

Soft-start valve MS-EDE-B

FESTO



Characteristics

At a glance

- Very compact and extremely lightweight series for use close to the process directly in the machine.
- Grid dimension: 40 mm; 62 mm
- With solenoid coil, without plug socket
- Supply voltage: 24 VDC

Diagrams

Further information → [ms-e-de-b](#)



Product segmentation



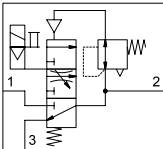
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- Quickest delivery, worldwide – wherever, whenever
- Expected high Festo quality
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Function



Electrically operated soft-start valve for slowly pressurising and exhausting pneumatic systems.

- The drives move slowly and safely to the initial position
- Sudden and unpredictable movements are avoided
- Adjustable switching time delay
- Detenting and non-detenting manual override

Pneumatic connection

Individual fittings that are fastened via a female thread

Special material properties

[F1A] Recommended for production plants for manufacturing lithium-ion batteries, F1A

Metals with copper, zinc or nickel as the main component are excluded from use. Exceptions are nickel in steels, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils

Version

[B] Second generation

Basic component with sturdy and lightweight polymer housing. Fully compatible with the MS series.

Type code

001	Series
MS	MS series

002	Size
4	Grid dimension 40 mm
6	Grid dimension 62 mm

003	Function
EDE	Soft-start valve, electrically actuated

004	Pneumatic connection
1/4	Female thread G1/4
1/2	Female thread G1/2

005	Supply voltage
V24	24 V DC (connection pattern to EN 175301)

006	Special material properties
F1A	Recommended for production plants for manufacturing lithium-ion batteries, F1A

007	Version
B	Second generation

Datasheet

General technical data

Size	4	6
Pneumatic connection, port 1	G1/4	G1/2
Pneumatic connection, port 2	G1/4	G1/2
Pneumatic connection, port 3	G1/4	G1/2
Design	Poppet valve, electrically actuated	
Lap	Underlap	
Type of mounting	Via wall/surface bracket	
Mounting position	Vertical +/-5°	
Valve function	3/2-way, closed, monostable	
Exhaust-air function	Without flow control option	
Manual override	Detenting, Non-detenting	
Type of actuation	Electric	
Type of reset	Mechanical spring	
Type of piloting	Pilot actuated	
Pilot air supply	Internal	
Signal status display	With accessories	

Electrical data

Characteristic coil data	24 V DC: 2.3 W	
Permissible voltage fluctuations	+/- 10%	
Electrical connection	Type C, To EN 175301-803	
Degree of protection	IP65	
Switch-on time	31 ms	

Flow characteristics

Size	4	6
Pneumatic connection, port 1	G1/4	G1/2
Standard nominal flow rate ¹⁾	2,000 l/min	5,000 l/min
Standard nominal flow rate, exhaust 0.6->0 MPa (6->0 bar, 87->0 psi)	1,600	–
C value	8.52 l/sbar	–
b value	0.45	–

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

Operating and environmental conditions

Operating pressure	0.3 ... 0.7 MPa
Operating pressure	3 ... 7 bar
Operating pressure	43.5 ... 101.5 psi
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Storage temperature	-10 ... 60°C
Ambient temperature	-5 ... 50°C
Media temperature	-5 ... 50°C
Corrosion resistance class CRC ¹⁾	1 - Low corrosion stress

¹⁾ Corrosion resistance class CRC 1 to Festo standard FN 940070. Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

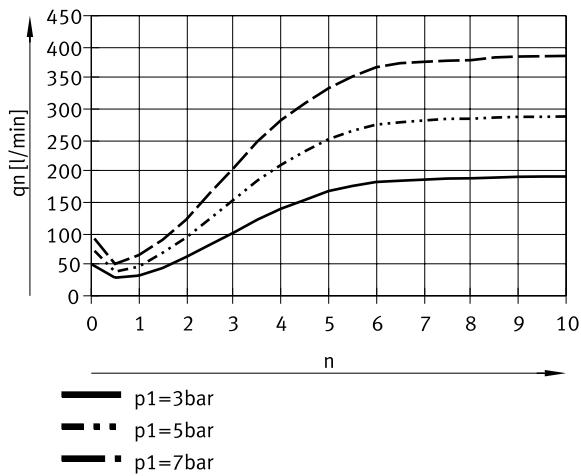
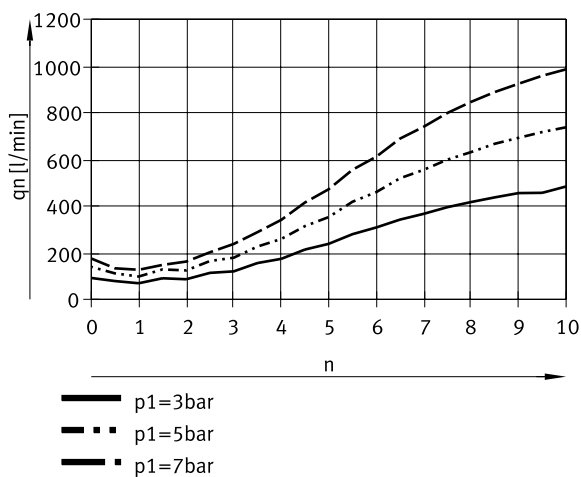
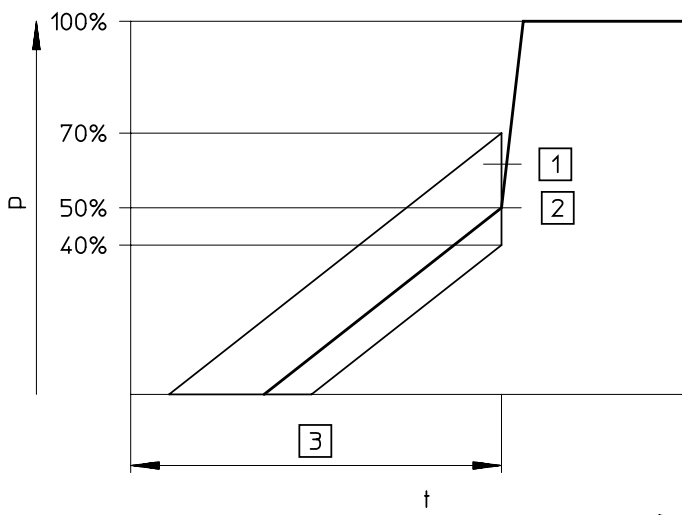
Materials

Material housing	PA-reinforced
Material seals	HNBR, NBR
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Additional material specifications – products for battery production (MS...-F1A-B)

Suitability for the production of Li-ion batteries	Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils
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Datasheet

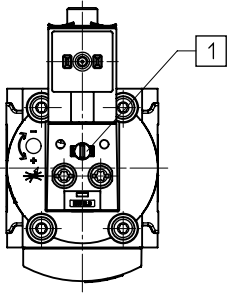
Flow rate q_n as a function of flow control screw turns n , measured: P1 against ambient pressure (MS4-EDE-B)Flow rate q_n as a function of flow control screw turns n , measured: P1 against ambient pressure (MS6-EDE-B)Pressure p as a function of time t (switching pressure)

- [1] Tolerance range
- [2] Switching point
- [3] Filling time adjustable via flow control

The +20%/−10% switching pressure tolerance refers to the operating pressure p_1 .
 Example: a switching pressure from 1.6 bar to 2.8 bar is permissible at an operating pressure of 4 bar.

Datasheet

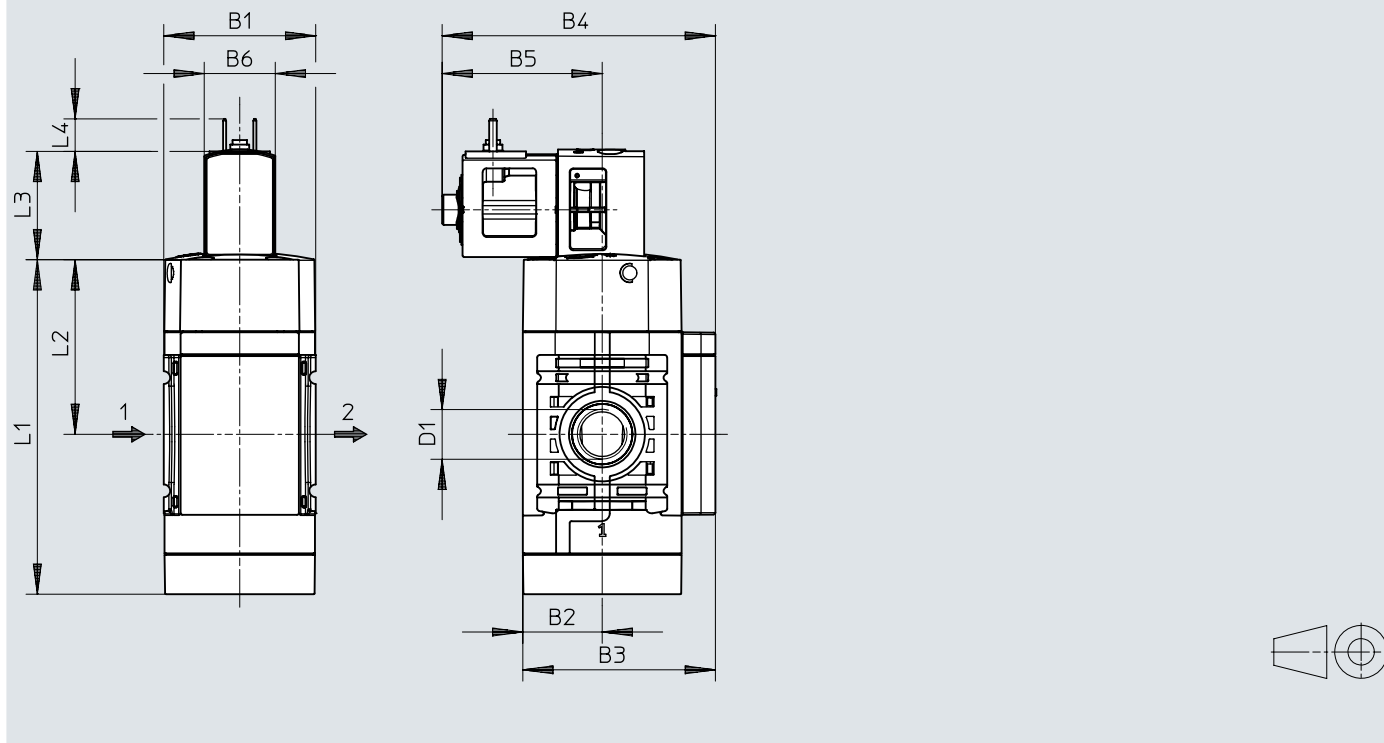
Manual override



[1] Detenting and non-detenting manual override

Dimensions

Dimensions – Basic version

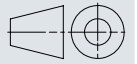
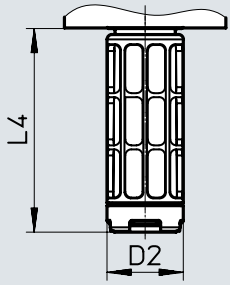
Download CAD data → www.festo.com

	B1	B2	B3	B4	B5	B6	D1	L1	L2	L3	L4
MS4-EE-...-B	40,2	21	50,9	72,3	42,4	18,8	G1/4	88,5	46,2	28,7	8,6
MS6-EE-...-B	62	31	76	87,7	42,7	18,8	G1/2	140	75,5	28,2	8,6

Dimensions

Dimensions – Silencer (accessory)

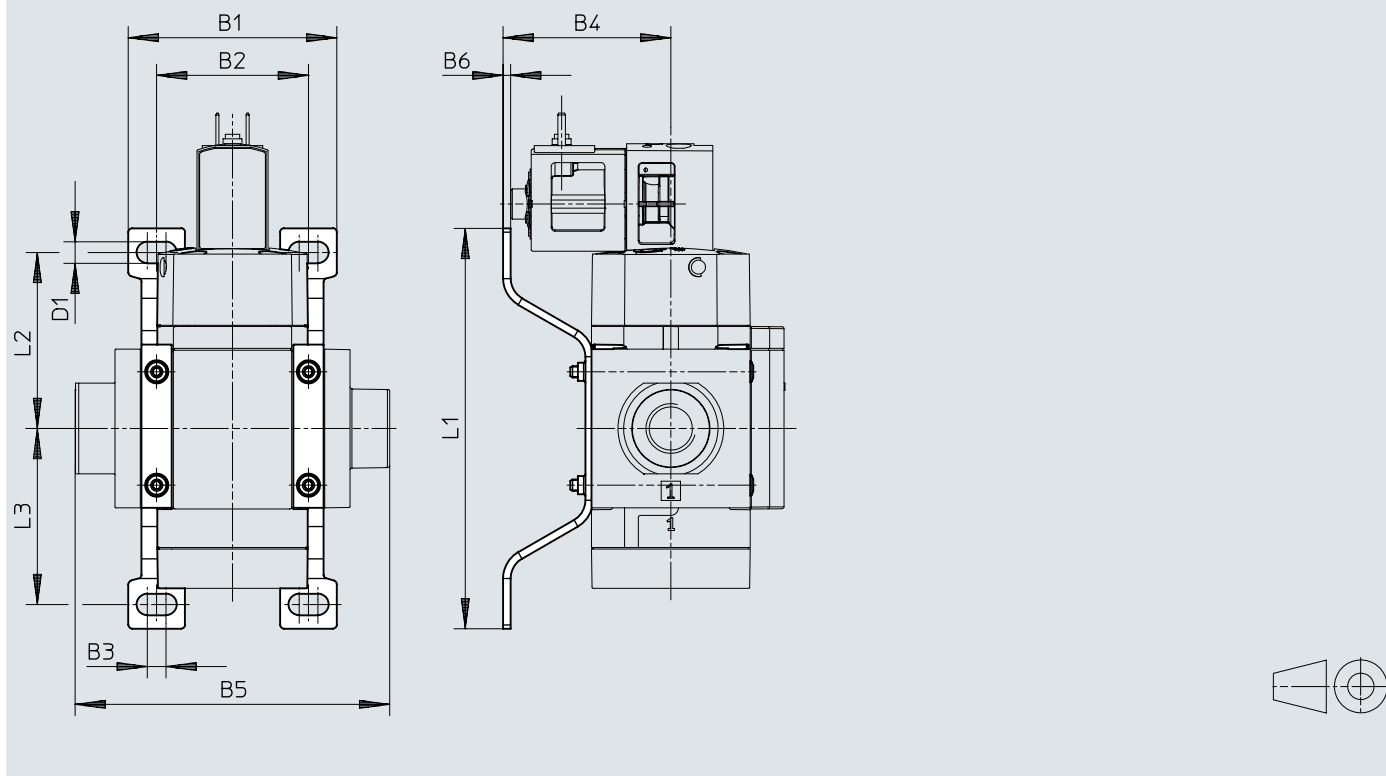
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	D2 ∅	L4
U-1/4	20	55
U-1/2	28	108


Dimensions


Dimensions – Wall mounting kit MS...-WPE-B (accessories)

Download CAD data → www.festo.com

	B1	B2	B3	B4	B5	B6	D1 ∅	L1	L2	L3
MS4-WPE-B	55,2	40,2	5	44,4	83,3	2	5,7	106	46,6	46,6
MS6-WPE-B	79	62	4,3	53,9	114,9	2	6,5	158	71	71

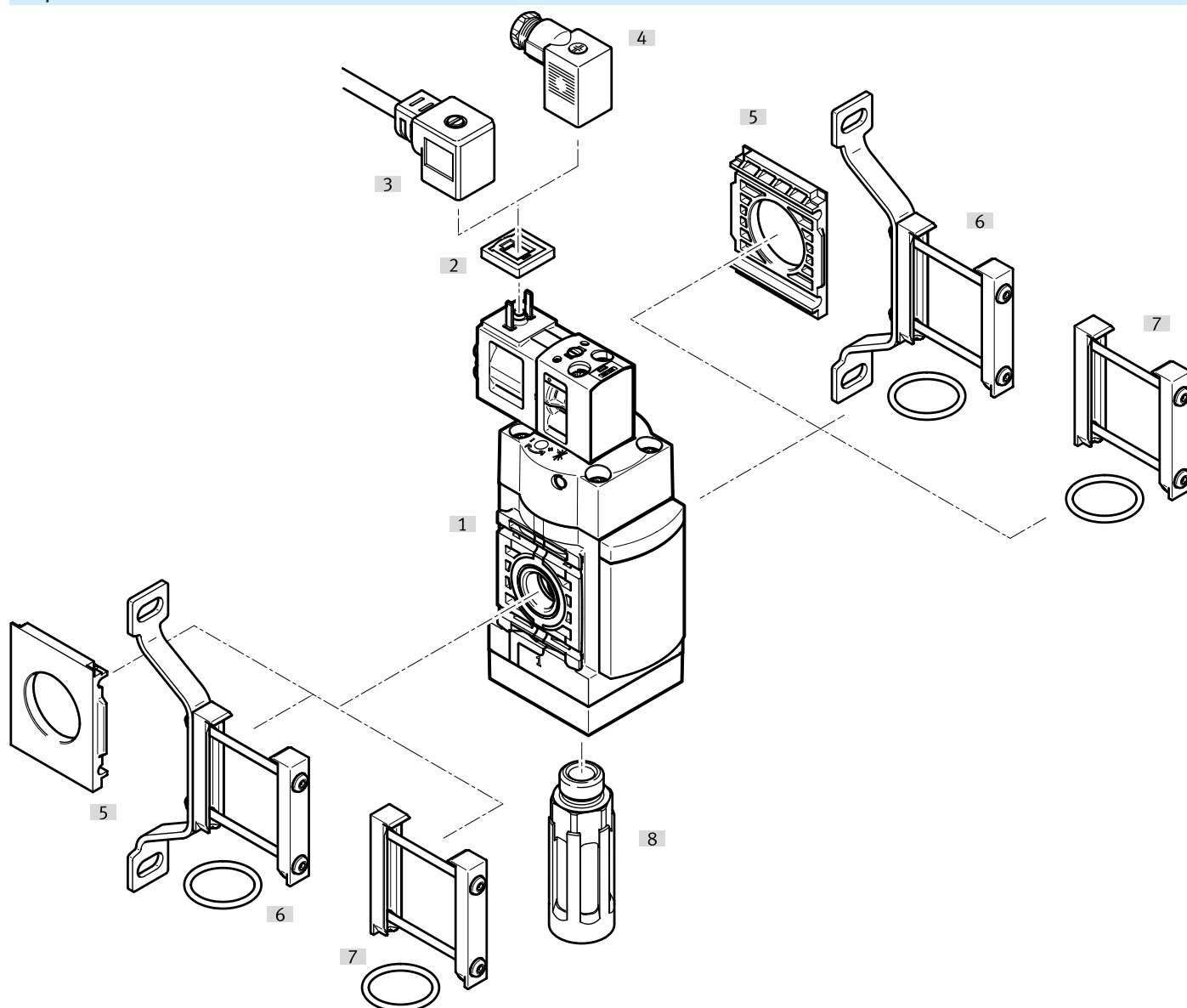
Ordering data

Ordering data					
	Size	Pneumatic connection, port 1	Product weight	Part no.	Type
	4	G1/4	196 g	★ 8080815	MS4-EDE-1/4-V24-B
	6	G1/2	517 g	★ 8080855	MS6-EDE-1/2-V24-B

Ordering data – Products for battery production					
	Size	Pneumatic connection, port 1	Product weight	Part no.	Type
	4	G1/4	196 g	8176511	MS4-EDE-1/4-V24-F1A-B
	6	G1/2	517 g	8176513	MS6-EDE-1/2-V24-F1A-B

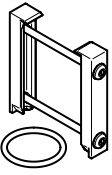
Peripherals

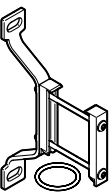
Peripherals overview

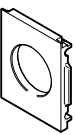


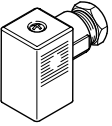
Accessories		→ Page/Internet
Type/order code	Description	
[1] On/off valve MS4/6-EDE-B		ms-ed-e-b
[2] Silencer U		12
[3] Module connector MS...-MV1		12
[4] Wall mounting kit MS...-WPE-B	Without illustration	12
[5] Mounting plate MS...-AEND	Module connector MS4/6-MV [2] or mounting bracket MS4-WP, WPB, WPE, WPM [3] is required for mounting.	12
[6] Illuminating seal MEB-LD		12
[7] Plug socket MSSD-EB	For on/off valve MS...-V24P and MS...-V24-...-EX2, the plug socket is included in the scope of delivery.	12
[8] Plug socket with cable KMEB		13

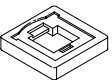
Accessories

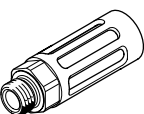
Module connector MS...-MV1					
	Size	Suitability for the production of Li-ion batteries	Product weight	Part no.	Type
	4		13 g	★ 8119201	MS4-MV1
		F1a	36 g	8176695	MS4-MV1-F1A
	6		33 g	★ 8119204	MS6-MV1
		F1a	54 g	8176697	MS6-MV1-F1A

Wall mounting kit MS...-WPE-B					
	Size	Product weight	Part no.	Type	
	4	30 g	★ 8118600	MS4-WPE-B	
	6	58 g	★ 8118599	MS6-WPE-B	

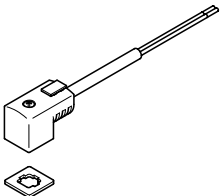
Mounting plate MS...-AEND					
	Size	Product weight	Part no.	Type	
	4	4 g	542966	MS4-AEND	
	6	11.1 g	535408	MS6-AEND1	

Plug socket MSSD-EB					
	Electrical connection	Product weight	Part no.	Type	
	4-pin, Socket, Type C	17 g	192745	MSSD-EB-S-M14	
	3-pin, Socket, Angled socket, Type C, To DIN EN 175301-803, To DIN EN 61984, Square design MSEB, Square design MSN2	11 g	★ 151687	MSSD-EB	

Illuminating seal MEB-LD					
	Operational voltage range DC	Product weight	Part no.	Type	
	12 ... 24 V	0.6 g	151717	MEB-LD-12-24DC	

Silencer U					
	Pneumatic connection	Product weight	Part no.	Type	
	G1/4	7.7 g	★ 2316	U-1/4	
	G1/2	58.2 g	★ 2310	U-1/2	

Accessories

Plug socket with cable KMEB						
	Nominal operating voltage DC	Electrical connection 2, number of connections/cores	Signal status display	Cable length	Part no.	Type
	24 V	2		2.5 m	547270	KMEB-3-24-2.5
				5 m	547271	KMEB-3-24-5
			Yellow LED	2.5 m	547268	KMEB-3-24-2.5-LED
				5 m	547269	KMEB-3-24-5-LED
		3	2.5 m	★ 151688	KMEB-1-24-2.5-LED	
			5 m	151689	KMEB-1-24-5-LED	
			10 m	193457	KMEB-1-24-10-LED	