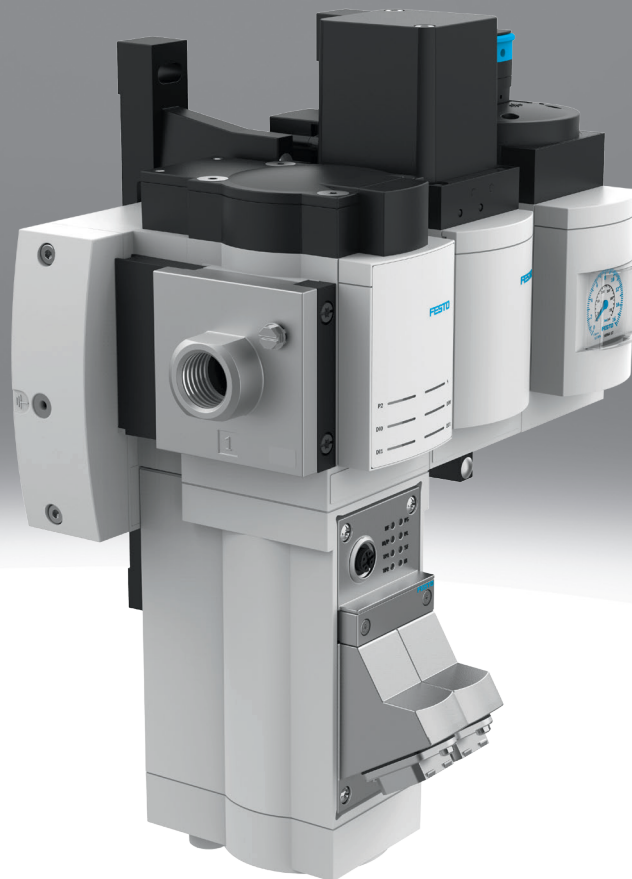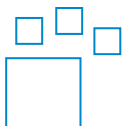# Energy efficiency module MSE6

FESTO

Characteristics

At a glance

- The energy efficiency module MSE6-C2M monitors consumption, regulates and shuts off the compressed air when production is inactive, and ensures a soft restart because the pressure does not fall below a specific level.
- The energy efficiency module MSE6-D2M monitors the compressed air consumption and shuts off the compressed air supply after production has stopped for a certain amount of time.
- The energy efficiency module MSE6-E2M monitors the compressed air consumption and shuts off the compressed air supply after production has stopped for a certain amount of time.

Ordering data - modular system

Configurable product
This product and all its product options can be ordered online via the configurator.

Function

[C2M]   Energy efficiency module

- Regulates to the adjustable normal setpoint pressure, automatically shuts off and then regulates to the adjustable setpoint for standby pressure if the flow rate falls below the limit value for a prolonged period
- Shuts off and regulates the pressure as controlled by the user
- Has a parameterisable slew rate limit for setpoint pressure
- Collecting and providing measurement data: output pressure, pressure change (to monitor for leaks), flow rate and air consumption
- Limit value monitoring for pressure (lower and upper limit value), pressure change in shut-off mode (upper limit value) and flow rate (upper limit value)
- 2 digital inputs
- 2 digital outputs
- Channel-based status indicator via LED
- Parameterisable special functions
- Fieldbus connection PROFINET IO via integrated fieldbus node, EtherNet/IP via integrated fieldbus node or EtherCAT via integrated fieldbus node
- CPX extension interface row 1 for connecting an MSE6-D2M or connecting digital and analogue CPX-EA modules (only MSE6-C2M-...-M)

[E2M]   Energy efficiency module

- Automatic shut-off if the flow rate falls below the limit value for an extended period of time
- Shuts off and pressurises as controlled by the user
- Collecting and providing measurement data: output pressure, pressure change (to monitor for leaks), flow rate and air consumption
- Limit value monitoring for pressure (lower and upper limit value), pressure change in shut-off mode (upper limit value) and flow rate (upper limit value)
- Fieldbus connection PROFIBUS DP via integrated fieldbus node, EtherNet/IP via integrated fieldbus node or EtherCAT via integrated fieldbus node

[D2M]   Energy efficiency module

- Automatic shut-off if the flow rate falls below the limit value for an extended period of time
- Shuts off and pressurises as controlled by the user
- Collecting and providing measurement data: output pressure, pressure change (to monitor for leaks), flow rate and air consumption
- Limit value monitoring for pressure (lower and upper limit value), pressure change in shut-off mode (upper limit value) and flow rate (upper limit value)
- Profinet IO, EtherNet/IP or EtherCAT fieldbus connection via the fieldbus node of the MSE6-C2M-...-M or CPX terminal controlled by the CPX extension
- CPX extension interface row 2 for connection to an MSE6-C2M-...-M or to a CPX terminal with CPX extension interface row 1

Electrical system expansion

A CPX IO module consists of an electronics module, an interlinking block and a connection block. There are several options to choose from. The possible combinations of these modules as well as information and ordering data for additional accessories (end plate with CPX extension, tie rod and mounting accessories) can be found in the CPX documentation. → Internet: cpx

Characteristics

Measured value display

With or without pressure gauge

[RG]	Integrated pressure gauge with red/green scale

Two adjustable red segments above the pressure gauge scale along with the printed green segment enable the required pressure range to be limited.

Pneumatic connection

Various connection sizes can be selected using the configurator.

Type code

001	Series	
MSE	Modular standard, electric	

002	Size	
6	Grid dimension 62 mm	

003	Function	
C2M	Energy efficiency module	
D2M	Energy efficiency module	
E2M	Energy efficiency module	

004	Flow measuring range	
5000	Max. 5000 l/min	

005	Electrical actuation	
FB13	Fieldbus node for PROFIBUS DP	
FB36	Fieldbus node for Ethernet/IP	
FB37	Fieldbus node for EtherCAT®	
FB43	Bus node for PROFINET IO with M12 connection	
FB44	Bus node for PROFINET IO with RJ45 connection	
CBUS	Internal electrical control	

006	Electrical inputs/outputs	
	None	
D	2 digital inputs, 2 digital outputs	

007	Electrical system expansion	
	No CPX extension connection	
M	CPX extension connection row 1 (master)	
S	CPX extension connection row 2 (slave)	

008	Measured value display	
	No display	
A4	Adapter for EN pressure gauge 1/4, without pressure gauge	
A8	Adapter for EN pressure gauge 1/8, without pressure gauge	
AG	MS pressure gauge standard scale	
RG	Integrated pressure gauge with red/green scale	
VS	Cover plate	

009	Alternative pressure gauge scale	
	MS pressure gauge	
BAR	bar	
MPA	MPa	

010	Electrical connection	
	Standard	
AMI	Operating voltage plug push-pull, AIDA	
M12L4	Operating voltage plug M12, L-coded, 4-pin	
M12L5	Operating voltage plug M12, L-coded, 5-pin	
VCB	Power supply via C-bus	

011	Pneumatic connection	
AGD	Connecting plate G1/2	
AGE	Connecting plate G3/4	

Datasheet

General technical data – MSE6-C2M

Pneumatic connection, port 1 [1]	G1/2, G3/4
Pneumatic connection, port 2	G1/2, G3/4
Mounting position	Horizontal +/-5°
Valve function	2/2 open, single solenoid

1) Pneumatic connection 1, 2: G3/4 possible via sub-base

Electrical data – MSE6-C2M

Electrical connection	4-pin M12x1, L-coded to EN 61076-2-111	5-pin M12x1, L-coded to EN 61076-2-111	5-pin AIDA push-pull
Operating voltage DC load voltage	21.6 … 28.8 V		
Operating voltage range DC electronics/sensors	18 … 30 V		
Reverse polarity protection	For operating voltage connections		
Degree of protection	IP65, With plug socket		
Number of inputs	2		
Number of outputs	2		
Switching logic for inputs	PNP (positive switching)		
Switching logic for outputs	PNP (positive switching)		
Field bus interface	2x socket, M12x1, 4-pin, D-coded		2x RJ45 push-pull socket, AIDA

Standard nominal flow rate – MSE6-C2M

Standard nominal flow rate (standardised to DIN 1343)[1]	4,500 … 7,000 l/min

1) Measured at p1 = 10 bar and p2 = 6 bar, Δp = 1 bar

Datasheet

Operating and environmental conditions – MSE6-C2M

Operating pressure	0.35 … 1.3 MPa
Operating pressure	3.5 … 13 bar
Operating pressure	50.75 … 188.5 psi
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation not possible
Ambient temperature	0 … 50°C
Media temperature	0 … 50°C
Storage temperature	-10 … 60°C
Corrosion resistance class CRC [1]	–
CE mark (see declaration of conformity) [2]	To EU EMC Directive, In accordance with EU RoHS Directive
CE marking (see declaration of conformity)[3]	To UK instructions for EMC, To UK RoHS instructions
Approval	RCM trademark
KC mark	KC-EMV

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

2) More information www.festo.com/catalogue/mse6 → Support/Downloads. If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary

3) More information www.festo.com/catalogue/mse6 → Support/Downloads. If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary

Display/operation – MSE6-C2M

Start value for flow rate measuring range	50 l/min
End value for flow rate measuring range	5,000 l/min
Accuracy of flow rate	± (3% o.m.v. + 0.3% FS)
Start value for pressure measuring range	0 MPa
Start value for pressure measuring range	0 bar
Start value for pressure measuring range	0 psi
End value for pressure measuring range	1.4 MPa
End value for pressure measuring range	14 bar
End value for pressure measuring range	203 psi
Accuracy in ± % FS	3 %FS
Displayable units	kPa, l, l/min, m3, mbar, psi, scf, scfm

Materials – MSE6-C2M

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

Datasheet

General technical data – MSE6-D2M
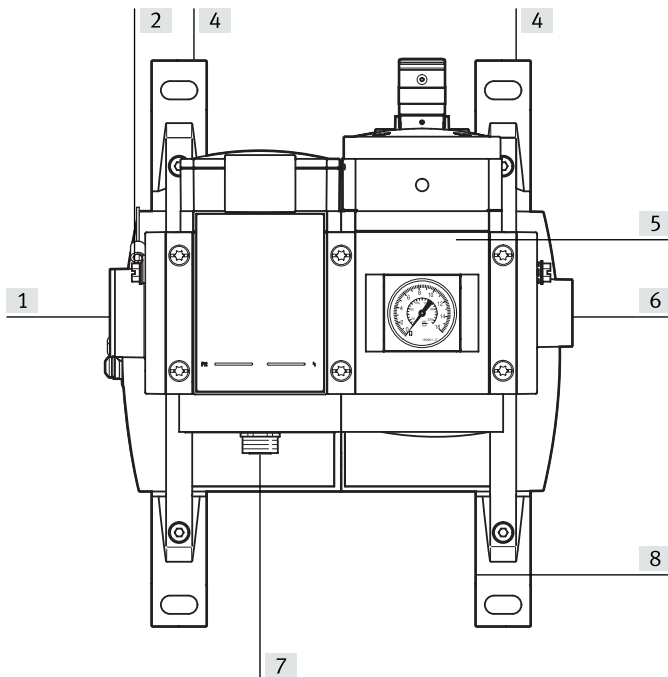
Pneumatic connection, port 1	G1/2, G3/4
Pneumatic connection, port 2	G1/2, G3/4
Mounting position	Horizontal +/-5°
Valve function	2/2 open, single solenoid

Electrical data – MSE6-D2M

Operating voltage DC load voltage	18 ... 28.8 V
Operating voltage range DC electronics/sensors	18 ... 30 V
Reverse polarity protection	For operating voltage connections
Degree of protection	IP65, With plug socket

Standard nominal flow rate – MSE6-D2M

Standard nominal flow rate (standardised to DIN 1343)[1]	4,500 l/min

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

Datasheet

Operating and environmental conditions – MSE6-D2M

Operating pressure	0.35 … 1.3 MPa
Operating pressure	3.5 … 13 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation not possible
Ambient temperature	0 … 50°C
Media temperature	0 … 50°C
Storage temperature	-10 … 60°C
Corrosion resistance class CRC [1]	–
CE mark (see declaration of conformity) [2]	To EU EMC Directive, In accordance with EU RoHS Directive
CE marking (see declaration of conformity)[3]	To UK instructions for EMC, To UK RoHS instructions
Approval	RCM trademark
KC mark	KC-EMV

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

2) More information www.festo.com/catalogue/mse6 → Support/Downloads. If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary

3) More information www.festo.com/catalogue/mse6 → Support/Downloads. If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary

Display/operation – MSE6-D2M

Start value for flow rate measuring range	50 l/min
End value for flow rate measuring range	5,000 l/min
Accuracy of flow rate	± (3% o.m.v. + 0.3% FS)
Start value for pressure measuring range	0 MPa
Start value for pressure measuring range	0 bar
Start value for pressure measuring range	0 psi
End value for pressure measuring range	1.4 MPa
End value for pressure measuring range	14 bar
End value for pressure measuring range	203 psi
Accuracy in ± % FS	3 %FS
Displayable units	kPa, l, l/min, m3, mbar, psi, scf, scfm

Materials – MSE6-D2M

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

Datasheet

General technical data – MSE6-E2M
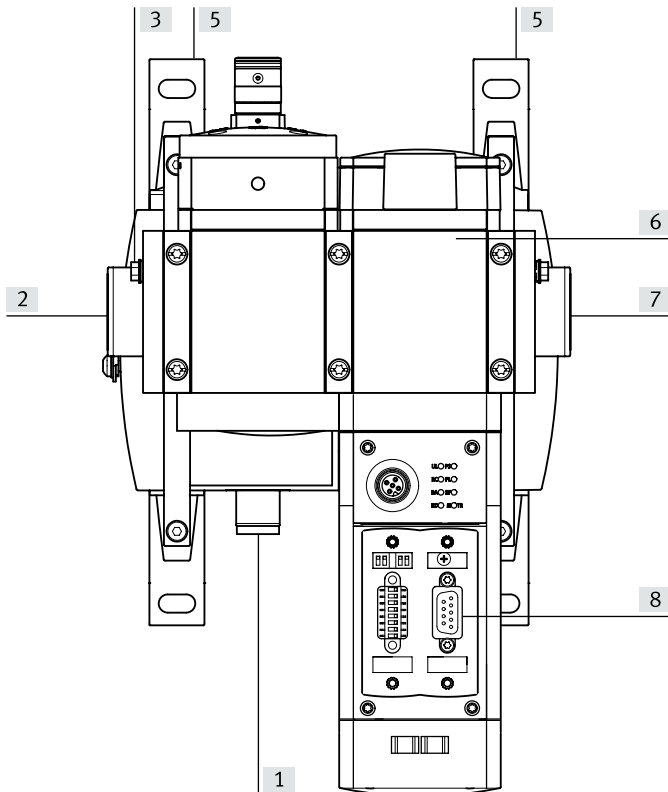
The MSE6-E2M consists of the following main components: shut-off valve, flow sensor, pressure sensor and bus node. The fieldbus interface enables it to be connected to a higher-order controller, e.g. a system or machine controller.

[1] System supply
[2] Pneumatic connection 1: Compressed air input
[3] Earth connection
[4] Shut-off valve for opening up and shutting off the system supply air
[5] Mounting bracket
[6] Sensor module for measuring pressure, flow rate and consumption
[7] Pneumatic connection 2: Compressed air output
[8] Fieldbus interface

Pneumatic connection, port 1 [1]	G1/2, G3/4
Pneumatic connection, port 2	G1/2, G3/4
Mounting position	Horizontal +/-5°
Valve function	2/2 open, single solenoid

1) Pneumatic connection 1, 2: G3/4 possible via sub-base

Electrical data – MSE6-E2M

Electrical actuation	Fieldbus node for PROFIBUS DP	Fieldbus node for Ethernet/IP	Fieldbus node for EtherCAT®	Bus node for PROFINET IO with M12 connection	Bus node for PROFINET IO with RJ45 connection
Electrical connection	4-pin, M18, Plugs				
Operating voltage DC load voltage	18 ... 26.4 V				
Operating voltage range DC electronics/sensors	18 ... 30 V				
Reverse polarity protection	For operating voltage connections				
Degree of protection	IP65, With plug socket				
Field bus interface	Sub-D socket, 9-pin	2x socket, M12x1, 4-pin, D-coded			2x RJ45 push-pull socket, AlDA

Standard nominal flow rate – MSE6-E2M

Standard nominal flow rate (standardised to DIN 1343)[1]	4,500 l/min

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

Datasheet

Operating and environmental conditions – MSE6-E2M

Operating pressure	0.35 ... 1 MPa
Operating pressure	3.5 ... 10 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation not possible
Ambient temperature	0 ... 50°C
Media temperature	0 ... 50°C
Storage temperature	-10 ... 60°C
Corrosion resistance class CRC [1]	–
CE mark (see declaration of conformity) [2]	To EU EMC Directive, In accordance with EU RoHS Directive
CE marking (see declaration of conformity)[3]	To UK instructions for EMC, To UK RoHS instructions
Approval	RCM trademark
KC mark	KC-EMV

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

2) More information www.festo.com/catalogue/mse6 → Support/Downloads. If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary

3) More information www.festo.com/catalogue/mse6 → Support/Downloads. If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary

Display/operation – MSE6-E2M

|	
Start value for flow rate measuring range	50 l/min
End value for flow rate measuring range	5,000 l/min
Accuracy of flow rate	± (3% o.m.v. + 0.3% FS)
Start value for pressure measuring range	0 MPa
Start value for pressure measuring range	0 bar
Start value for pressure measuring range	0 psi
End value for pressure measuring range	1.4 MPa
End value for pressure measuring range	14 bar
End value for pressure measuring range	203 psi
Accuracy in ± % FS	3 %FS
Displayable units	kPa, l, l/min, m3, mbar, psi, scf, scfm

Materials – MSE6-E2M

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

Dimensions

Dimensions – MSE6-C2M – fieldbus node FB43 for PROFINET IO with port M12x1, 4-pole

Download CAD data → www.festo.com
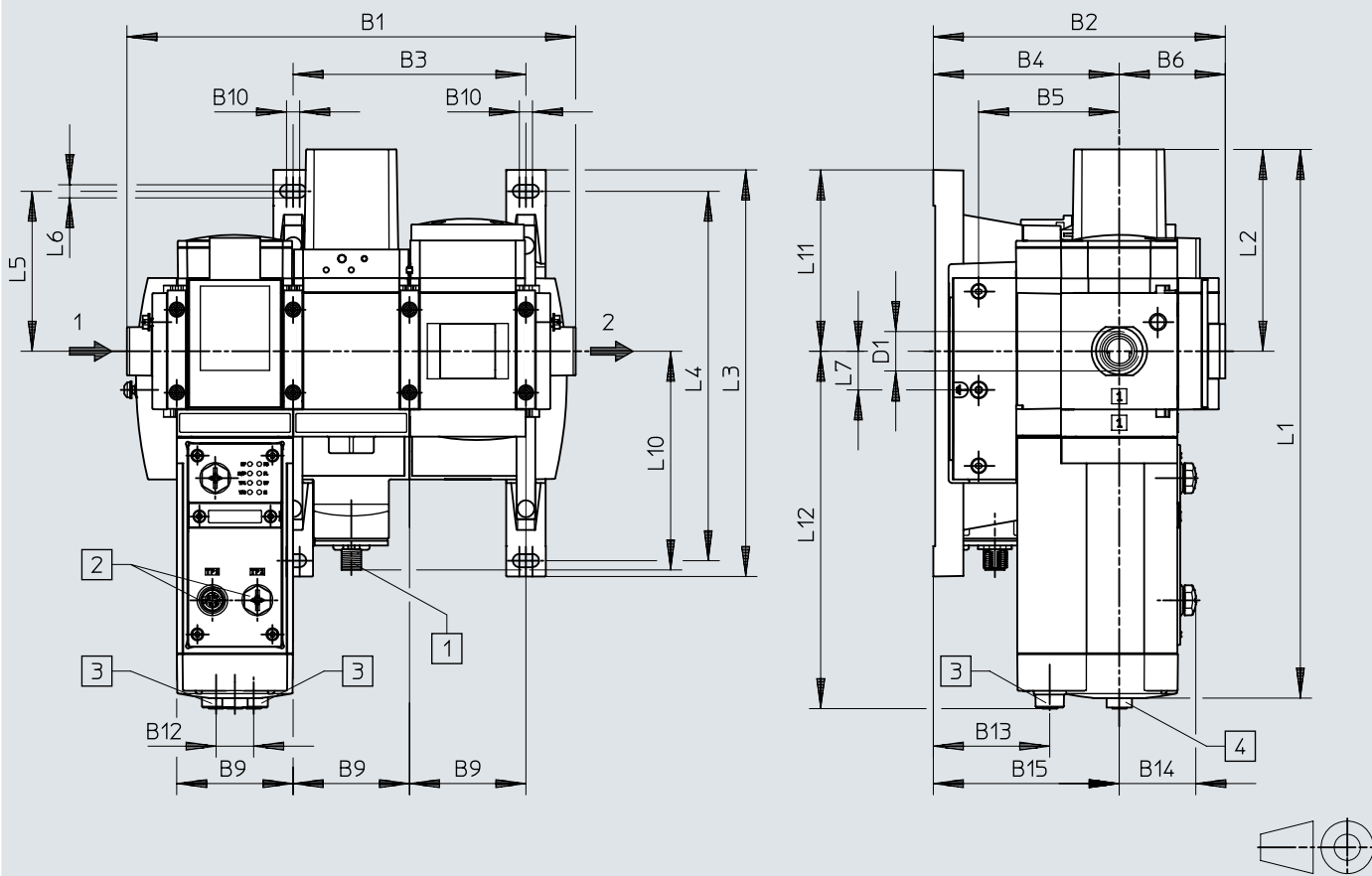
[1] M12L socket, 4/5-pin
[2] 2x M12x1 plug, 4-pin RJ45
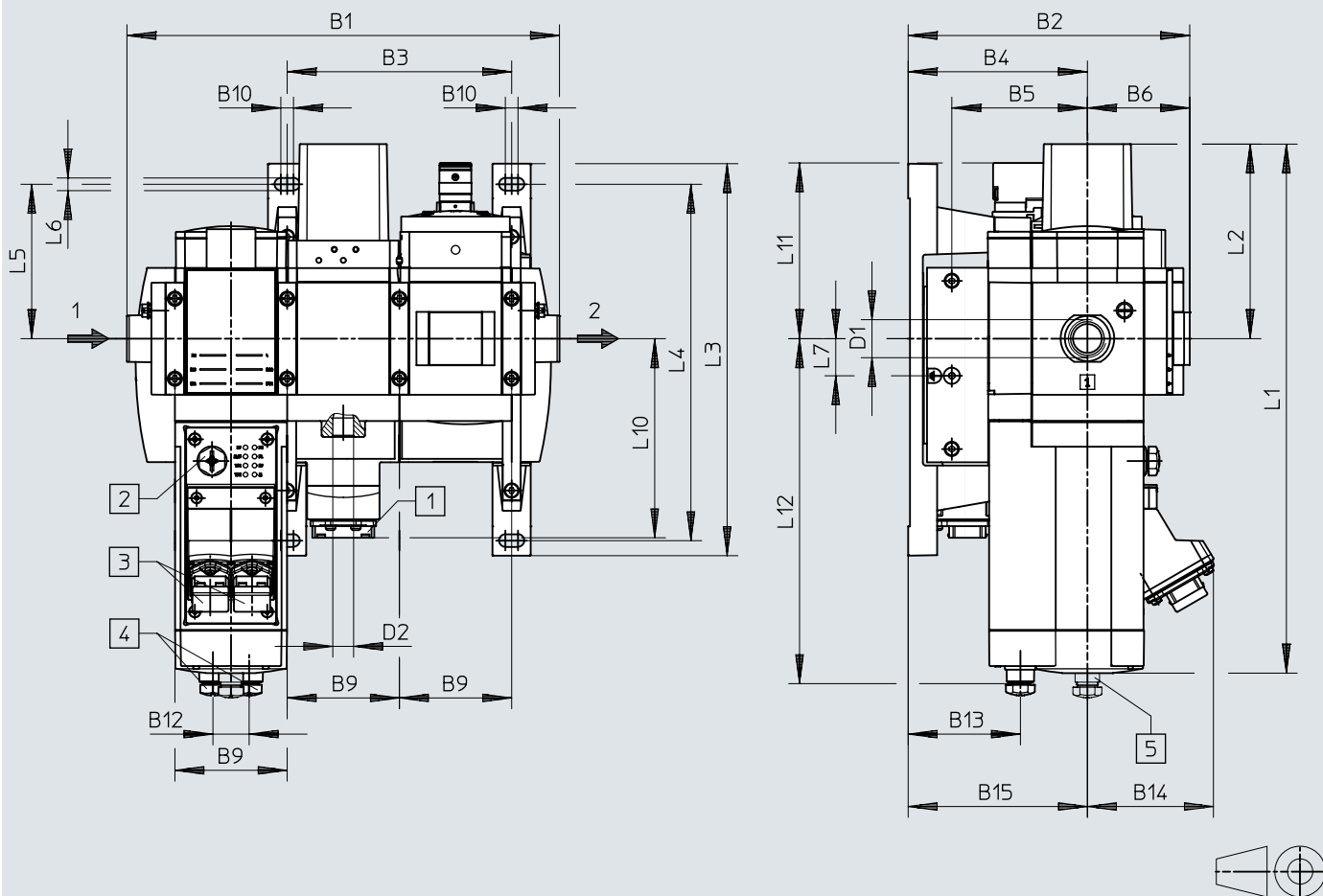[3] 2x M12x1 socket, 5-pin RJ45
[4] 2x M12x1 plug, 8-pin

	B1	B2	B3	B4	B5	B6	B9	B10	B12	B13	B14	B15
MSE6-C2M-...-FB43-...	239	155,5	124	99	74,9	56,5	62	7	20	62	40,8	99

	D1	L1	L2	L3	L4	L5	L6	L7	L10	L12
MSE6-C2M-...-FB43-...	G1/2	292,4	107,5	216,6	196,9	85,3	7	20,7	116,5	190,4

Dimensions

[1]   RJ45 push-pull socket, AIDA

[2]   5-pin plug M12x1

[3]   2x RJ45 push-pull socket, AIDA

[4]   2x M12x1 plug, 5-pin

[5]   M12x1 plug, 8-pin (only MSE6-C2M-...-FB44-D-M-RG)

	B1	B2	B3	B4	B5	B6	B9	B10	B12	B13	B14	B15
MSE6-C2M-...-FB44-D-RG	239	155,5	124	99	74,9	56,5	62	7	20	62	69,2	–
MSE6-C2M-...-FB44-D-M-RG												99

	D1	D2	L1	L2	L3	L4	L5	L6	L7	L10	L11	L12
MSE6-C2M-...-FB44-D-RG	G1/2	G1/4	292,4	107,5	216,6	196,9	85,3	7	20,6	110	97,2	190,4
MSE6-C2M-...-FB44-D-M-RG												

Dimensions

[1]   M12L socket, 4/5-pin

[2]   2x M12x1 plug, 4-pin RJ45

[3]   2x M12x1 socket, 5-pin RJ45

[4]   2x M12x1 plug, 8-pin

	B1	B2	B3	B4	B5	B6	B9	B10	B12	B13	B14	B15
MSE6-C2M-...-FB36/FB37-...	239	155,5	124	99	74,9	56,5	62	7	20	62	40,8	99

	D1	L1	L2	L3	L4	L5	L6	L7	L10	L11	L12
MSE6-C2M-...-FB36/FB37-...	G1/2	292,4	107,5	216,6	196,9	85,3	7	20,7	116,5	97,3	190,4

Dimensions
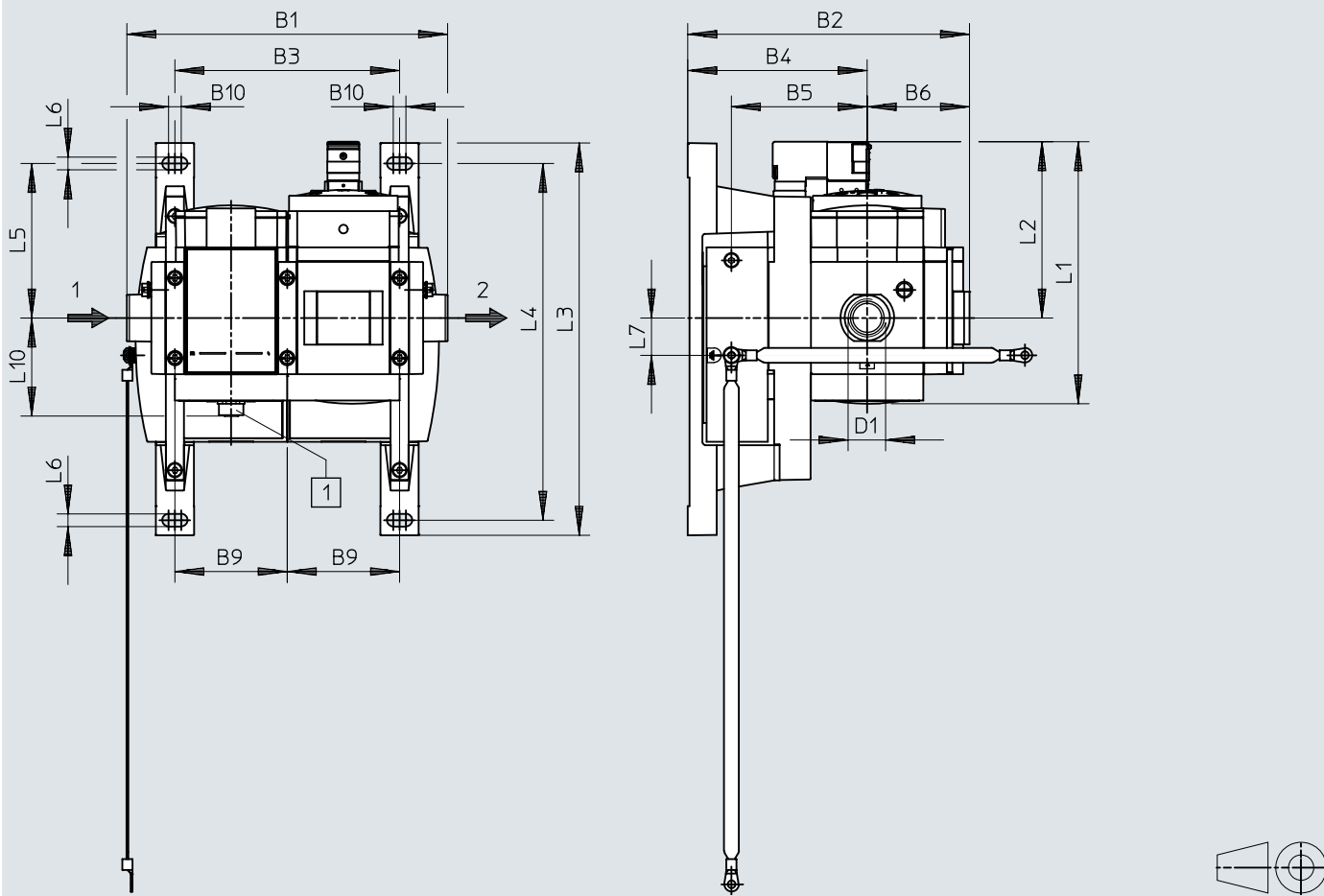
[1]   M12x1 plug, 8-pin

	B1	B2	B3	B4	B5	B6	B9	B10
MSE6-D2M-…-CBUS-S-RG	177	155,5	124	99	74,9	56,5	62	7

	D1	L1	L2	L3	L4	L5	L6	L7	L10
MSE6-D2M-…-CBUS-S-RG	G1/2	144,6	97,3	216,6	196,9	85,3	7	20,6	54,1

Dimensions

Dimensions – MSE6-E2M – fieldbus node FB13 for PROFIBUS DP   Download CAD data → www.festo.com
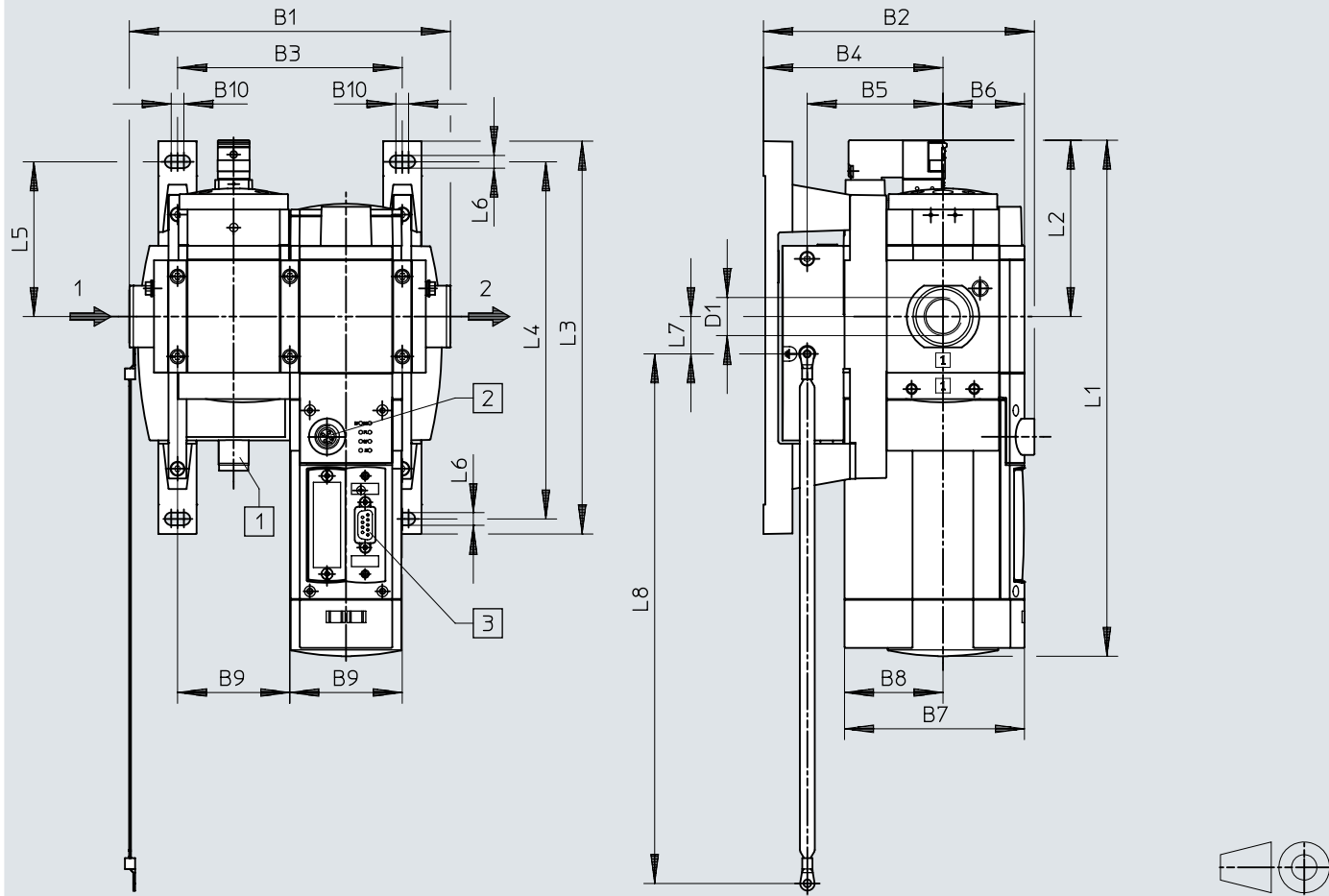
[1] M18x1 plug, 4-pin
[2] Socket M12x1, 5-pin
[3] Sub-D socket, 9-pin

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
MSE6-E2M-...-FB13	178	150	124	99	75	45	100	55	62	7

	D1	L1	L2	L3	L4	L5	L6	L7	L8
MSE6-E2M-...-FB13	G1/2	285	98	217	197	86	7	21	292

Dimensions

Dimensions – MSE6-E2M – fieldbus node FB43 for PROFINET IO with M12 port   Download CAD data → www.festo.com
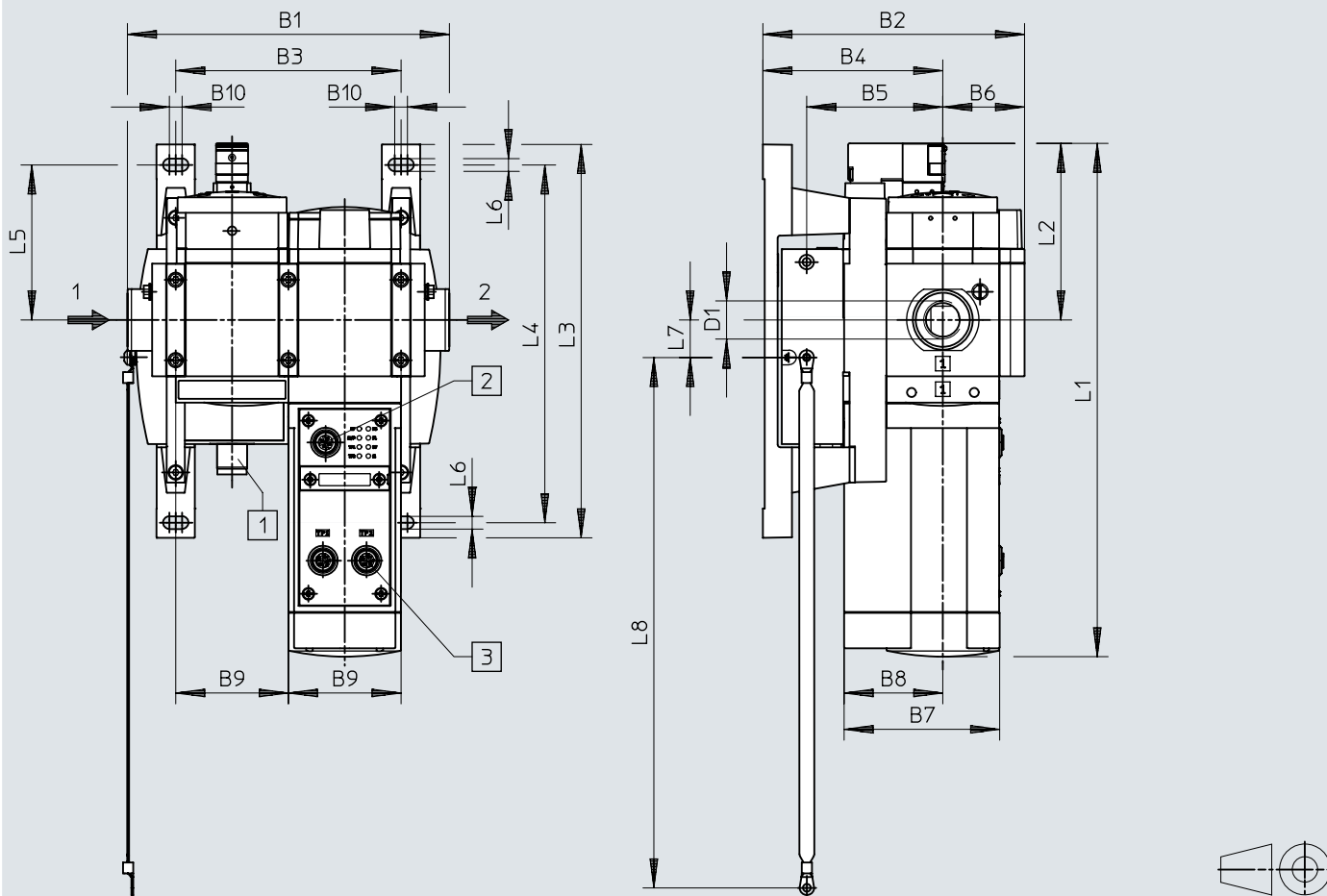
[1]   M18x1 plug, 4-pin
[2]   5-pin plug M12x1
[3]   2x socket M12x1, 4-pin, D-coded

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
MSE6-E2M-...-FB43	178	145	124	99	75	45	86	55	62	7

	D1	L1	L2	L3	L4	L5	L6	L7	L8
MSE6-E2M-...-FB43	G1/2	285	98	217	197	86	7	21	292

Dimensions

Dimensions – MSE6-E2M – fieldbus node FB44 for PROFINET IO with RJ45 connection

Download CAD data → www.festo.com
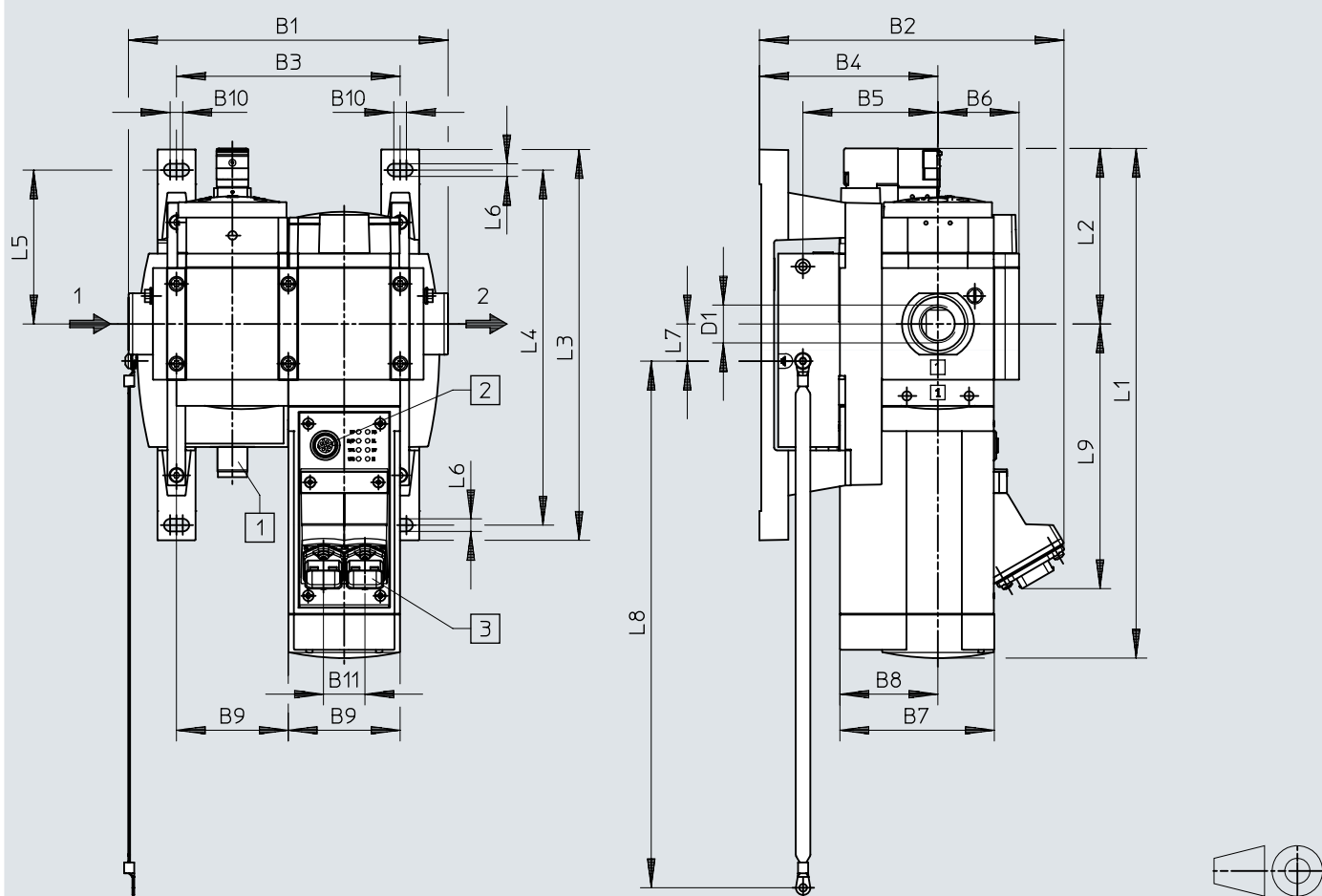
[1] M18x1 plug, 4-pin
[2] 5-pin plug M12x1
[3] MS6-E2M-...-FB44: 2x RJ45 push-pull socket, AIDA

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
MSE6-E2M-...-FB44	178	170	124	99	75	45	86	55	62	7	23

	D1	L1	L2	L3	L4	L5	L6	L7	L8	L9
MSE6-E2M-...-FB44	G1/2	285	98	217	197	86	7	21	292	147

Dimensions
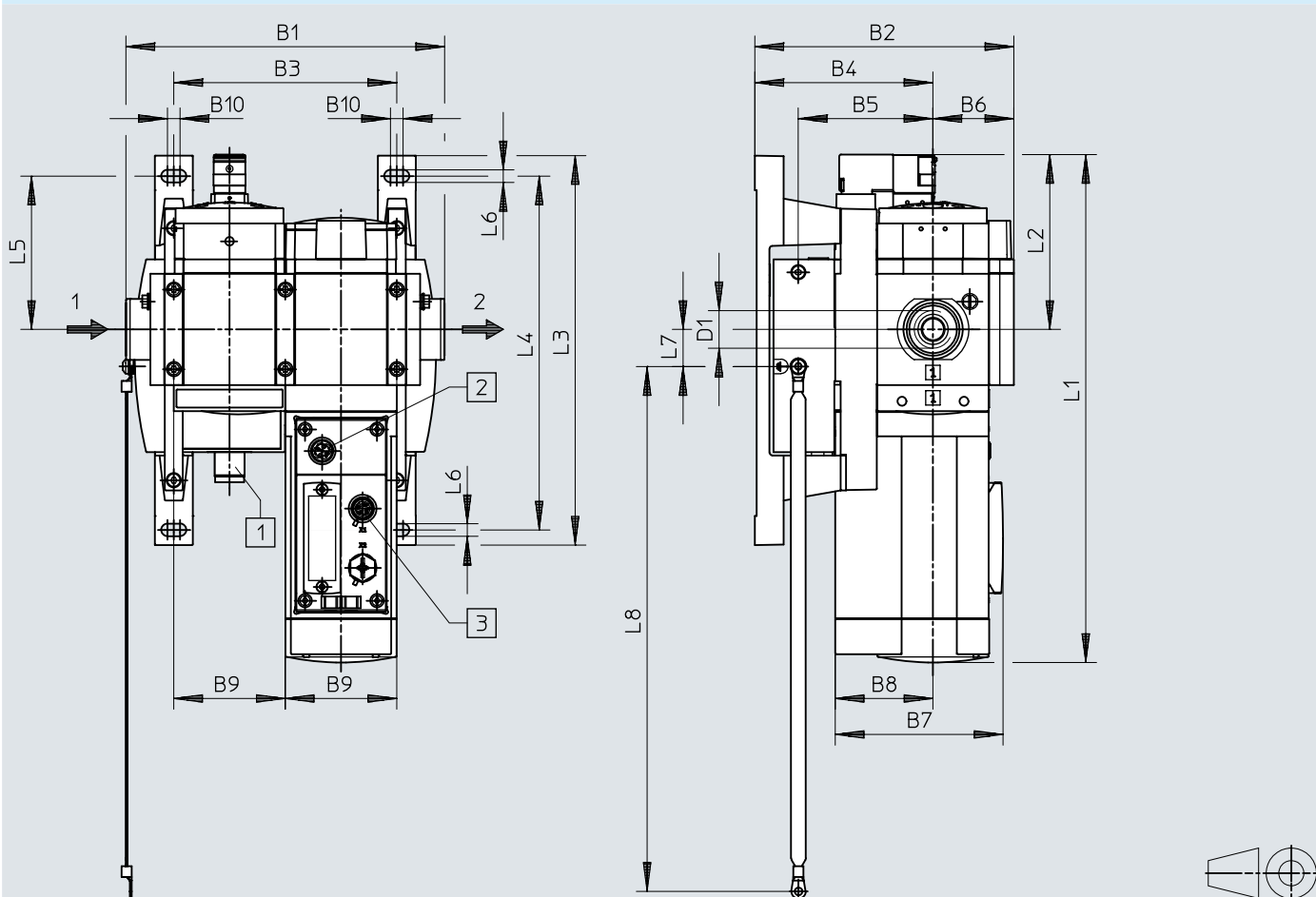
[1] M18x1 plug, 4-pin
[2] Socket M12x1, 5-pin
[3] 2x socket M12x1, 4-pin, D-coded

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
MSE6-E2M-...-FB36/FB37	178	145	124	99	75	45	94	55	62	7

	D1	L1	L2	L3	L4	L5	L6	L7	L8
MSE6-E2M-...-FB36/FB37	G1/2	285	98	217	197	86	7	21	292

Ordering data

Ordering data – MSE6-C2M-...-FB43/44

	Pneumatic connection, port 1	Electrical connection	Field bus interface	Product weight	Part no.	Type
	G1/2	5-pin, AIDA push-pull	2x RJ45 push-pull socket, AIDA	4,550 g	**8157909**	**MSE6-C2M-5000-FB44-D-RG-BAR-AMI-AGD**

Ordering data – MSE6-C2M-...-FB43/44 with CPX extension

	Pneumatic connection, port 1	Electrical connection	Field bus interface	Product weight	Part no.	Type
	G1/2	4-pin, M12x1, L-coded to EN 61076-2-111	2x socket, M12x1, 4-pin, D-coded	4,455 g	**8169407**	**MSE6-C2M-5000-FB43-D-M-RG-BAR-M12L4-MQ1-AGD**
		5-pin, AIDA push-pull	2x RJ45 push-pull socket, AIDA	4,550 g	**8157908**	**MSE6-C2M-5000-FB44-D-M-RG-BAR-AMI-AGD**
		5-pin, M12x1, L-coded to EN 61076-2-111	2x socket, M12x1, 4-pin, D-coded	4,455 g	**8157912**	**MSE6-C2M-5000-FB43-D-M-RG-BAR-M12L5-MQ1-AGD**

Ordering data – MSE6-C2M-...-FB36/37 with CPX extension

	Pneumatic connection, port 1	Electrical connection	Field bus interface	Product weight	Part no.	Type
	G1/2	4-pin, M12x1, L-coded to EN 61076-2-111	2x socket, M12x1, 4-pin, D-coded	4,395 g	**8169406**	**MSE6-C2M-5000-FB36-D-M-RG-BAR-M12L4-AGD**
		5-pin, M12x1, L-coded to EN 61076-2-111			**8157913**	**MSE6-C2M-5000-FB36-D-M-RG-BAR-M12L5-AGD**

Ordering data – MSE6-D2M

	Pneumatic connection, port 1	Product weight	Part no.	Type
	G1/2	2,700 g	**8085453**	**MSE6-D2M-5000-CBUS-S-RG-BAR-VCB-AGD**

Ordering data

Ordering data – MSE6-E2M-...-FB13 for PROFIBUS DP

	Pneumatic connection, port 1	Field bus interface	Product weight	Part no.	Type
	G1/2	Sub-D socket, 9-pin	3,300 g	**2465321**	**MSE6-E2M-5000-FB13-AGD**

Ordering data – MSE6-E2M-...-FB43/FB44 for PROFINET IO

	Pneumatic connection, port 1	Field bus interface	Product weight	Part no.	Type
	G1/2	2x socket, M12x1, 4-pin, D-coded	3,250 g	**8157910**	**MSE6-E2M-5000-FB43-AGD**
		2x RJ45 push-pull socket, AIDA	3,450 g	**8157911**	**MSE6-E2M-5000-FB44-AGD**
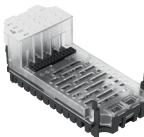
Ordering data – MSE6-E2M-...-FB36/37 for EtherNet/IP, EtherCAT®

	Pneumatic connection, port 1	Field bus interface	Product weight	Part no.	Type
	G1/2	2x socket, M12x1, 4-pin, D-coded	3,300 g	**3992150**	**MSE6-E2M-5000-FB37-AGD**
				3990296	**MSE6-E2M-5000-FB36-AGD**

Ordering data – Modular product system

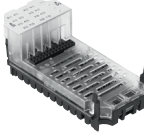|	Short type code		Part no.	Type
	MSE6		**2839638**	**MSE6**

Ordering data – Electronics modules, digital input modules

	Number of inputs	Switching logic for inputs	Nominal operating voltage DC	Product weight	Part no.	Type
	4	PNP (positive switching)	24 V	39 g	**195752**	**CPX-4DE**

Ordering data

Ordering data – Electronics modules, digital input modules						
	Number of inputs	Switching logic for inputs	Nominal operating voltage DC	Product weight	Part no.	Type
	8	PNP (positive switching)	24 V	39 g	**195750**	**CPX-8DE**

Ordering data – Electronic modules, digital output modules						
	Number of outputs	Switching logic for outputs	Nominal operating voltage DC	Product weight	Part no.	Type
	4	PNP (positive switching)	24 V	42 g	**195754**	**CPX-4DA**
	8			49 g	**541482**	**CPX-8DA**

Ordering data – Electronic modules, digital input/output modules						
	Number of inputs	Number of outputs	Switching logic for outputs	Product weight	Part no.	Type
	8	8	PNP (positive switching)	48 g	**526257**	**CPX-8DE-8DA**

Ordering data – Electronic modules, analogue modules						
	Number of inputs	Number of outputs	Nominal operating voltage DC	Product weight	Part no.	Type
		2	24 V	49 g	**526170**	**CPX-2AA-U-I**
	4			46 g	**573710**	**CPX-4AE-U-I**

Peripherals

Peripherals overview – MSE6-C2M
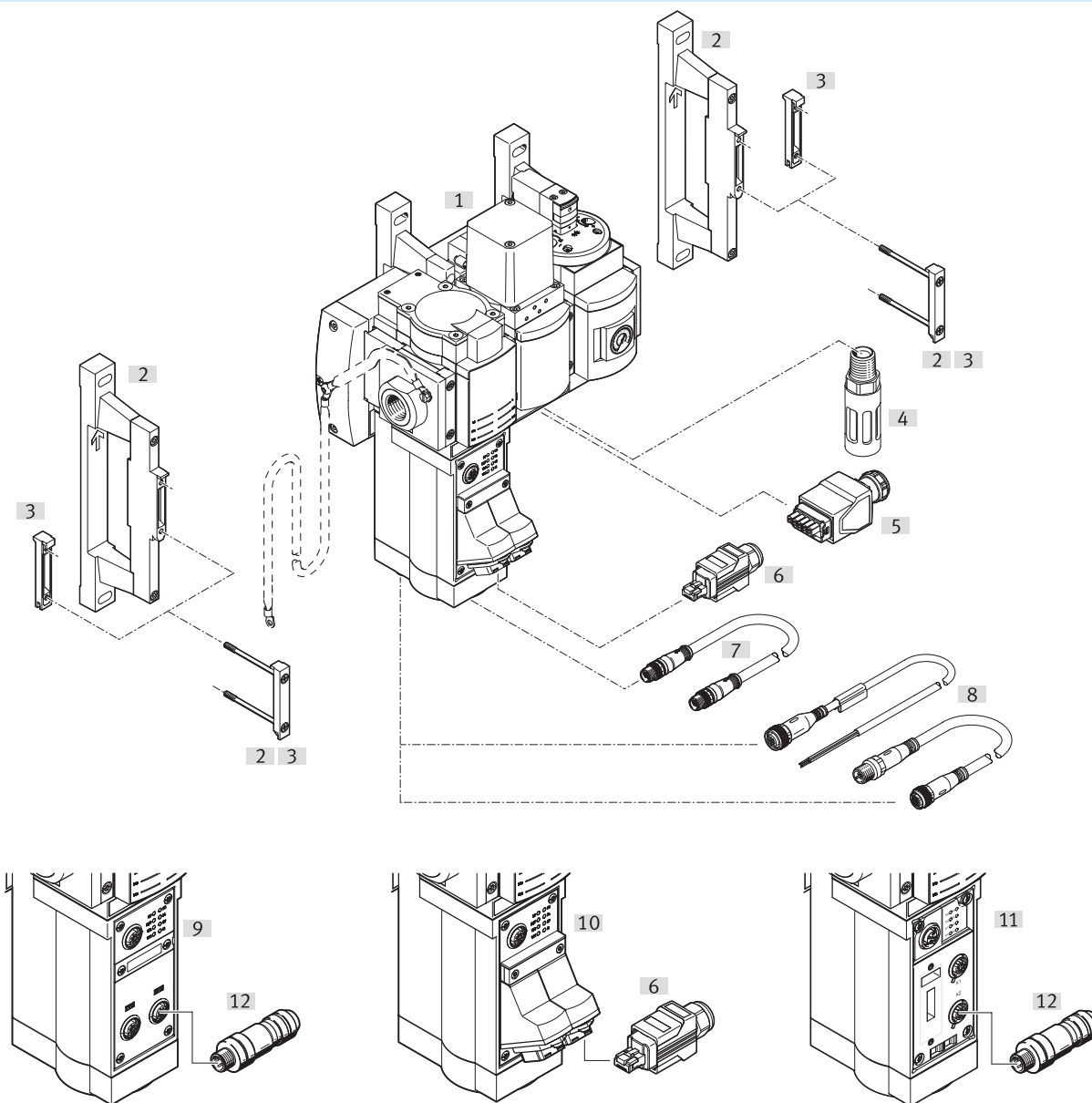
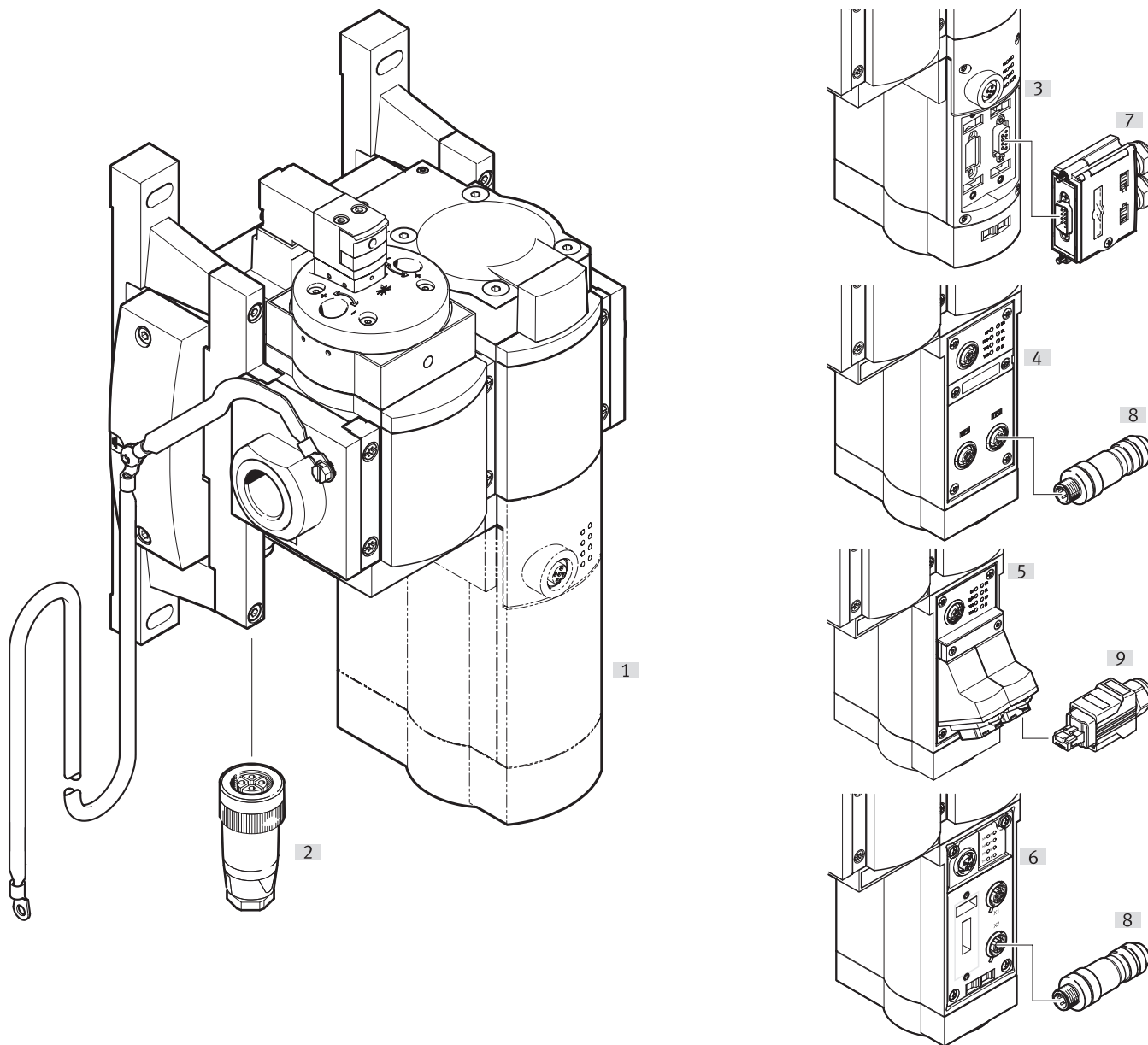| Accessories			→ Page/Internet
	Type/order code	Description	
[1]	Energy efficiency module MSE6-C2M		mse6-c2m
[2]	Wall mounting-SET MS6-WPG	Same wall gap for combinations with series MS6 and MSE6	25
[3]	Module connector MS6-MV-EX	For connecting the modules	25
[4]	Silencer U	For noise reduction	25
[5]	Power supply socket NECU-M-PP	For system supply	25
[6]	Plug FBS-RJ45	For bus node FB44 for PROFINET IO	
[7]	Connecting cable NEBC-F12G8	For CPX extension (only MSE6-C2M-...-M)	26
[8]	Connecting cable NEBU-M12	For electrical inputs/outputs	26
[9]	Fieldbus node FB43	For PROFINET IO with M12 connection	mse6-c2m
[10]	Fieldbus node FB44	For PROFINET IO with RJ45 connection	mse6-c2m
[11]	Fieldbus node FB36	For EtherNet/IP, Fieldbus node FB37 for EtherCAT®	mse6-c2m
[12]	Plug NECU-M-S-D12G4	For fieldbus node FB43 for PROFINET IO, fieldbus node FB36 for EtherNet/IP, fieldbus node FB37 For EtherCAT®	26

Peripherals

Peripherals overview – MSE6-D2M
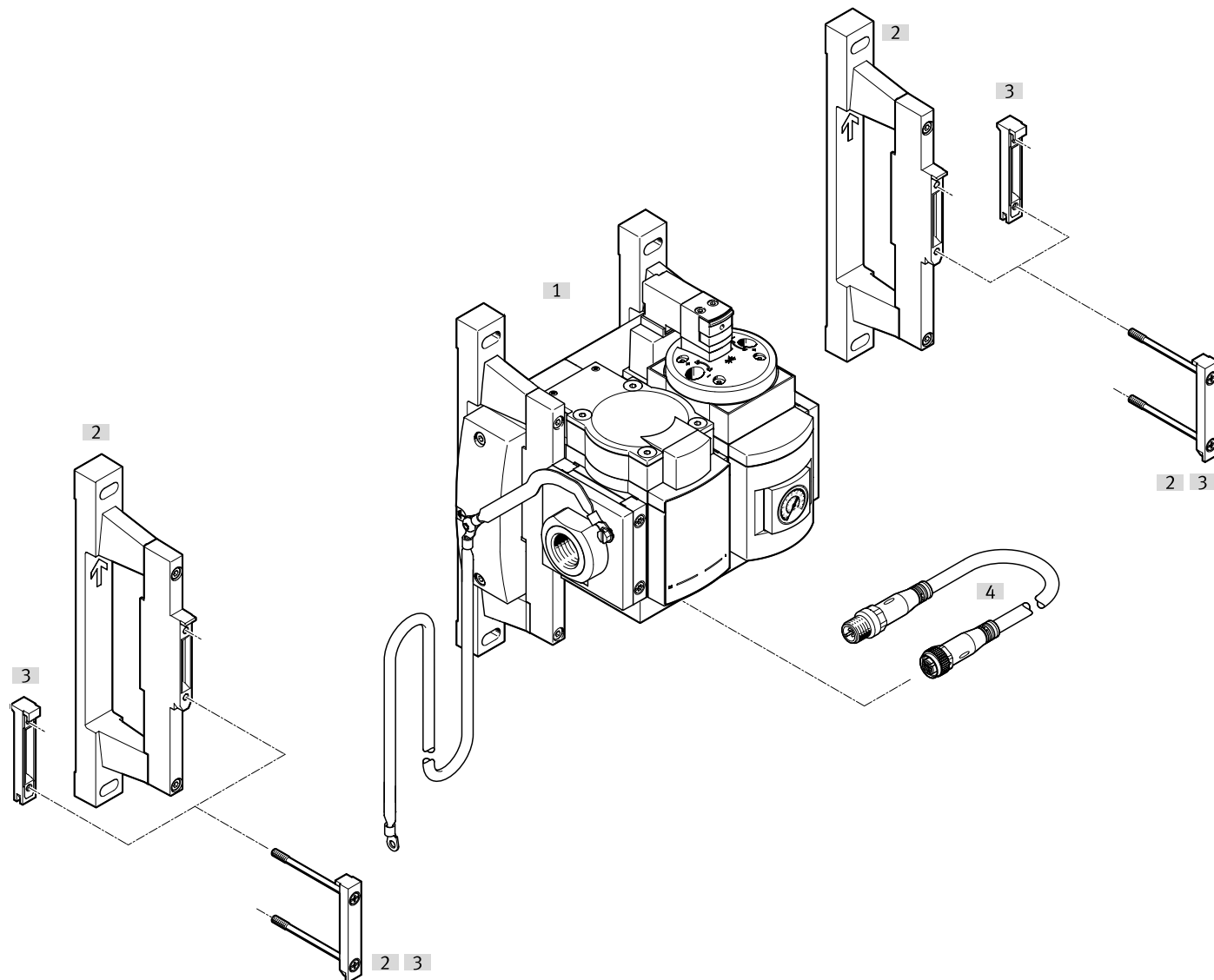
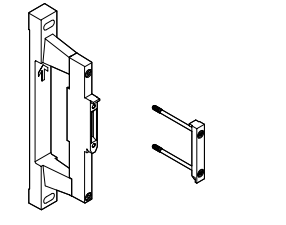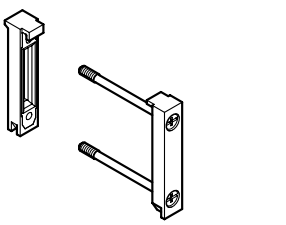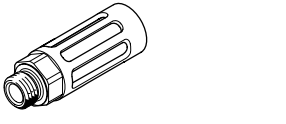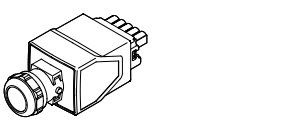| Accessories			→ Page/Internet
	Type/order code	Description	
[1]	Energy-efficiency module MSE6-D2M		mse6-d2m
[2]	Wall mounting-SET MS6-WPG	Same wall gap for combinations with series MS6 and MSE6	25
[3]	Module connector MS6-MV-EX	For connecting the modules	25
[4]	Connecting cable NEBC-F12G8	For CPX extension (only MSE6-C2M-…-M)	26

Peripherals

Peripherals overview – MSE6-E2M

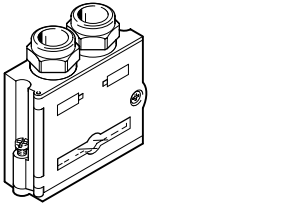| Accessories			→ Page/Internet
	Type/order code	Description	
[1]	Energy efficiency module MSE6-E2M		mse6-e2m
[2]	Plug socket NTSD	For system supply	26
[3]	Fieldbus node FB13	For PROFIBUS DP	mse6-e2m
[4]	Fieldbus node FB43	For PROFINET IO with M12 connection	mse6-e2m
[5]	Fieldbus node FB44	For PROFINET IO with RJ45 connection	mse6-e2m
[6]	Fieldbus node FB36	For EtherNet/IP, Fieldbus node FB37 for EtherCAT®	mse6-e2m
[7]	Plug FBS-SUB-9		25
[8]	Plug NECU-M-S-D12G4	For fieldbus node FB43 for PROFINET IO, fieldbus node FB36 for EtherNet/IP, fieldbus node FB37 For EtherCAT®	26
[9]	Plug FBS-RJ45	For bus node FB44 for PROFINET IO	
[10]	Wall mounting SET MS6-WPG	For same wall gap for combining series MS6 and MSE6 (without illustration)	25
[11]	Module connector MS6-MV-EX	For connecting the modules (without illustration)	25

Accessories

Wall mounting-SET MS6-WPG

	Short type code	Product weight	Part no.	Type
	MS6-WPG	245 g	**8072794**	**MS6-WPG**

Module connector MS6-MV-EX

	Short type code	Product weight	Part no.	Type
	MS6-MV-EX	54 g	**541543**	**MS6-MV-EX**
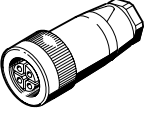
Silencer U

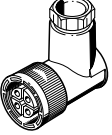|	Short type code	Product weight	Part no.	Type
	U	17 g	**6842**	**U-1/4-B**

Power supply socket NECU-M-PP

	Electrical connection 1, used connections/cores	Electrical connection 1, connector system	Additional functions	Product weight	Part no.	Type
	5	Connection pattern PP, coding on pins 2 and 5	Fulfils requirements according to AIDA	109 g	**5195383**	**NECU-M-PPG5PP-C1-PN**
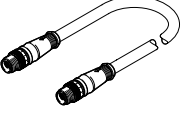
Plug FBS-RJ45

	Note on fieldbus interface	Product weight	Part no.	Type
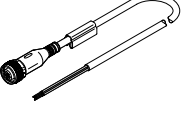
Plug FBS-SUB-9

	Field bus interface	Protocol	Product weight	Part no.	Type
	2x 2 spring-loaded terminals	PROFIBUS	60 g	**532216**	**FBS-SUB-9-GS-DP-B**
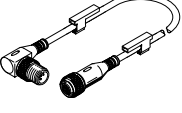
Accessories
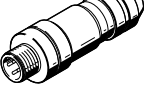
Plug socket NTSD (straight)

	Electrical connection	Operational voltage range AC	Product weight	Part no.	Type
	4-pin, Straight socket, Screw terminal	250 V	25 g	**18493**	**NTSD-GD-9**
			31 g	**18526**	**NTSD-GD-13,5**

Plug socket NTSD (angled)

	Electrical connection	Operational voltage range AC	Product weight	Part no.	Type
	4-pin, Angled socket, Screw terminal	250 V	30 g	**18527**	**NTSD-WD-9**

Connecting cable NEBC-F12G8

	Electrical connection 1, used connections/cores	Cable length	Product weight	Part no.	Type
	8	0.25 m	47 g	**564189**	**NEBC-F12G8-KH-0.25-N-S-F12G8**
		0.5 m	69 g	**564190**	**NEBC-F12G8-KH-0.5-N-S-F12G8**
		1 m	113 g	**564191**	**NEBC-F12G8-KH-1-N-S-F12G8**
		1.5 m	154 g	**564192**	**NEBC-F12G8-KH-1.5-N-S-F12G8**
		2 m	200 g	**576015**	**NEBC-F12G8-KH-2-N-S-F12G8**

Connecting cable NEBU-M12 – open end

	Electrical connection 2, connector system	Cable length	Product weight	Part no.	Type
	Open end	2.5 m	78 g	**541330**	**NEBU-M12G5-K-2.5-LE5**
			79 g	**567843**	**NEBU-M12W5-K-2.5-LE5**
		5 m	146 g	**541331**	**NEBU-M12G5-K-5-LE5**
			147 g	**567844**	**NEBU-M12W5-K-5-LE5**

Connecting cable NEBU-M12 – angled

	Electrical connection 2, connector system	Electrical connection 2, cable outlet	Cable length	Product weight	Part no.	Type
	M12x1, A-coded to EN 61076-2-101	Angled	0.5 m	37 g	**8003617**	**NEBU-M12G5-K-0.5-M12W5**
				38 g	**570733**	**NEBU-M12W5-K-0.5-M12W5**
			2 m	77 g	**8003618**	**NEBU-M12G5-K-2-M12W5**
				78 g	**570734**	**NEBU-M12W5-K-2-M12W5**

Plug NECU-M-S-D12G4

	Electrical connection 1	Electrical connection 2	Product weight	Part no.	Type
	Straight plug connector, M12x1, 4-pin, D-coded, screenable	Screw terminal, can be screened	44.3 g	**543109**	**NECU-M-S-D12G4-C2-ET**