

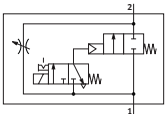
Soft-start valve MS12N-DE

FESTO



Characteristics

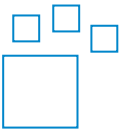
At a glance



- 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
- Optional pressure sensor

Ordering data - modular system

Link [ms12n_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]: integrated pressure gauge
- Key features [A4]: Adapter for pressure gauge

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

Type code

001	Series	
MS	MS series	
002	Size	
12	Grid dimension 124 mm	
003	Thread type	
N	NPT thread	
004	Function	
DE	Soft-start valve, electric	
005	Pneumatic connection, inch	
AQT	Sub-base NPT1	
AQU	Sub-base NPT11/4	
AQV	Sub-base NPT11/2	
AQW	Sub-base NPT2	
G	Module without connecting thread, without sub-base	

006	Supply voltage	
V24	24 V DC (connection pattern to EN 175301)	
V24P	24 V DC plug, M12 socket adapter (connection pattern to IEC 61076-2-101)	
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	
AG	MS pressure gauge	
008	Alternative pressure gauge scale	
	MS pressure gauge	
BAR	bar	
MPA	MPa	
009	Type of mounting	
	Without mounting bracket	
WP	Mounting bracket basic design	
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⁾	–
Pneumatic connection, port 2 ²⁾	–
Design	Piston seat
Type of mounting	Either: Inline installation With accessories
Mounting position ³⁾	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) With connecting plates: 1 NPT, 1 1/4 NPT, 1 1/2 NPT or 2 NPT

2) With connecting plates: 1 NPT, 1 1/4 NPT, 1 1/2 NPT or 2 NPT

3) Soft-start valve mounted vertically when combined with a pressure sensor as condensate must not collect in the pressure sensor.

Electrical data

Degree of protection	IP65
Duty cycle	100%

Flow characteristics

Standard nominal flow rate (standardised to DIN 1343) ¹⁾	25,000 ... 42,000 l/min
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1) Measured at p1 = 6 bar and p2 = 5 bar, Δp = 1 bar, depending on the selected connecting plates, which must be ordered separately → Accessories page: ms12-aq

Operating and environmental conditions

Operating pressure	3 ... 16 bar
Operating medium	Compressed air to ISO 8573-1:2010 [:-:-]
Ambient temperature	-10 ... 50°C
Media temperature	-10 ... 50°C
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress
CE mark (see declaration of conformity)	To EU Low Voltage Directive
UKCA marking (see declaration of conformity)	To UK regulations for electrical equipment

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

Weight

Product weight	3,800 g
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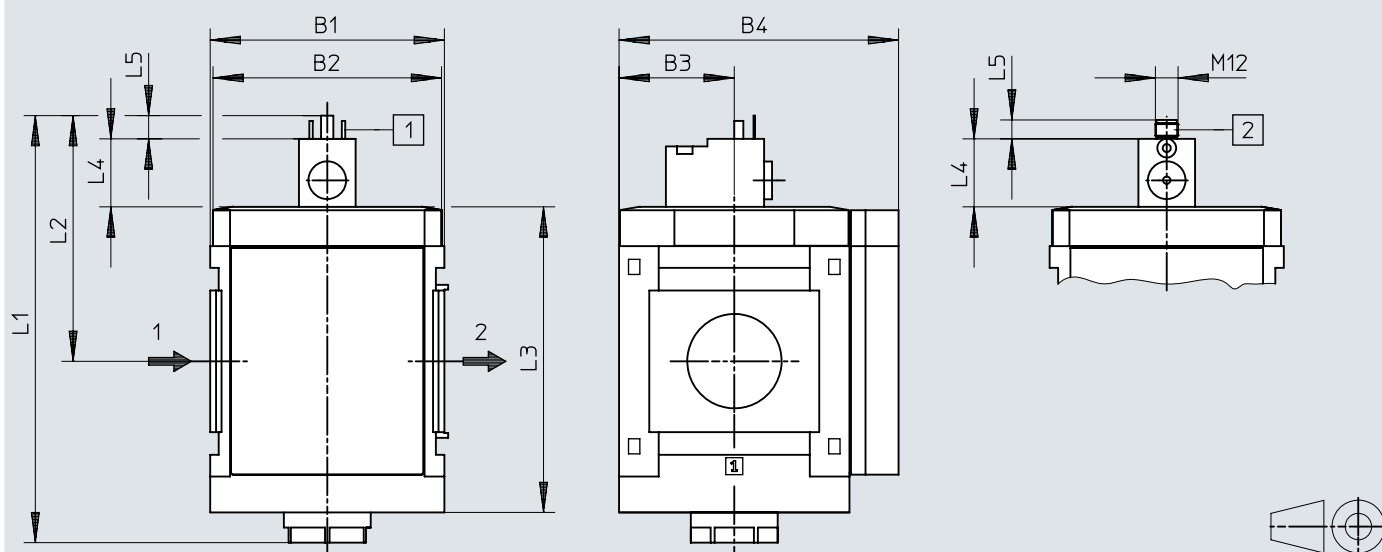
Materials

Material housing	Die-cast aluminium
Material seals	NBR
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Dimensions

Dimensions – Basic type, module without connecting thread, without connecting plate, with cover plate

Download CAD data www.festo.com



[1] Plug connection according to EN 175301-803

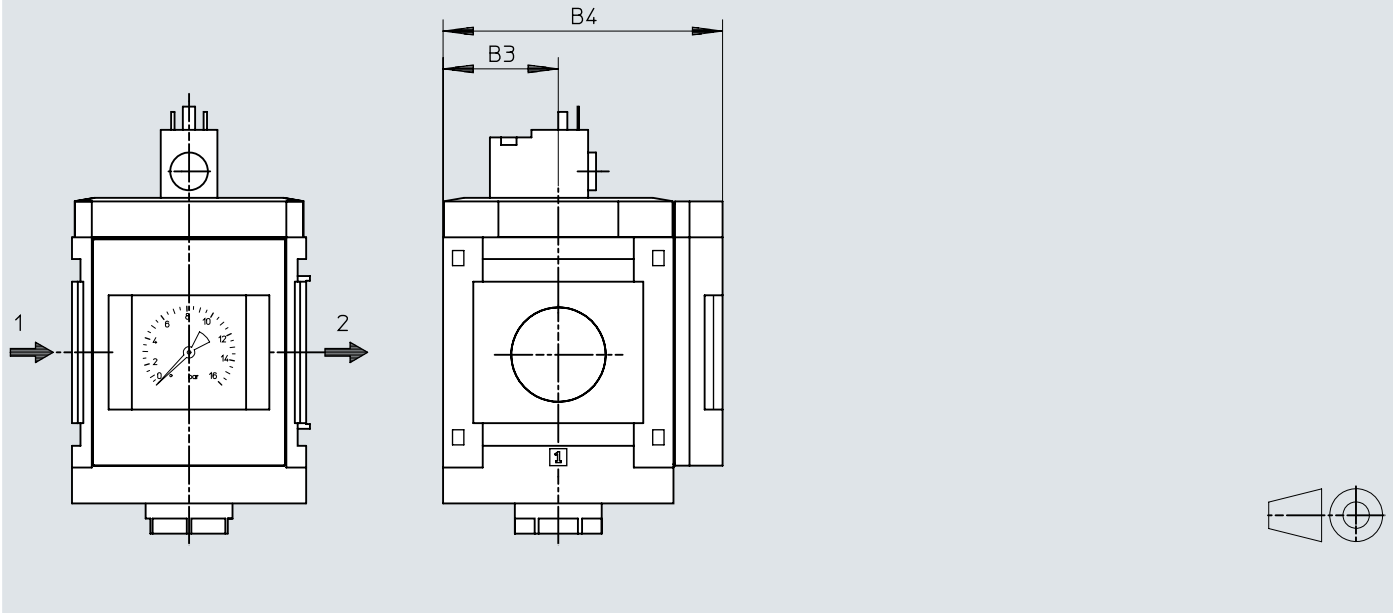
[2] Plug connection M12, 4-pin according to DESINA for connecting cable NEBU-M12

	B1 [inch]	B2 [inch]	B3 [inch]	B4 [inch]	L1 [inch]	L2 [inch]	L3 [inch]	L4 [inch]	L5 [inch]
MS12N-DE-G-V24, V110, V230	4,88	4,80	2,40	5,83	8,90	5,12	6,38	1,41	0,48
MS12N-DE-G-V24P								1,42	0,39

Dimensions

Dimensions – Integrated MS pressure gauge with standard scale, display unit [bar]

Download CAD data www.festo.com

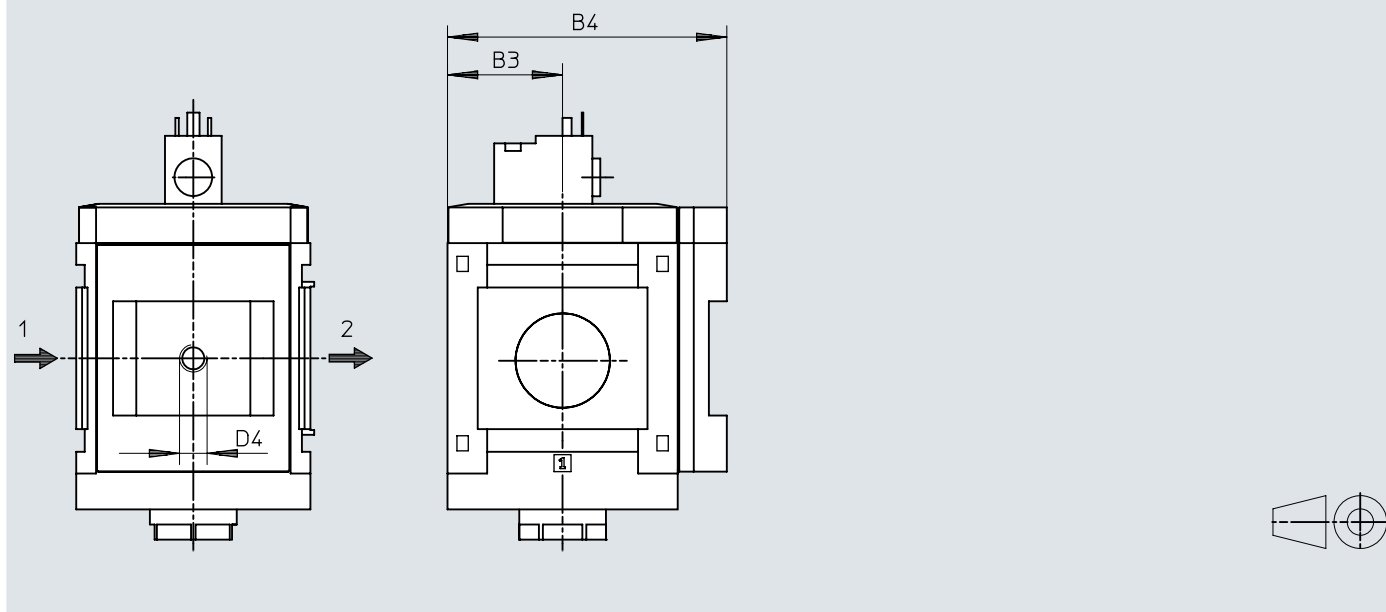


	B3 [inch]	B4 [inch]
MS12N-DE-...-AG	2,40	5,83

Dimensions

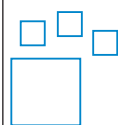
Dimensions – Adapter for EN pressure gauge 1/4, without pressure gauge

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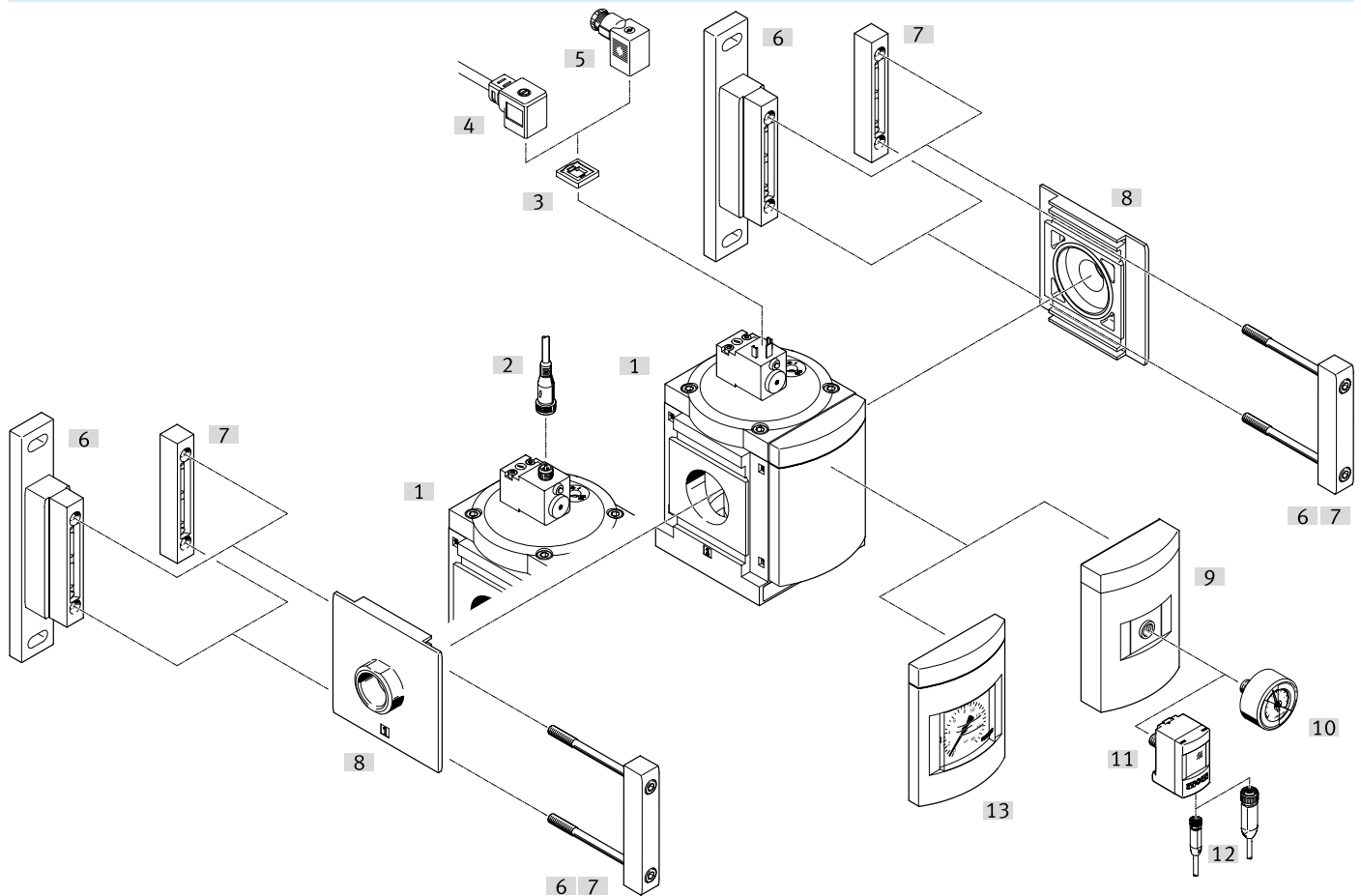
	B3 [inch]	B4 [inch]	D4
MS12N-DE-...-A4	2,40	5,83	G1/4

Ordering data

Ordering data – Modular product system			
	Short type code	Part no.	Type
	MS12N-DE	535039	MS12N-DE

Peripherals

Peripherals overview



Accessories			→ Link
Type/order code	Description		
[1] Soft-start valve MS12N-DE	Soft-start valve		ms12n-de
[2] Connecting cable NEBA-M12G5, straight	Connecting cable for display module	11	
[3] Illuminating seal MC-LD	Switching status indication	11	
[4] Plug socket with cable KMC	Connecting cable for valve coil	12	
[5] Plug socket MSSD-C	Connection socket for valve coil	12	
[6] Mounting bracket MS12-WP	Order code [WP]	10	
[7] Module connector MS12-MV	For connecting the modules	10	
[8] Connecting plate SET MS12-AQ...	Order code [AQ...]	10	
[9] Adapter for EN pressure gauge 1/4	Order code [A4]	ms12n-de	
[10] Pressure gauge MA	Built-in pressure indicator	10	
[11] Pressure sensor SPAU-...-T	Display module	11	
[12] Connecting cable NEBA-M...G...-LE4, straight	Connecting cable for display module	11	
[12] Connecting cable NEBA-M...G...-LE4, angled	Connecting cable for display module	11	
[13] Pressure gauge MS	Order code [AG], [RG]	ms12n-de	

Accessories

Module connector MS12-MV

	Material plate	LABS (PWIS) conformity	Product weight	Part no.	Type
	Die-cast aluminium	VDMA24364-B1/B2-L	500 g	537134	MS12-MV

Mounting bracket MS12-WP

	Material bracket	LABS (PWIS) conformity	Product weight	Part no.	Type
	Die-cast aluminium	VDMA24364-B1/B2-L	700 g	537133	MS12-WP

Connecting plate SET MS12-AQ...

	Pneumatic connection, port 1	Material sub-base	LABS (PWIS) conformity	Product weight	Part no.	Type
	1 NPT	Die-cast aluminium	VDMA24364-B1/B2-L	1,300 g	537139	MS12-AQT
	1 1/4 NPT		VDMA24364-B2-L		537140	MS12-AQU
	1 1/2 NPT		VDMA24364-B1/B2-L		537141	MS12-AQV
	2 NPT				537142	MS12-AQW

Pressure gauge MA

	Pneumatic connection	Indicating range	Indicating range	Product weight	Part no.	Type
	R1/4	0 ... 232 psi	0 ... 16 bar	70 g	187080	MA-40-16-R1/4-EN

Pressure sensor SPAU

	Pneumatic connection	Switching output	Electrical connection 1, connector system	Part no.	Type
	R1/4	2 x PNP or 2 x NPN, switchable	M12x1, A-coded to EN 61076-2-101	8001208	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M12D

Accessories

Pressure sensor SPAU					
	Pneumatic connection	Switching output	Electrical connection 1, connector system	Part no.	Type
	R1/4	2 x PNP or 2 x NPN, switchable	M8x1, A-coded, to EN 61076-2-104	8001209	SPAU-P10R-T-R14M-L-PNLK-PNVBA-M8D

Connecting cables 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 cables 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 MC-LD				
	Operational voltage range DC	Nominal operating voltage AC	Part no.	Type
		230 V	19146	MC-LD-230AC
	12 ... 24 V		19145	MC-LD-12-24DC

Accessories

Plug socket with cable KMC 230V AC

	Nominal operating voltage AC	Electrical connection	Cable length	Part no.	Type
	230 V		2.5 m	151690	KMEB-1-230AC-2.5
			5 m	151691	KMEB-1-230AC-5
		Socket, Type A	2.5 m	30932	KMC-1-230AC-2,5
			5 m	30934	KMC-1-230AC-5

Plug socket with cable KMC 24V DC

	Nominal operating voltage DC	Electrical connection	Switching status indication	Cable length	Part no.	Type
	24 V	Socket, Type A	LED	2.5 m	30931	KMC-1-24DC-2,5-LED
				5 m	30933	KMC-1-24DC-5-LED
				10 m	193459	KMC-1-24-10-LED

Plug socket MSSD-C

	Electrical connection	Degree of protection	Product weight	Part no.	Type
	3-pin, Angled socket, Type A, To DIN EN 175301-803, Square design MSC, Square design MSN1	IP65	22 g	34583	MSSD-C