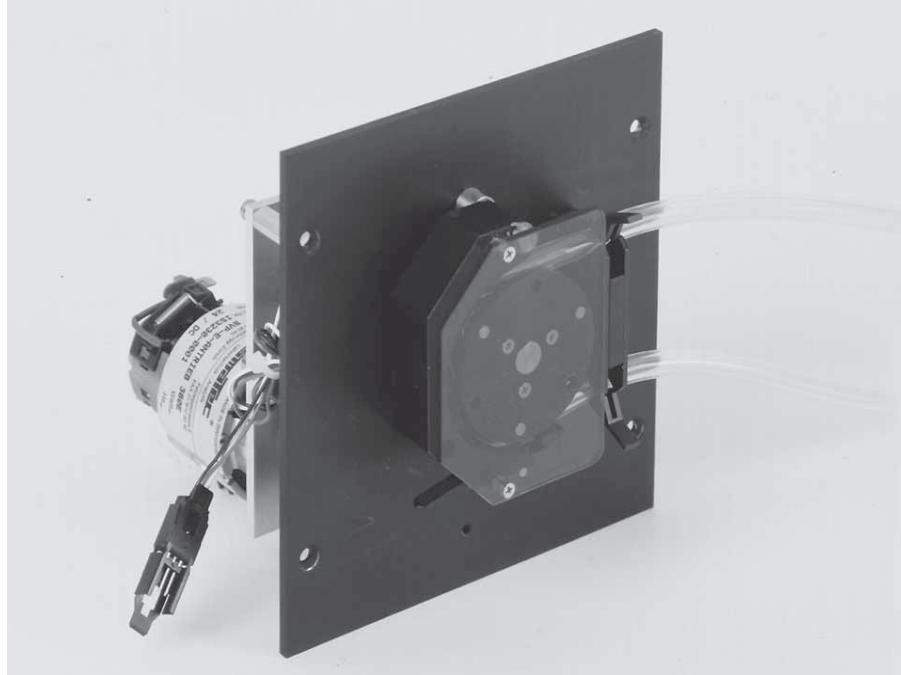
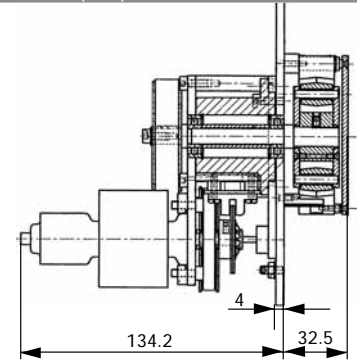


DC motor with optical encoder and gear box

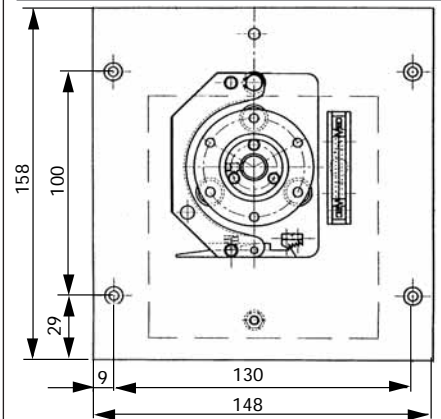
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

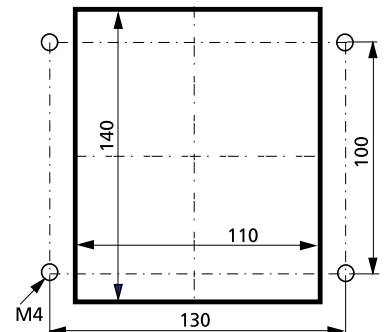
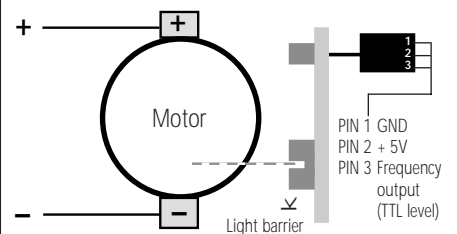


Diagram and electrical connections



Technical specifications	
Pump model	MCP-E 360
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4–240 rpm ^{a)} 1–240 rpm ^{b)}
Flow rates*	0.072–880 ml/min
Motor control*	optional control unit
Power consumption max.	67 W
Optical encoder	120 impulses/motor rev.
Channels	1
Pump rollers	3
Weight	1.5 kg
Tubing type	Standard tubing
Tubing i.d.	0.8–6.4 mm
*See 'Please note'	

Flow rates ¹⁾		
Tubing i.d. mm	Wall thickness mm	ml per revolution
0.8	1.6	0.072
1.6	1.6	0.26
3.2	1.6	1.0
4.8	1.6	2.2
6.4	1.6	3.7

¹⁾ Water, Tygon® tubing, without differential pressure

k Calculation example for flow rate

rpm x ml per revolution = ml/min

240 x 3.7 = 888

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E 360	Order No.
24 V _{DC}		IS 3230

***** Please note

Specifications valid for the following ISMATEC® control units:

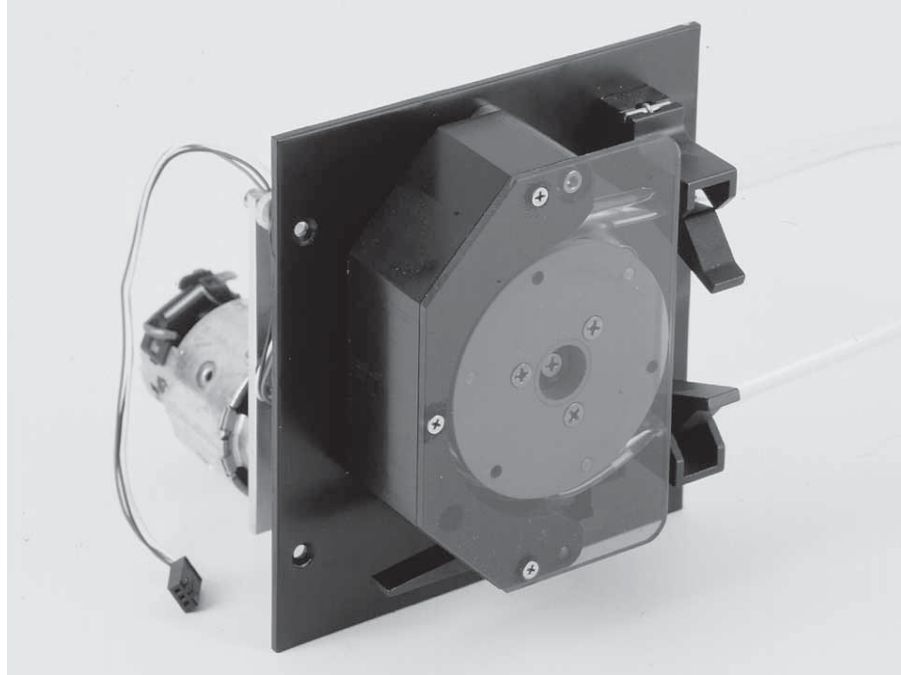
a) BVP-E - see data sheet 08.3

b) MCP-E - see data sheet 08.5

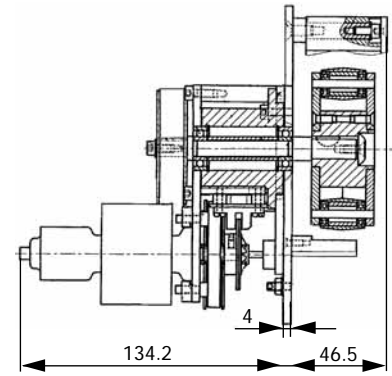
Data sheet
04.1
30.09.05

DC motor with optical encoder and gear box

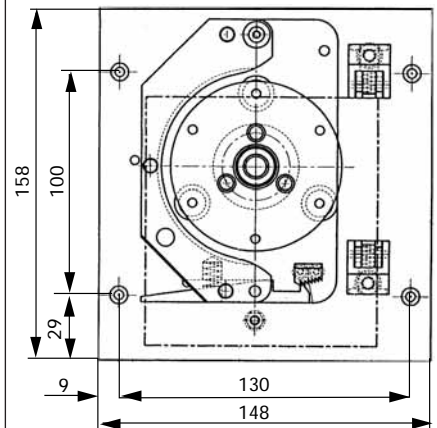
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

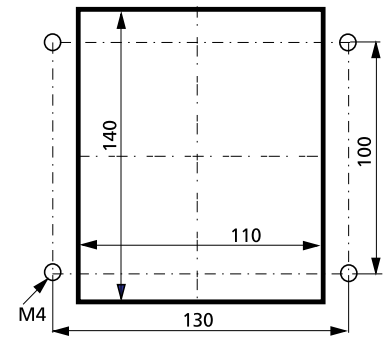
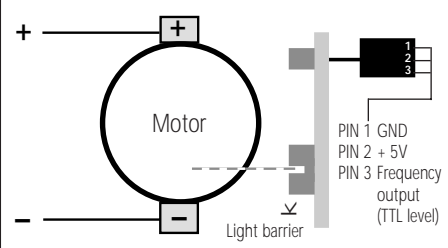


Diagram and electrical connections



Technical specifications	
Pump model	MCP-E 380
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4–240 rpm ^{a)} 1–240 rpm ^{b)}
Flow rates*	0.44–2800 ml/min
Motor control*	optional control unit
Power consumption	max. 67 W
Optical encoder	120 impulses/motor rev.
Channels	1
Pump rollers	3
Weight	2.0 kg
Tubing type	Standard tubing
Tubing i.d.	1.6–9.5 mm
*See 'Please note'	

Flow rates ¹⁾		
Tubing i.d. mm	Wall thickness mm	ml per revolution
1.6	1.6	0.44
3.2	1.6	1.7
4.8	1.6	3.6
6.4	1.6	6.0
8.0	1.6	8.8
9.5	1.6	12

¹⁾ Water, Tygon® tubing, without differential pressure

k Calculation example for flow rate
 rpm x ml per revolution = ml/min
 240 x 12 = 2880

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E 380	Order No.
24 V _{DC}		IS 3231

***** Please note

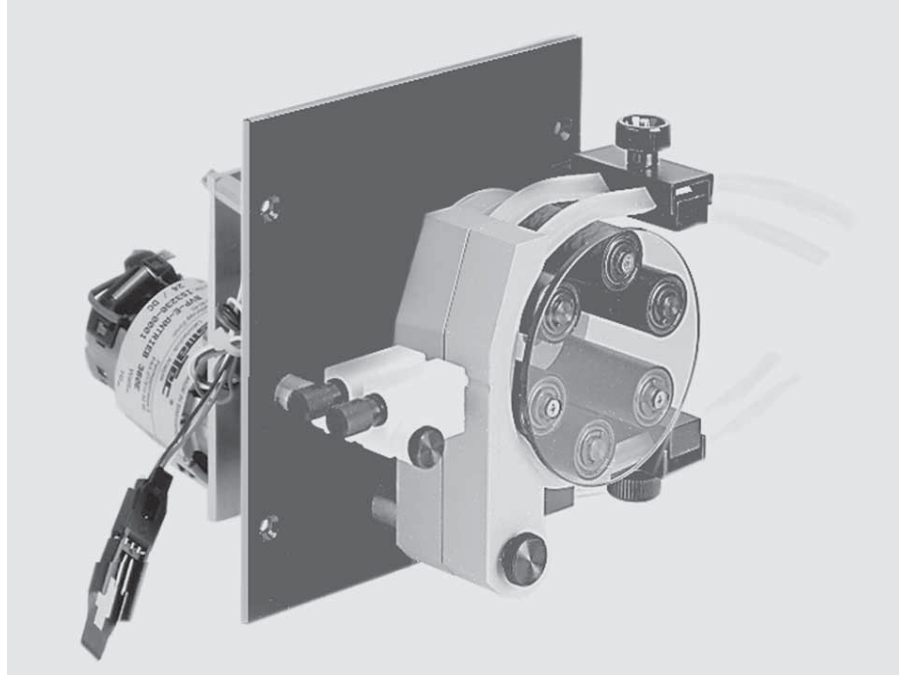
Specifications valid for the following ISMATEC® control units:

a) BVP-E - see data sheet 08.3
 b) MCP-E - see data sheet 08.5

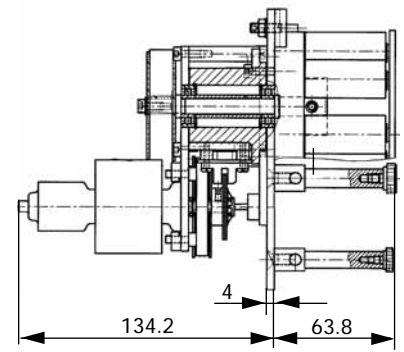
Data sheet
04.2
30.09.05

DC motor with optical encoder and gear box

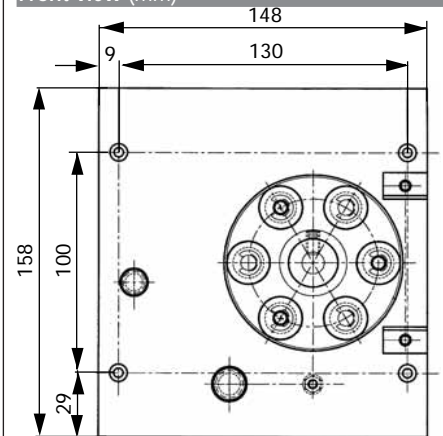
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

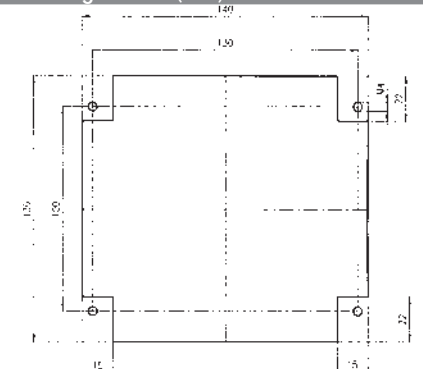
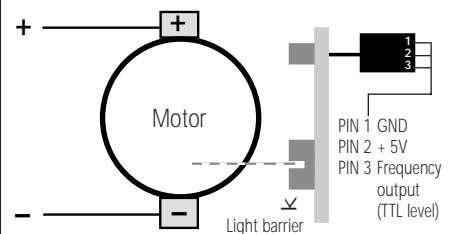


Diagram and electrical connections



***** Please note

Specifications valid for the following ISMATEC® control units:
 a) BVP-E - see data sheet 08.3
 b) MCP-E - see data sheet 08.5

Technical specifications

Pump model	MCP-E SB2V
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4–240 rpm ^{a)} 1–240 rpm ^{b)}
Flow rates*	1.1–1100 ml/min
Motor control*	optional control unit
Power consumption max.	67 W
Optical encoder	120 impulses/motor rev.
Channels	2
Pump rollers	6
Weight	1.5 kg
Tubing type	Standard tubing
Tubing i.d.	3.2–8.0 mm

*See 'Please note'

Flow rates¹⁾

Tubing i.d. mm	Wall thickness mm	ml per revolution
3.2	1.6	1.1
4.8	1.6	2.3
6.4	1.6	3.7
8.0	1.6	4.6

¹⁾ Water, Tygon® tubing, without differential pressure

k Calculation example for flow rate
 rpm x ml per revolution = ml/min
 240 x 4.6 = 1104

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E SB2V	Order No.
24 V _{DC}		IS 3202/ISM 010

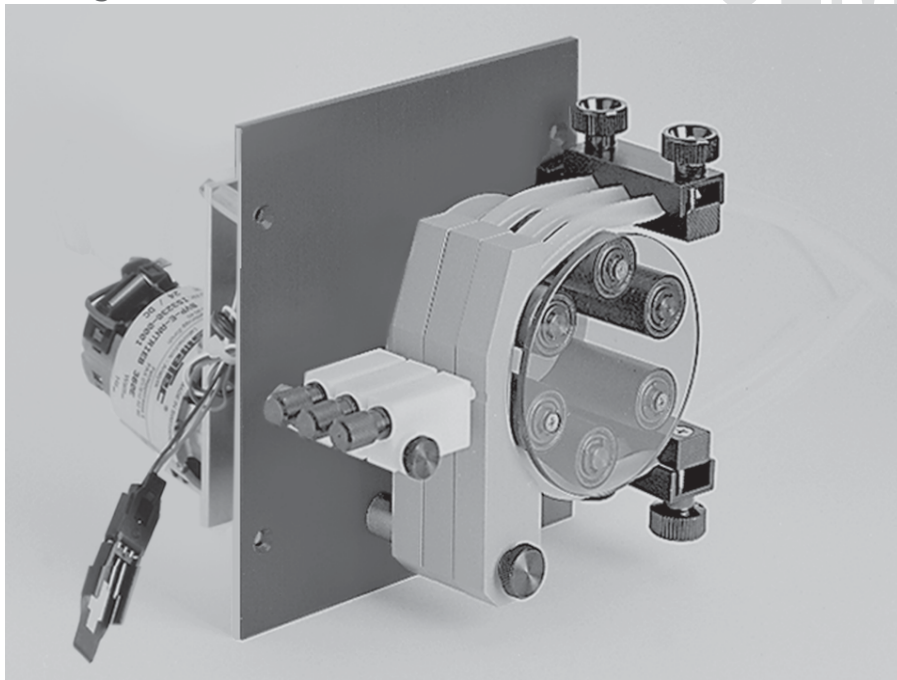
Data sheet

04.3

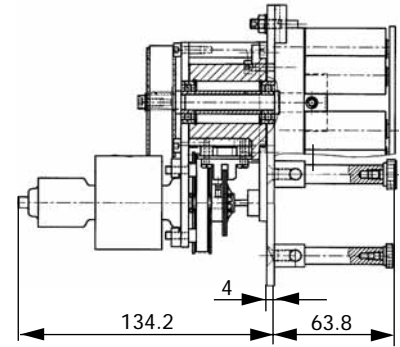
30.09.05

DC motor with optical encoder and gear box

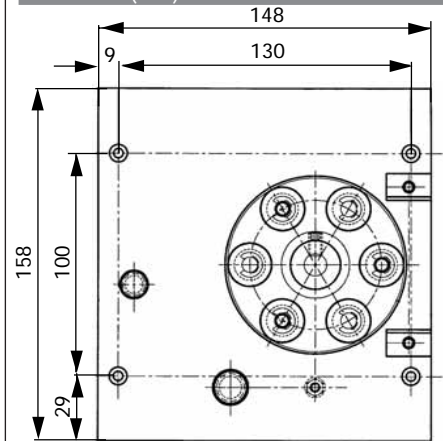
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

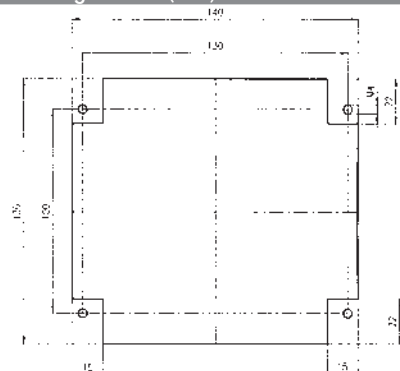
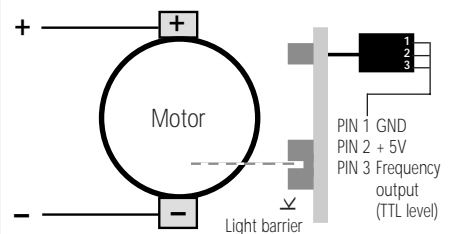


Diagram and electrical connections



*

Please note

Specifications valid for the following ISMATEC® control units:

- a) BVP-E - see data sheet 08.3
- b) MCP-E - see data sheet 08.5

Technical specifications

Pump model	MCP-E SB3V
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4–240 rpm ^{a)} 1–240 rpm ^{b)}
Flow rates*	0.09–520 ml/min
Motor control*	optional control unit
Power consumption max.	67 W
Optical encoder	120 impulses/motor rev.
Channels	3
Pump rollers	6
Weight	1.5 kg
Tubing type	Standard tubing
Tubing i.d.	0.8–4.8 mm

*See 'Please note'

Flow rates¹⁾

Tubing i.d. mm	Wall thickness mm	ml per revolution
0.8	1.6	0.09
1.6	1.6	0.26
3.2	1.6	0.99
4.8	1.6	2.2

¹⁾ Water, Tygon® tubing, without differential pressure

k Calculation example for flow rate
rpm x ml per revolution = ml/min
240 x 2.2 = 528

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

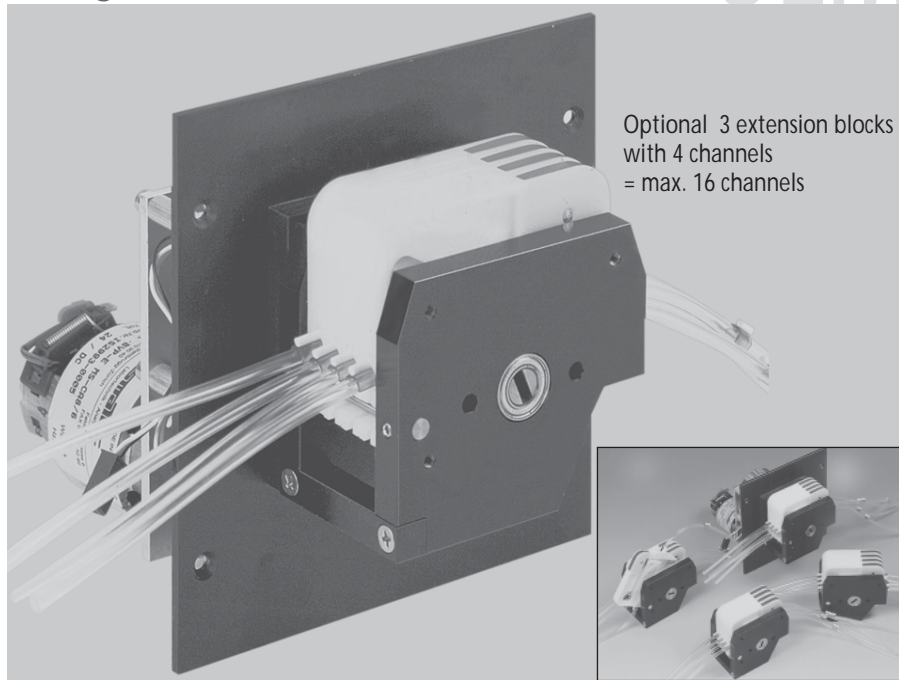
Nominal voltage	Type MCP-E SB3V	Order No.
24 V _{DC}		IS 3202/ISM 011

Data sheet

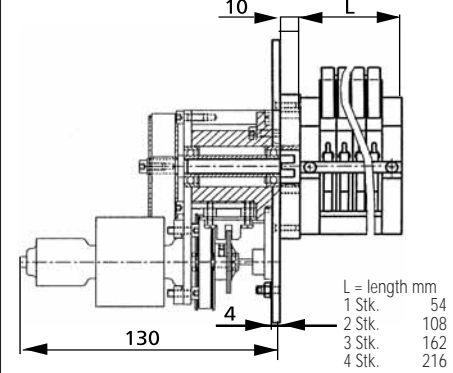
04.4
30.09.05

DC motor with optical encoder and gear box

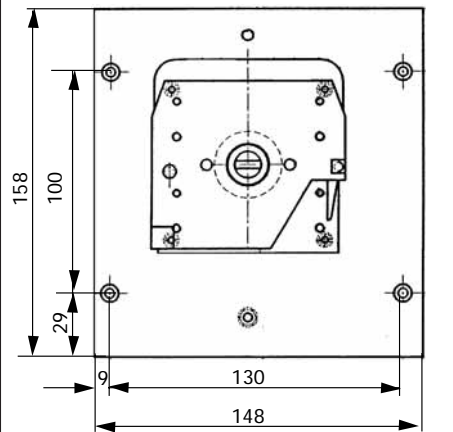
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

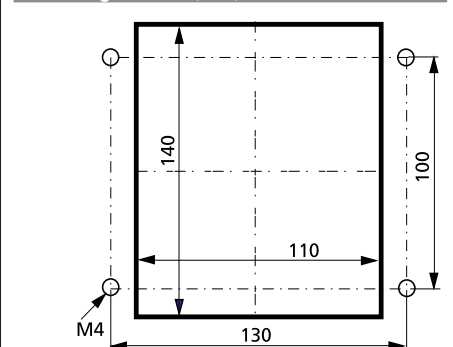
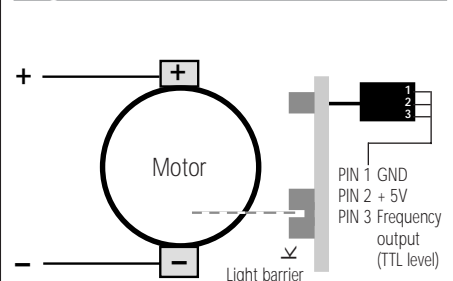


Diagram and electrical connections



Please note
Specifications valid for the following ISMATEC® control units:
a) BVP-E - see data sheet 08.3
b) MCP-E - see data sheet 08.5

Technical specifications	
Pump model	MCP-E MS/CA4-12
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4 -240 rpm ^{a)} 1 -240 rpm ^{b)}
Flow rates*	0.00093-57 ml/min
Motor control*	optional control unit
Power consumption	max. 67 W
Optical encoder	120 impulses/motor rev.
Channels	4-16
Pump rollers	12
Weight	1.6 kg
Tubing type	3-stop collared tubing
Tubing i.d.	0.13-3.17 mm
Cassettes	MS/CA Click'n'go, POM
*See 'Please note'	
Cassettes (Spare part / Option)	
IS 3510	MS/CA Click'n'go, POM-C ²⁾
IS 0649	MS/CA Pressure lever, POM-C
IS 3629	MS/CA Pressure lever, PVDF
²⁾ Standard equipment	
K Please see data sheet 09.1	

Flow rates ¹⁾			
Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.00093	1.14	0.067
0.19	0.0021	1.22	0.075
0.25	0.0038	1.30	0.083
0.38	0.0088	1.42	0.094
0.44	0.012	1.52	0.10
0.51	0.016	1.65	0.12
0.57	0.019	1.75	0.13
0.64	0.024	1.85	0.13
0.76	0.033	2.06	0.15
0.89	0.044	2.29	0.17
0.95	0.050	2.54	0.19
1.02	0.056	2.79	0.21
1.09	0.063	3.17	0.24

¹⁾ Water, Tygon® tubing, without differential pressure

K Calculation example for flow rate
 rpm x ml per revolution = ml/min
 240 x 0.24 = 57.6

Ask for the ISMATEC® Pump Tubing Selection Guide.

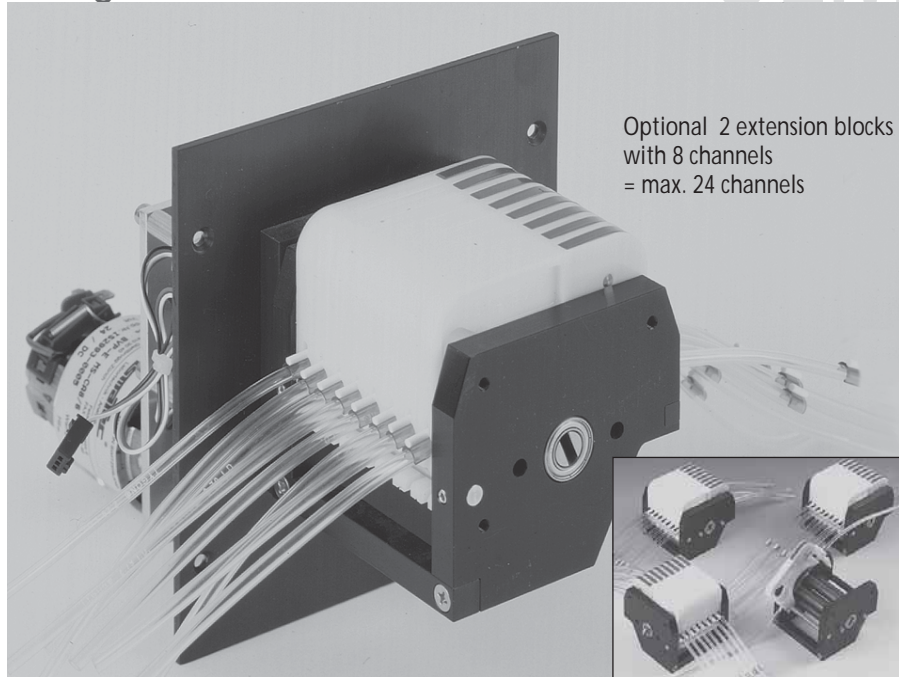
Ordering information

Nominal voltage	Type MCP-E MS/CA4-12	Order No.	1 Extension MS/CA4-12
24 V _{DC}		IS 3967	ISM 737

Data sheet
04.5
30.09.05

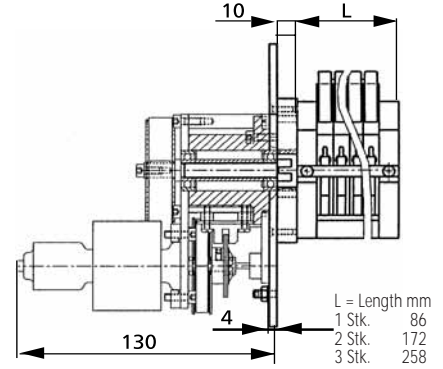
DC motor with optical encoder and gear box

OEM

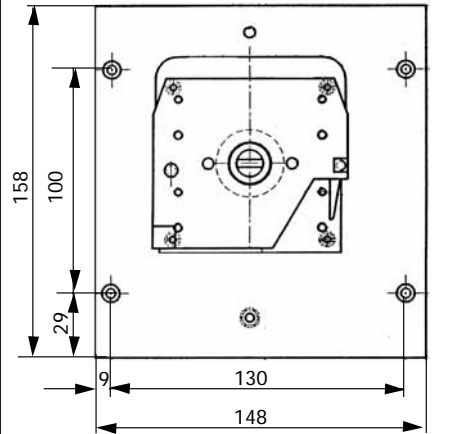


Optional 2 extension blocks with 8 channels = max. 24 channels

Side view (mm)



Front view (mm)



Mounting cut-out (mm)

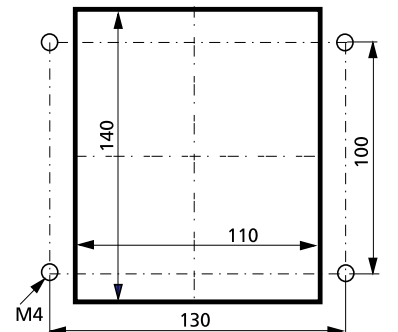
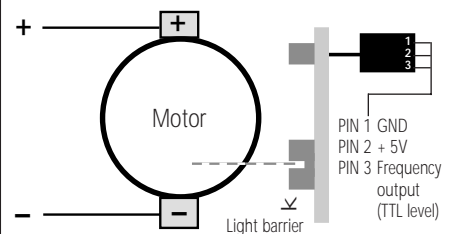


Diagram and electrical connections



Technical specifications

Pump model	MCP-E MS/CA8-6
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4 -240 rpm ^{a)} 1 -240 rpm ^{b)}
Flow rates	0.0014-100 ml/min
Motor control*	optional control unit
Power consumption	max. 67 W
Optical encoder	120 impulses/motor rev.
Channels	8-24
Pump rollers	6
Weight	1.7 kg
Tubing type	3-stop collared tubing
Tubing i.d.	0.13-3.17 mm
Cassettes	MS/CA Click'n'go, POM

*See 'Please note'

Cassettes (Spare part / Option)
IS 3510 MS/CA Click'n'go, POM-C²⁾
IS 0649 MS/CA Pressure lever, POM-C
IS 3629 MS/CA Pressure lever, PVDF²⁾
²⁾ Standard equipment
k Please see data sheet 09.1

Flow rates¹⁾

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0014	1.14	0.09
0.19	0.0028	1.22	0.10
0.25	0.0048	1.30	0.11
0.38	0.011	1.42	0.13
0.44	0.014	1.52	0.15
0.51	0.019	1.65	0.17
0.57	0.024	1.75	0.19
0.64	0.030	1.85	0.21
0.76	0.042	2.06	0.25
0.89	0.057	2.29	0.29
0.95	0.064	2.54	0.33
1.02	0.073	2.79	0.37
1.09	0.083	3.17	0.43

¹⁾ Water, Tygon® tubing, without differential pressure

k Calculation example for flow rate
rpm x ml per revolution = ml/min
240 x 0.43 = 103.2

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E MS/CA8-6
	Order No.
24 V _{DC}	1 Extension MS/CA8-6
	IS 2993
	ISM 185

Data sheet

04.6

30.09.05

*

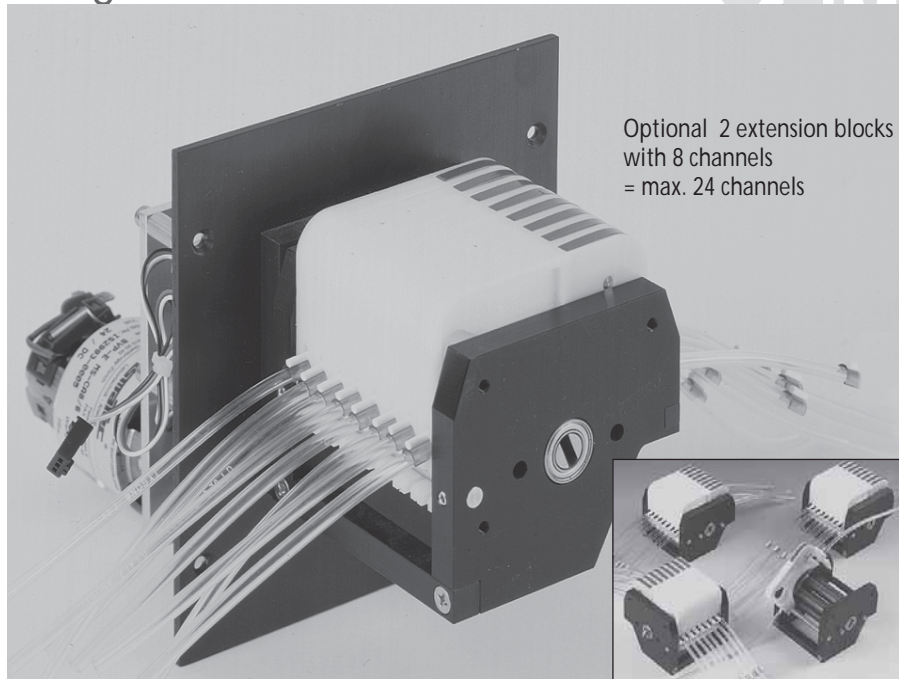
Please note

Specifications valid for the following ISMATEC® control units:

- a) BVP-E - see data sheet 08.3
- b) MCP-E - see data sheet 08.5

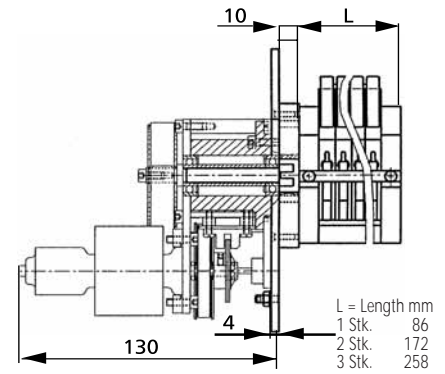
DC motor with optical encoder and gear box

OEM

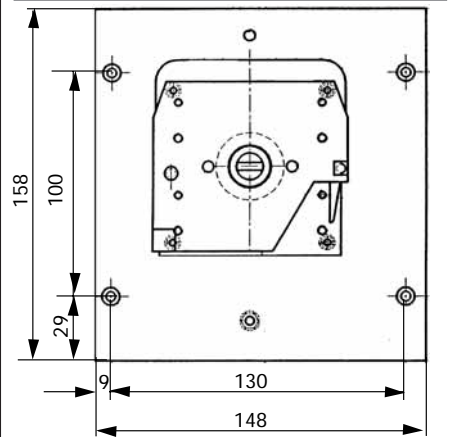


Optional 2 extension blocks with 8 channels = max. 24 channels

Side view (mm)



Front view (mm)



Mounting cut-out (mm)

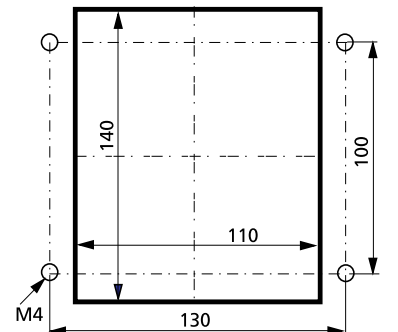
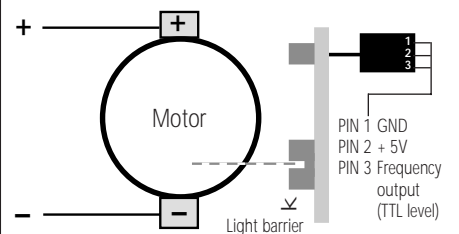


Diagram and electrical connections



Technical specifications

Pump model	MCP-E MS/CA8-8
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4 -240 rpm ^{a)} 1 -240 rpm ^{b)}
Flow rates	0.0011-84 ml/min
Motor control*	optional control unit
Power consumption	max. 67 W
Optical encoder	120 impulses/motor rev.
Channels	8-24
Pump rollers	8
Weight	1.7 kg
Tubing type	3-stop collared tubing
Tubing i.d.	0.13-3.17 mm
Cassettes	MS/CA Click'n'go, POM

*See 'Please note'

Cassettes (Spare part / Option)
 IS 3510 MS/CA Click'n'go, POM-C²⁾
 IS 0649 MS/CA Pressure lever, POM-C
 IS 3629 MS/CA Pressure lever, PVDF²⁾
²⁾ Standard equipment
 k Please see data sheet 09.1

Flow rates¹⁾

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0011	1.14	0.078
0.19	0.0023	1.22	0.088
0.25	0.0041	1.30	0.098
0.38	0.0094	1.42	0.11
0.44	0.013	1.52	0.13
0.51	0.017	1.65	0.15
0.57	0.021	1.75	0.16
0.64	0.026	1.85	0.17
0.76	0.036	2.06	0.20
0.89	0.049	2.29	0.24
0.95	0.056	2.54	0.27
1.02	0.063	2.79	0.31
1.09	0.072	3.17	0.35

¹⁾ Water, Tygon® tubing, without differential pressure

k Calculation example for flow rate
 rpm x ml per revolution = ml/min
 240 x 0.35 = 84.0

Ask for the ISMATEC®
 Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E MS/CA8-8	Order No.	1 Extension MS/CA8-8
24 V _{DC}		IS 3198	ISM 184

Data sheet

04.7

30.09.05

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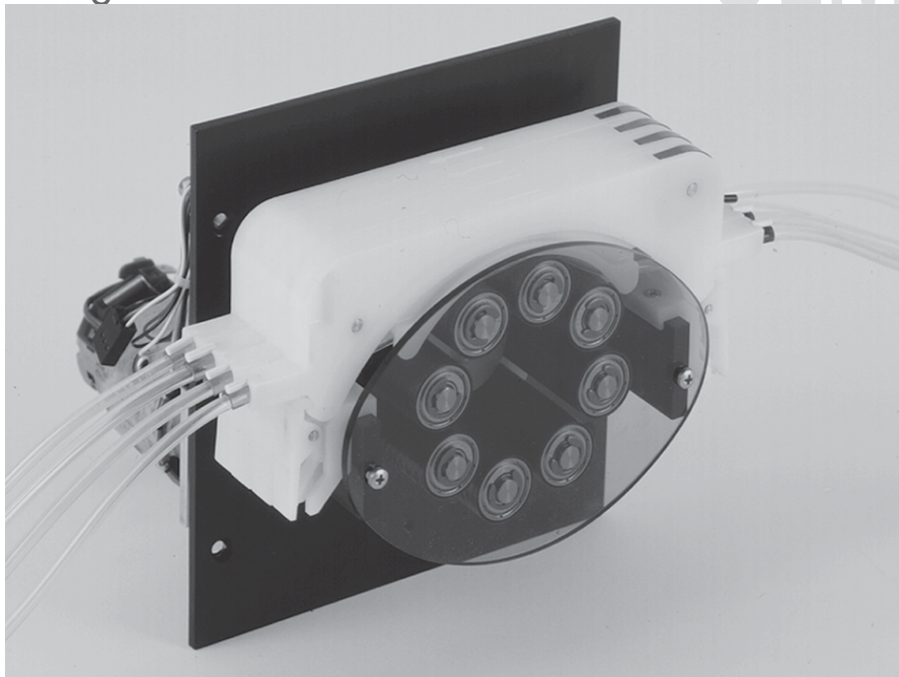
Please note

Specifications valid for the following ISMATEC® control units:

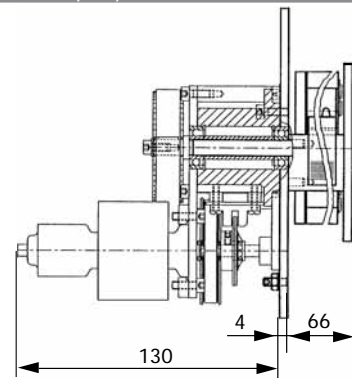
- a) BVP-E - see data sheet 08.3
- b) MCP-E - see data sheet 08.5

DC motor with optical encoder and gear box

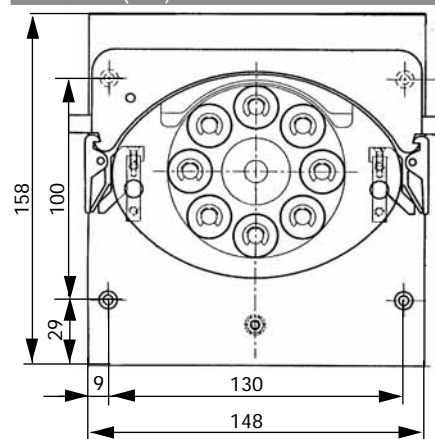
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

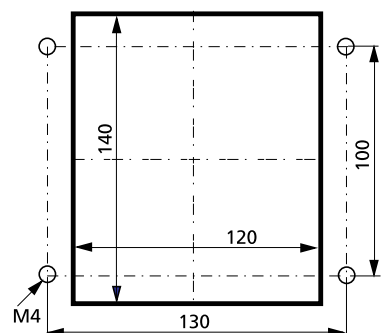
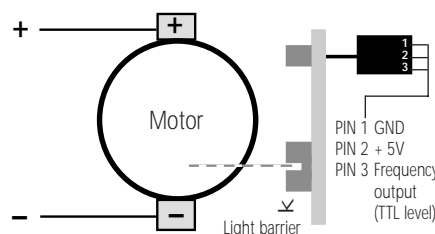


Diagram and electrical connections



***** Please note

Specifications valid for the following ISMATEC® control units:

- a) BVP-E - see data sheet 08.3
- b) MCP-E - see data sheet 08.5

Technical specifications

Pump model	MCP-E CA4
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4 –240 rpm ^{a)} 1 –240 rpm ^{b)}
Flow rates*	0.002–230 ml/min
Motor control*	optional control unit
Power consumption	max. 67 W
Optical encoder	120 impulses/motor rev.
Channels	4
Pump rollers	8
Weight	1.7 kg
Tubing type	2-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	CA Click'n'go, POM

*See 'Please note'

- Cassettes (Spare part / Option)
- IS 3710 CA Click'n'go, POM-C²⁾
 - IS 0122 CA Anpresshebel, POM-C
 - IS 3820 CA Anpresshebel, PVDF
 - IS 0123 Adaptor (1 pcs.), POM-C
 - IS 3861 Adaptor (1 pcs.), PVDF

²⁾ Standard equipment

K Please see data sheet 09.1

Flow rates¹⁾

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0013	1.14	0.16
0.19	0.0039	1.22	0.18
0.25	0.0076	1.30	0.20
0.38	0.019	1.42	0.23
0.44	0.025	1.52	0.26
0.51	0.034	1.65	0.30
0.57	0.042	1.75	0.33
0.64	0.053	1.85	0.36
0.76	0.074	2.06	0.43
0.89	0.10	2.29	0.51
0.95	0.11	2.54	0.62
1.02	0.13	2.79	0.74
1.09	0.14	3.17	0.94

¹⁾ Water, Tygon® tubing, without differential pressure

K Calculation example for flow rate

$$\text{rpm} \times \text{ml per revolution} = \text{ml/min}$$

$$240 \times 0.94 = 225.6$$

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E CA4	Order No.
24 V _{DC}		IS 3192

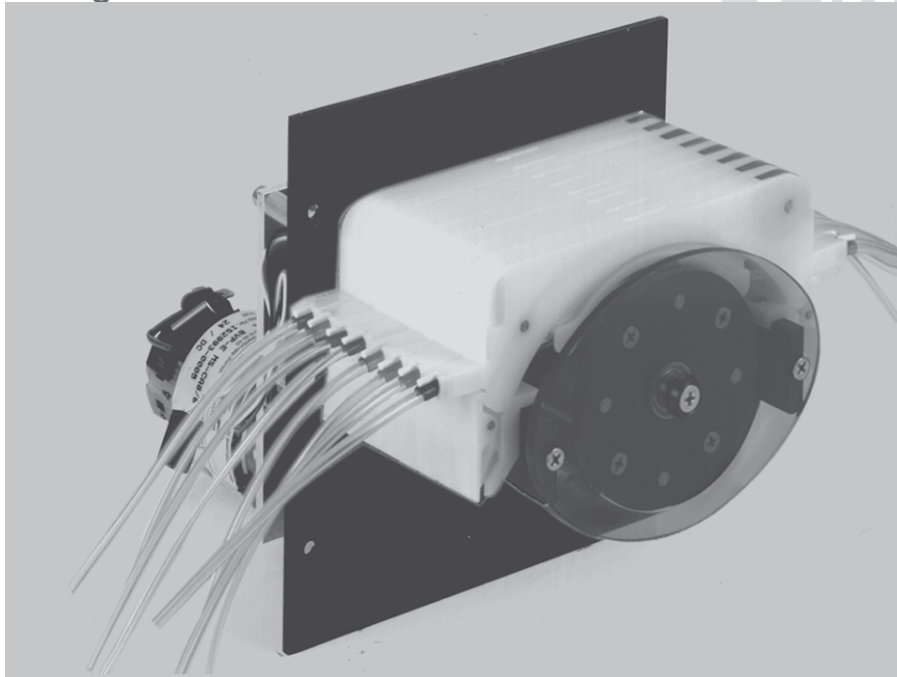
Data sheet

04.8

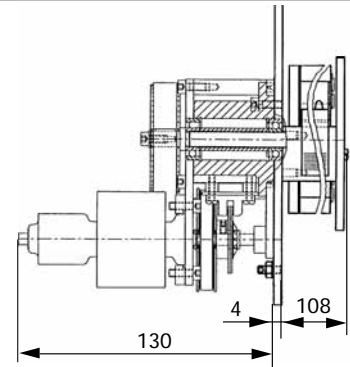
30.09.05

DC motor with optical encoder and gear box

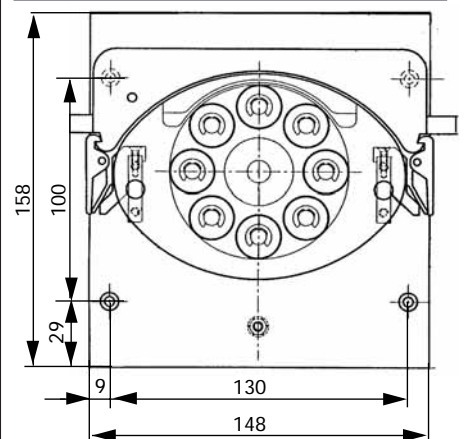
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

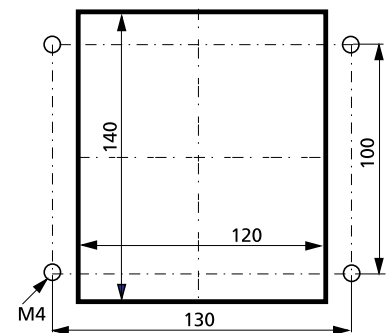
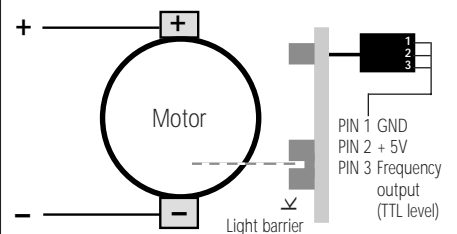


Diagram and electrical connections



Technical specifications

Pump model	MCP-E CA8
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4 –240 rpm ^{a)} 1 –240 rpm ^{b)}
Flow rates*	0.002–230 ml/min
Motor control*	optional control unit
Power consumption	max. 67 W
Optical encoder	120 impulses/motor rev.
Channels	8
Pump rollers	8
Weight	1.8 kg
Tubing type	2-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	CA Click'n'go, POM

*See 'Please note'

Cassettes (Spare part / Option)
 IS 3710 CA Click'n'go, POM-C²⁾
 IS 0122 CA Anpresshebel, POM-C
 IS 3820 CA Anpresshebel, PVDF
 IS 0123 Adaptor (1 pcs.), POM-C
 IS 3861 Adaptor (1 pcs.), PVDF
²⁾ Standard equipment
 K Please see data sheet 09.1

Flow rates¹⁾

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0013	1.14	0.16
0.19	0.0039	1.22	0.18
0.25	0.0076	1.30	0.20
0.38	0.019	1.42	0.23
0.44	0.025	1.52	0.26
0.51	0.034	1.65	0.30
0.57	0.042	1.75	0.33
0.64	0.053	1.85	0.36
0.76	0.074	2.06	0.43
0.89	0.10	2.29	0.51
0.95	0.11	2.54	0.62
1.02	0.13	2.79	0.74
1.09	0.14	3.17	0.94

¹⁾ Water, Tygon® tubing, without differential pressure

k Calculation example for flow rate
 rpm x ml per revolution = ml/min
 240 x 0.94 = 225.6

Ask for the ISMATEC®
 Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E CA8	Order No.
24 V _{DC}		IS 3193

Data sheet

04.9
 30.09.05

*

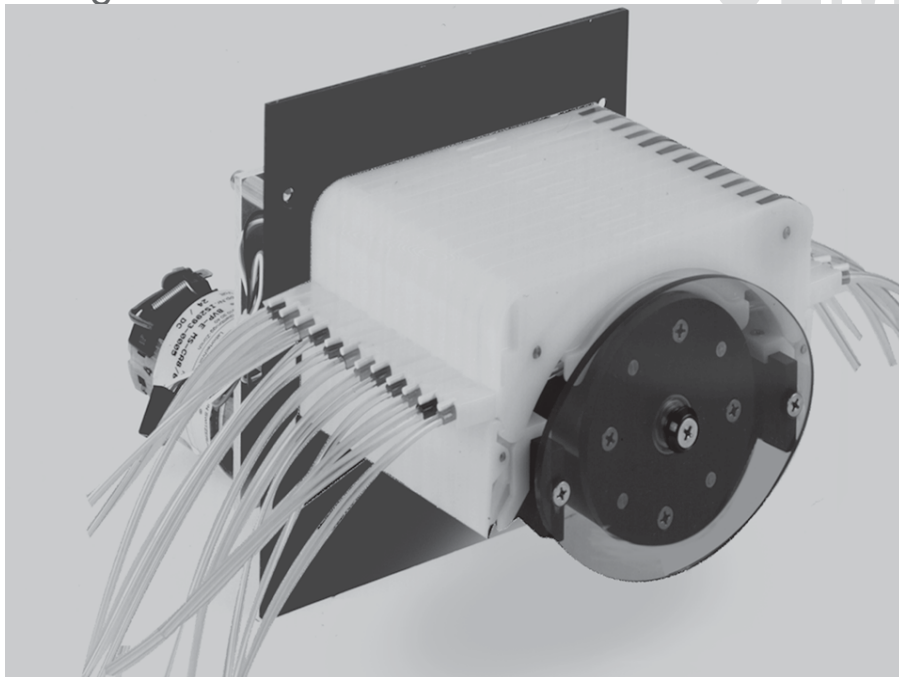
Please note

Specifications valid for the following ISMATEC® control units:

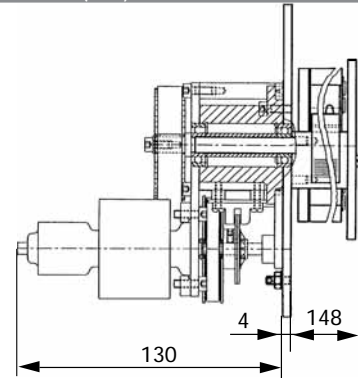
- a) BVP-E - see data sheet 08.3
- b) MCP-E - see data sheet 08.5

DC motor with optical encoder and gear box

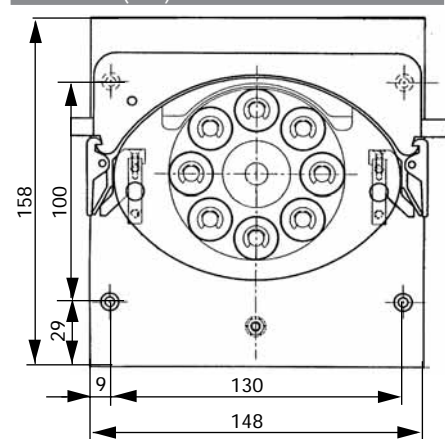
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

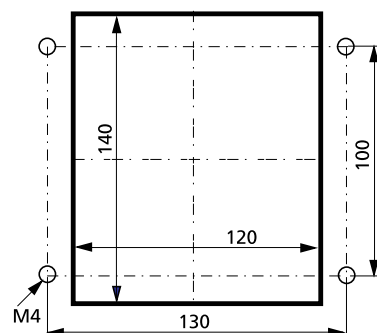
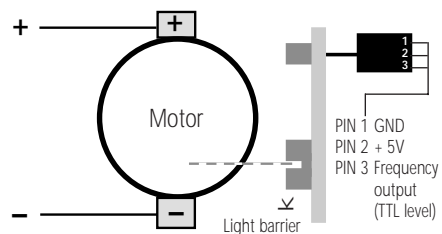


Diagram and electrical connections



***** Please note

Specifications valid for the following ISMATEC® control units:

- a) BVP-E - see data sheet 08.3
- b) MCP-E - see data sheet 08.5

Technical specifications

Pump model	MCP-E CA12
Motor type	DC motor with encoder
Gear ratio	25:1
Rotation speed*	2.4 –240 rpm ^{a)} 1 –240 rpm ^{b)}
Flow rates*	0.002–230 ml/min
Motor control*	optional control unit
Power consumption	max. 67 W
Optical encoder	120 impulses/motor rev.
Channels	12
Pump rollers	8
Weight	1.9 kg
Tubing type	2-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	CA Click'n'go, POM

*See 'Please note'

- Cassettes (Spare part / Option)
- IS 3710 CA Click'n'go, POM-C²⁾
 - IS 0122 CA Anpresshebel, POM-C
 - IS 3820 CA Anpresshebel, PVDF
 - IS 0123 Adaptor (1 pcs.), POM-C
 - IS 3861 Adaptor (1 pcs.), PVDF
- ²⁾ Standard equipment
K Please see data sheet 09.1

Flow rates¹⁾

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0013	1.14	0.16
0.19	0.0039	1.22	0.18
0.25	0.0076	1.30	0.20
0.38	0.019	1.42	0.23
0.44	0.025	1.52	0.26
0.51	0.034	1.65	0.30
0.57	0.042	1.75	0.33
0.64	0.053	1.85	0.36
0.76	0.074	2.06	0.43
0.89	0.10	2.29	0.51
0.95	0.11	2.54	0.62
1.02	0.13	2.79	0.74
1.09	0.14	3.17	0.94

¹⁾ Water, Tygon® tubing, without differential pressure

K Calculation example for flow rate
 rpm x ml per revolution = ml/min
 240 x 0.94 = 225.6

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MCP-E CA12	Order No.
24 V _{DC}		IS 3194

Data sheet

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