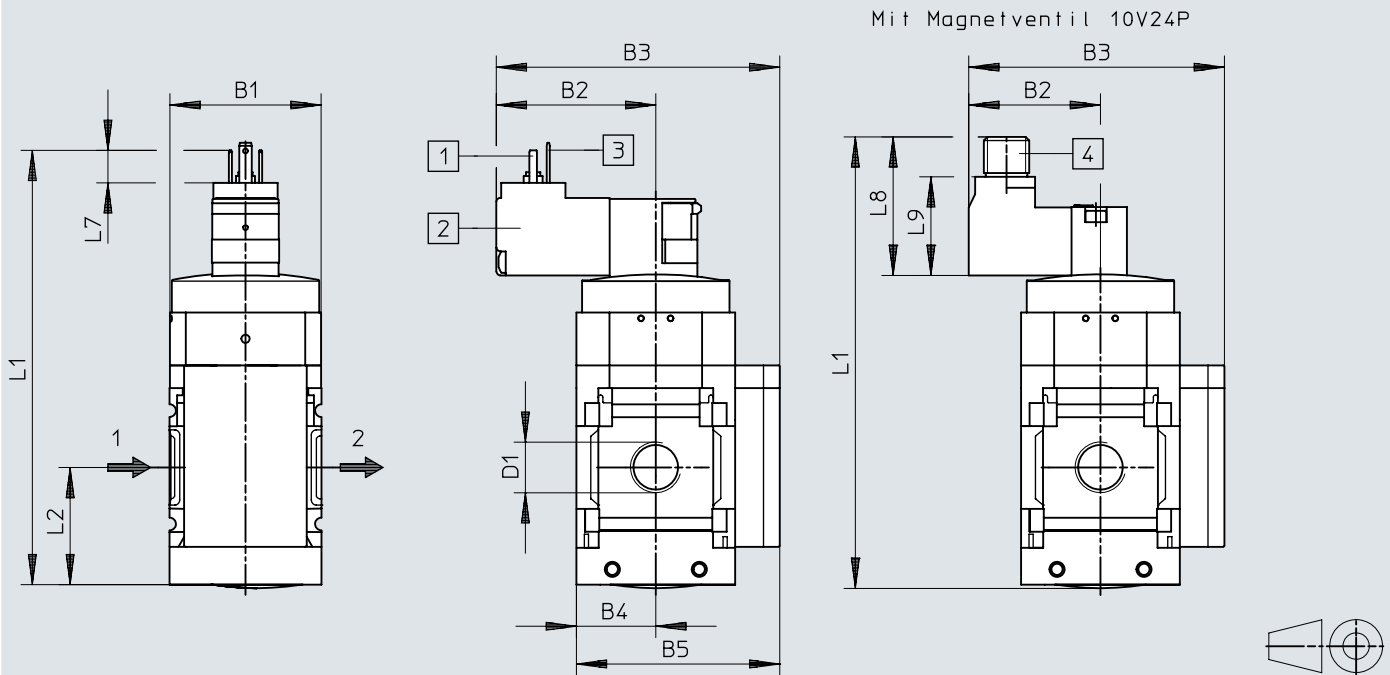
2) More information www.festo.com/certificates/ms6n-en

Materials

Material housing	Die-cast aluminium
Material seals	NBR
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


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

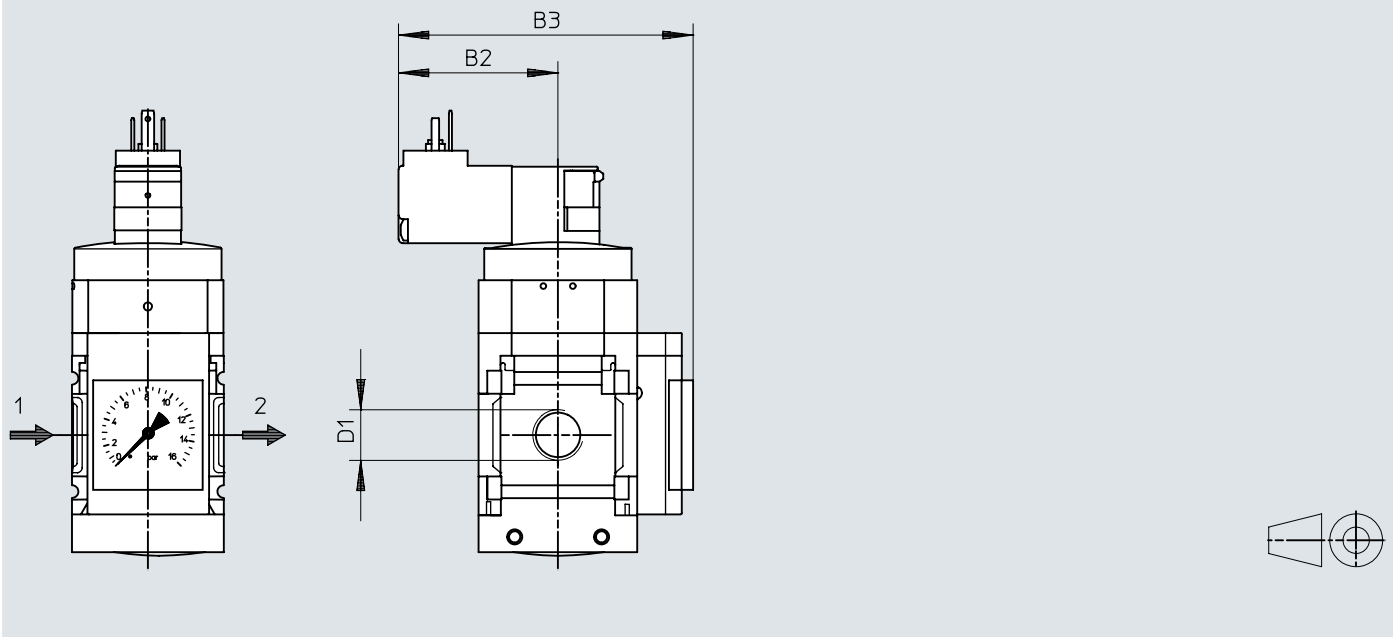
	B1	B2		B3		B4	B5	D1
		[V24] [V110] [V230]	[10V24] [10V24P]	[V24] [V110] [V230]	[10V24] [10V24P]			
	[inch]	[inch]		[inch]		[inch]	[inch]	
MS6N-DE-1/4	2,44	2,05	1,73	3,82	3,50	1,22	2,99	1/4 NPT
MS6N-DE-3/8								3/8 NPT
MS6N-DE-1/2								1/2 NPT

	L1			L2	L7	L8	L9
	[V24] [V110] [V230]	[10V24]	[10V24P]				
	[inch]			[inch]	[inch]	[inch]	[inch]
MS6N-DE-1/4	5,87	5,79	5,98	1,81	0,34	1,46	1,02
MS6N-DE-3/8							
MS6N-DE-1/2							

Dimensions

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

Download CAD data www.festo.com

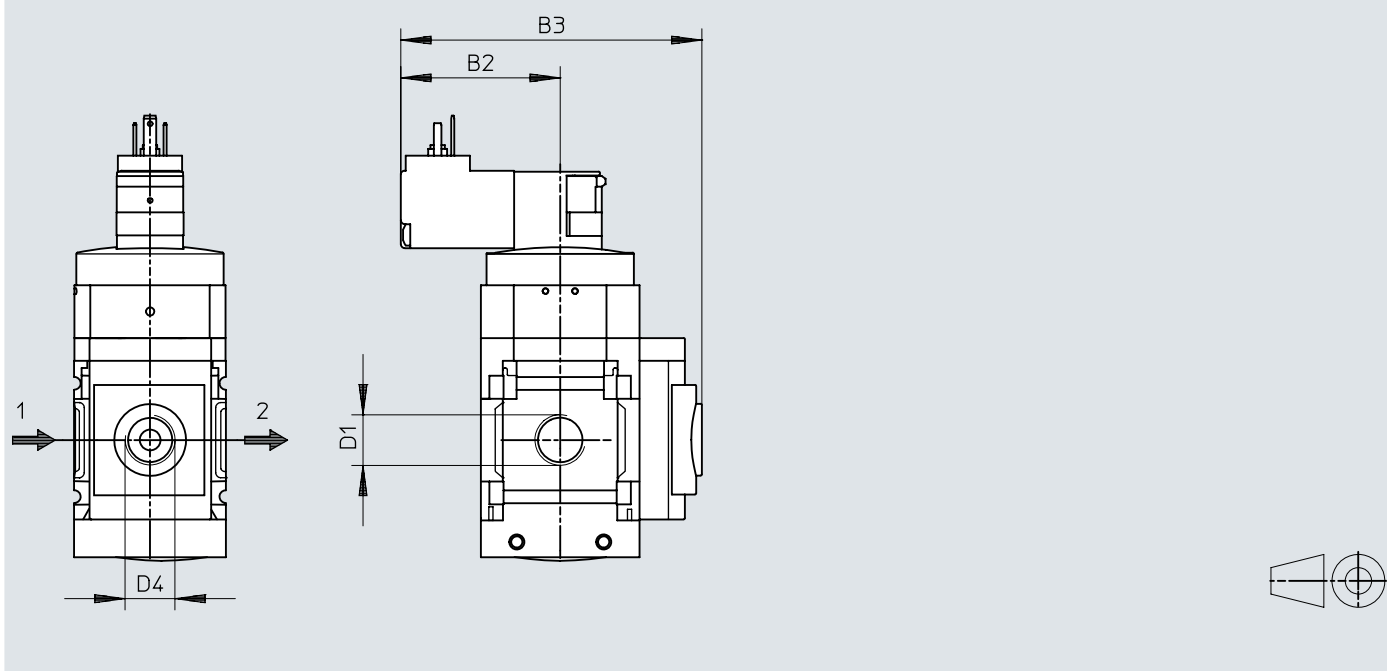


	B2		B3		D1
	[V24] [V110] [V230]	[10V24] [10V24P]	[V24] [V110] [V230]	[10V24] [10V24P]	
	[inch]		[inch]		
MS6N-DE-1/4-...-AG	2,05	1,73	3,86	3,54	1/4 NPT
MS6N-DE-3/8-...-AG					3/8 NPT
MS6N-DE-1/2-...-AG					1/2 NPT
MS6N-DE-1/4-...-RG	2,05	1,73	3,92	3,60	1/4 NPT
MS6N-DE-3/8-...-RG					3/8 NPT
MS6N-DE-1/2-...-RG					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

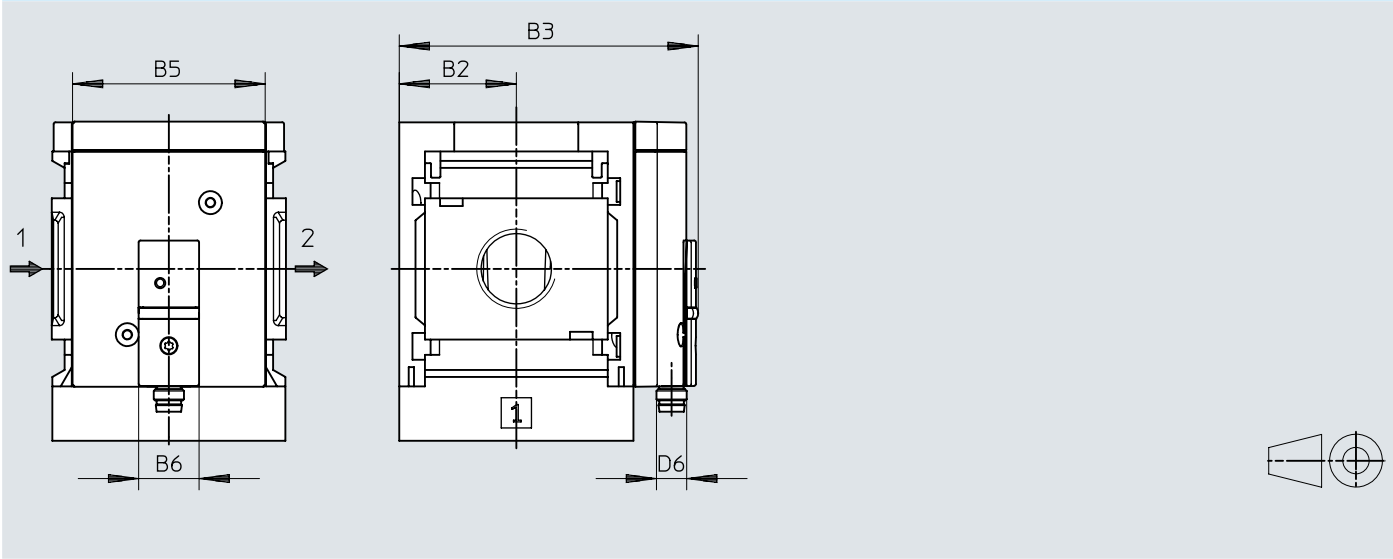
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	B2		B3		D1	D4
	[V24] [V110] [V230]	[10V24] [10V24P]	[V24] [V110] [V230]	[10V24] [10V24P]		
	[inch]		[inch]			
MS4N-DE-1/8-...-A8	1,66	1,37	3,14	2,85	1/8 NPT	1/8 NPT
MS4N-DE-1/4-...-A8					1/4 NPT	
MS4N-DE-1/8-...-A4	1,66	1,37	3,14	2,85	1/8 NPT	1/4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

Dimensions

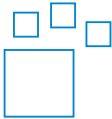
Dimensions – Pressure sensor with status indicator AD7, AD8, AD9, AD10 [Download CAD data](http://www.festo.com) www.festo.com



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

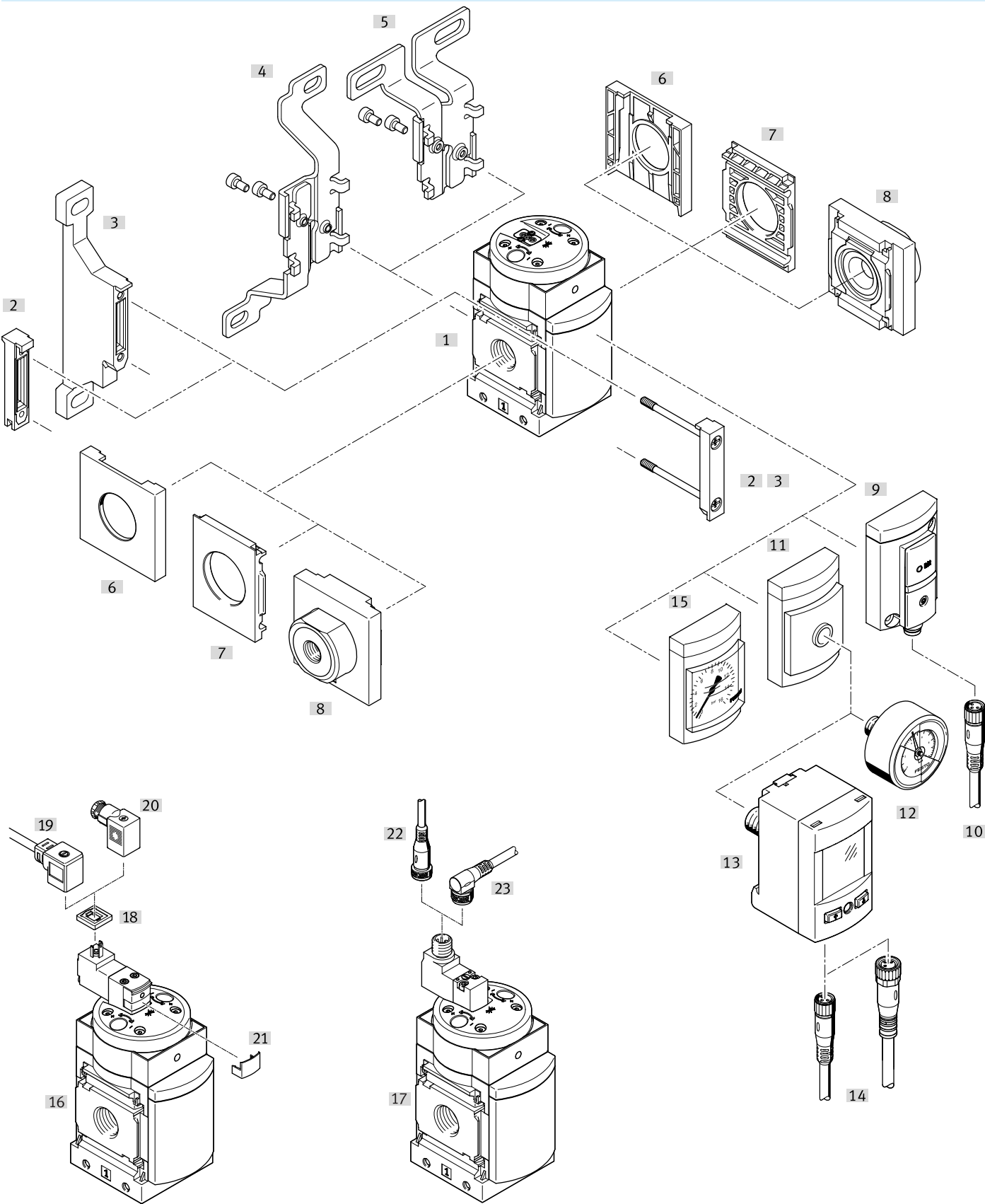
Ordering data

Ordering data						
	Pneumatic connection, port 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
	1/2 NPT		From right to left		542577	MS6N-DE-3/8-10V24-Z
			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			
	Short type code	Part no.	Type
	MS6N-DE	527687	MS6N-DE

Peripherals

Peripherals overview



Accessories		→ Link
Type/order code	Description	
[1] On/off valve MS4-EE		ms6n-de

Peripherals

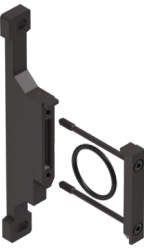
Accessories		→ Link
Type/order code	Description	
[2] Module connector MS4-MV1		12
[3] Mounting bracket MS4-WP	Order code [WP]	12
[3] Mounting bracket MS4-WPM	Order code [WPM] (without illustration)	12
[4] Mounting bracket MS4-WB	Order code [WB]	
[5] Mounting bracket MS4-WBM	Not available for this size	–
[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] Connecting plate SET MS4-AQ...	Order code [AQ...]	13
[9] Pressure sensor with operational status indicator SDE5	Order code [AD7], [AD8], [AD9], [AD10]	ms6n-de
[10] Connecting cable NEBU-M8...-LE3		14
[11] Adapter for EN pressure gauge 1/8, 1/4	Order code [A8], [A4]	ms6n-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]	ms6n-de
[16] On/off valve MS4-EE	Supply voltage [V24], [V24P], [10V24], [10V24C], [V110], [V230]	ms6n-de
[17] On/off valve MS4-EE	Supply voltage [10V24D], [10V24F], [10V24P]	ms6n-de
[18] Illuminating seal MEB-LD		14
[19] Plug socket with cable KMEB		15
[20] Plug socket MSSD-EB	For on/off valve MS...-V24P and MS...-V24...-EX2, 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 MS6-MV1

	Size	Material module connector	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	Material bracket	LABS (PWIS) conformity	Product weight	Part no.	Type
	6	Die-cast aluminium	VDMA24364-B1/B2-L	76 g	532195	MS6-WP

Mounting bracket MS6-WPM

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

Mounting bracket MS6-WB

	Size	Material bracket	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	Material housing	LABS (PWIS) conformity	Part no.	Type	
	6	Reinforced PA	VDMA24364-B1/B2-L	538780	MS6-END	

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

Connecting plate SET MS6-AQ...						
	Size	Pneumatic connection, port 1	Material sub-base	Product weight	Part no.	Type
	6	1/4 NPT	Die-cast aluminium	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	Indicating range	Indicating range	Product weight	Part no.	Type
	R1/8		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

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

Accessories

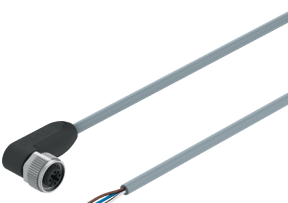
Pressure sensor SPAU

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

Connecting cable NEBA, straight

Connecting cable NEBA, straight						
	Electrical connection 1, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/ cores	Cable length	Part no.	Type
	M12x1, A-coded to 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, to 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, connector system	Electrical connection 2, connector system	Electrical connection 2, number of connections/cores	Cable length	Part no.	Type
	M12x1, A-coded to 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, to 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	Operational voltage range DC	Nominal operating voltage AC	Product weight	Part no.	Type
	Type C, To DIN EN 175301-803, Square design MSEB		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	Electrical connection 1	Electrical connection 1, number of connections/cores	Cable length	Part no.	Type
	230 V	Socket, to EN 175301-803, type C	3	2.5 m	151690	KMEB-1-230AC-2.5
				5 m	151691	KMEB-1-230AC-5

Plug socket with cable KMEB 24V DC						
	Nominal operating voltage DC	Electrical connection 1	Electrical connection 1, number of connections/cores	Cable length	Part no.	Type
	24 V	Socket, to EN 175301-803, type 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, To DIN EN 175301-803, To DIN EN 61984, Square design MSEB, Square design MSN2	IP65, To IEC 60529		151687	MSSD-EB

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