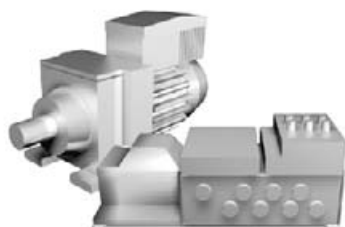




SEW
EURODRIVE



Drive System for Decentralized Installation in Degree of Protection IP66

FC460000

Edition 03/2005

11321326 / EN

Manual





1 Important Notes.....	4
2 System Description	5
2.1 Drive system for decentralized installation in IP66.....	5
3 Available Components.....	7
3.1 MOVIMOT®	7
3.2 MOVI-SWITCH® 1E	12
3.3 MOVI-SWITCH® 2S	17
3.4 MOVIMOT® with P2.A option for mounting close to the motor	22
3.5 Fieldbus interfaces	26
3.6 Field distributors.....	30
3.7 Options.....	35
4 Project Planning	37
4.1 Drive selection	37
4.2 Features of sealing material and surfaces	41
4.3 Questionnaire.....	42
5 Installation	44
5.1 Installation instructions.....	44
5.2 Tightening torques	45
5.3 Connection of MOVIMOT® in IP66 close to the motor	47
5.4 Approved installation positions for MOVIMOT®/MOVI-SWITCH® drives.....	52
5.5 Examples for cable run in MOVIMOT®/MOVI-SWITCH® drives	53
5.6 Recommended installation positions fieldbus interfaces, field distributors ..	54
5.7 Examples for cable run in fieldbus interfaces, field distributors	58



1 Important Notes



- This manual does not replace the detailed operating instructions/manuals!
- Installation and startup only by trained personnel observing the relevant accident prevention regulations and the following documents!

Other applicable documents

- Operating instructions
 - MOVIMOT® MM03C to MM3XC
 - MOVI-SWITCH®
- Manuals (depending on the respective bus system)
 - PROFIBUS Interfaces, Field Distributors
 - Interbus Interfaces, Field Distributors
 - DeviceNet/CANopen Interfaces, Field Distributors
 - AS-interface Interfaces, AS-interface Field Distributors
- Catalog "Drive System for Decentralized Installation"
- **When operating MOVIMOT® or field distributors in safety applications, consult the related publications "Safe Disconnection for MOVIMOT® MM..C – Applications" and "Safe Disconnection for MOVIMOT® MM..C – Conditions." Use only those components in safety applications that were explicitly delivered in this design by SEW-EURODRIVE!**



2 System Description

2.1 Drive system for decentralized installation in IP66

2.1.1 Use in bottling plants and food processing

The entire beverage industry is currently undergoing change.

Customers are demanding a variety of different products and sizes resulting in shorter product life cycles, increased product variety and ultimately smaller lot sizes in the beverage industry.

System manufacturers and operators are certainly aware of this change and are increasingly focusing on decentralized machine and system concepts that meet the demand for more flexibility.



56334AXX

One very important aspect is the different ambient conditions regarding humidity and temperature in the different production sections.

Drive inverters and automation components will have to be taken out of the protective control cabinet to be installed as a decentralized drive component directly in the system. This type of installation makes them subject to extreme environmental conditions. Component suppliers have to be familiar with the application and this type of industry to be successful. This expertise is a necessary prerequisite to design systems with the highest degree of reliability. SEW-EURODRIVE is such an experienced system supplier with years of experience in the bottling industry and food processing.



System Description

Drive system for decentralized installation in IP66

2.1.2 Components in IP66

The components for decentralized drive systems from SEW-EURODRIVE in IP66 meet the requirements set forth in the respective standard. They are protected against contact with water containing acid or caustic as well as wetting agents. Careful installation is necessary to ensure IP66 and all installation materials will have to meet the respective specification.

Components for decentralized drive systems from SEW-EURODRIVE

- MOVIMOT[®] drives in IP66
- MOVIMOT[®] close to the motor in IP66
- MOVI-SWITCH[®] 1E drives in IP66
- MOVI-SWITCH[®] 2S drives in IP66
- Fieldbus interfaces and field distributors

Several measures ensure suitability and long-term stability. The most important characteristics are:

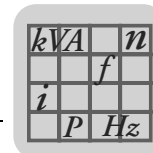
- IP66 motors with condensation bore and corrosion protection
- IP66 terminal box with cable outlet on one end
- Wiring board with increased resistance to moisture condensation
- Stainless steel screw plugs with internal gasket
- Stainless steel retaining screws
- Metal cable glands

These drives can be equipped with a pressure compensation fitting.

This fitting makes for controlled exchange of air between environment and inside of the unit. It prevents a partial vacuum that will result in liquids entering the unit.

2.1.3 Support through special consultants

These requirements cannot always be conveyed in written form. Consulting talks between system operators, system suppliers and component suppliers have proven as productive means to clarify the existing conditions and necessary measures. SEW-EURODRIVE has a team of competent consultants that offer their active support when it comes to selecting optimum configurations and economical solutions.



3 Available Components

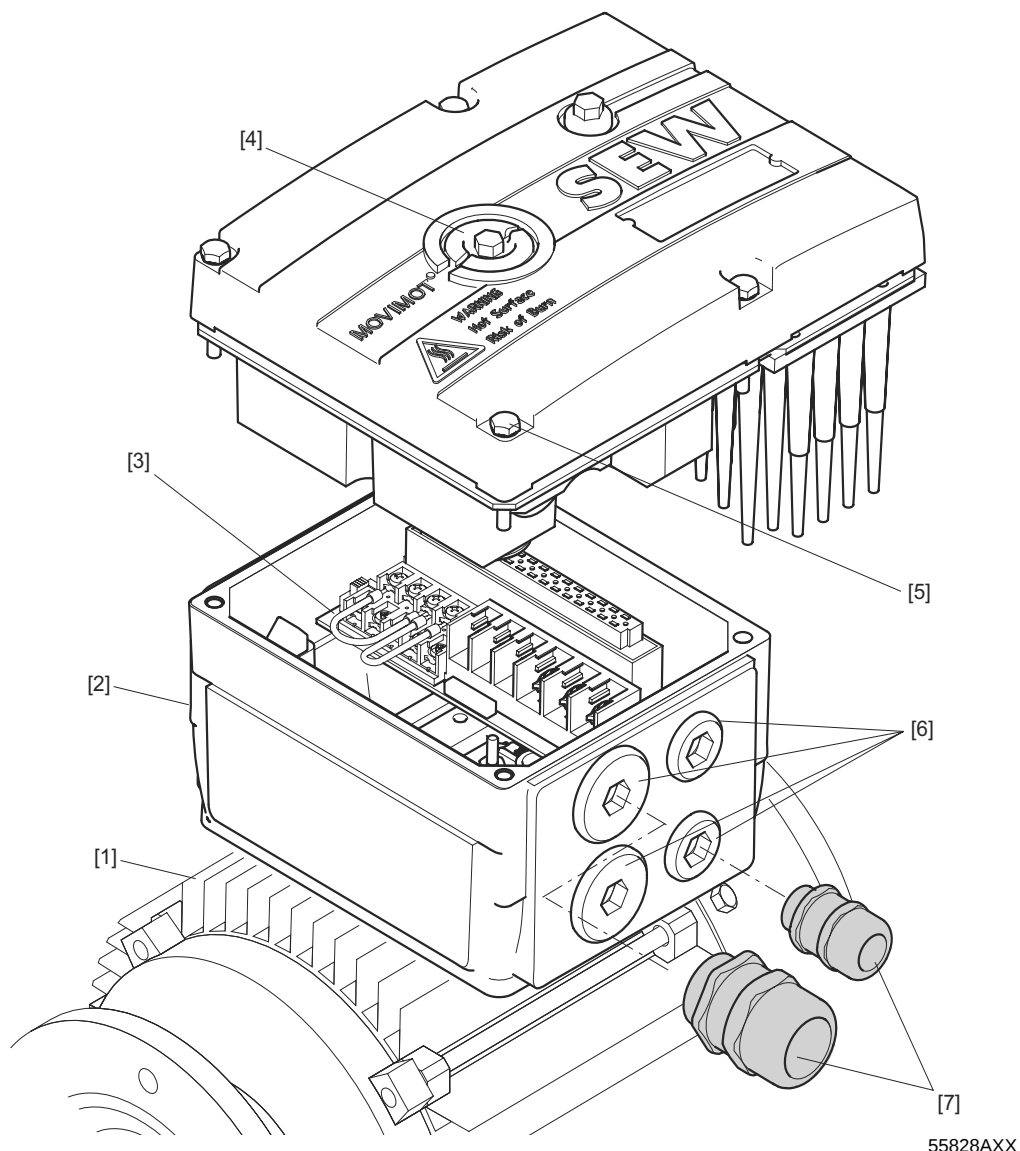
3.1 MOVIMOT®

3.1.1 MOVIMOT® in IP66 without pressure compensation (example size 1)

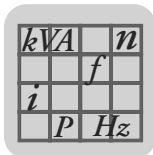
Features

MOVIMOT® drives in IP66 without pressure compensation are characterized by the following features:

- [1] IP66 motor with condensation bore and corrosion protection (OS1)
- [2] IP66 terminal box with cable outlet on one end (MM../RA1A or MM../RA2A)
- [3] Wiring board with increased resistance to moisture condensation (coated)
- [4] F1 potentiometer plug, available in stainless steel version, see page 35
- [5] Stainless steel retaining screws in MOVIMOT® inverter
- [6] Stainless steel screw plugs with internal gasket
- [7] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)



55828AXX

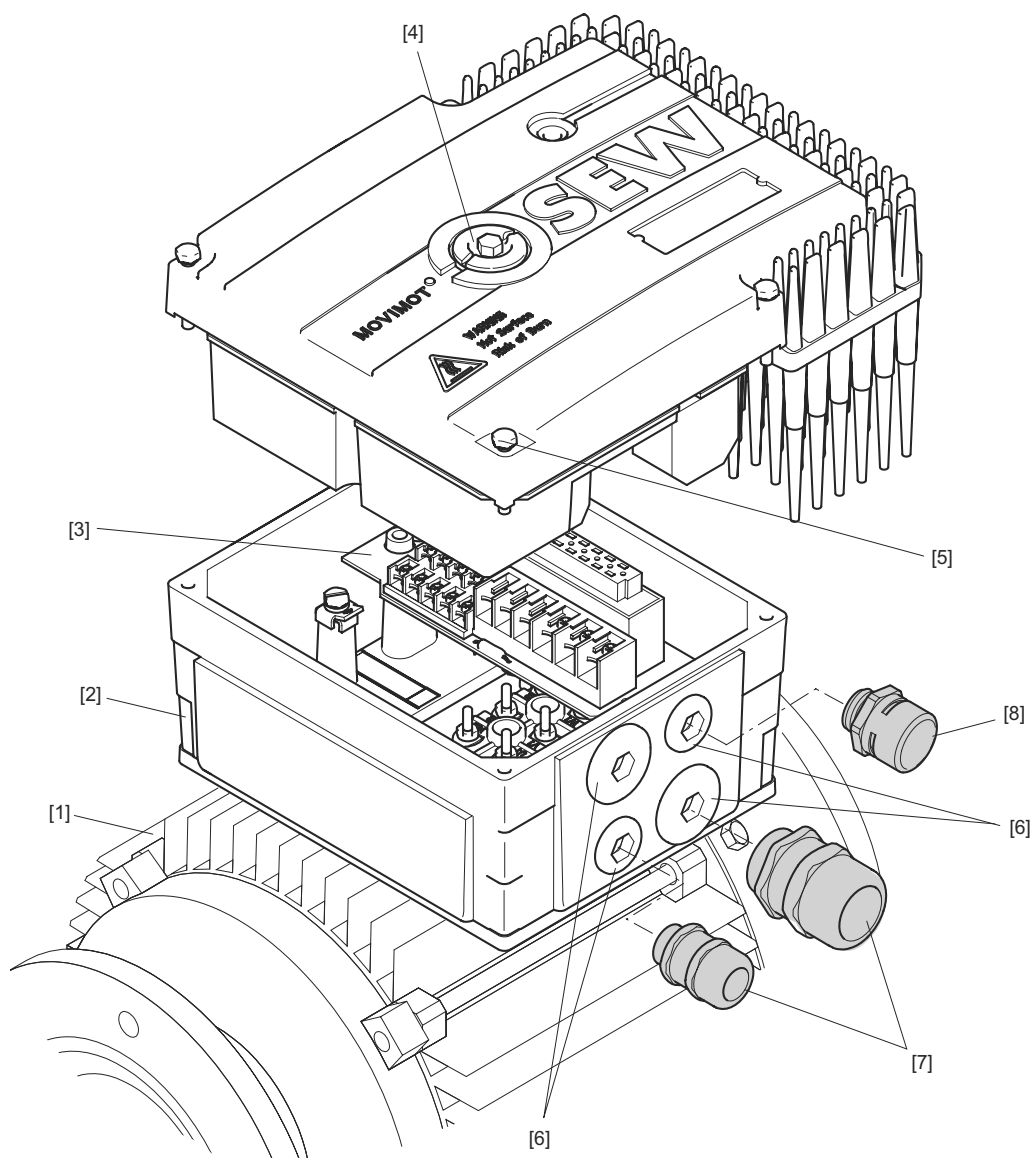


3.1.2 MOVIMOT® in IP66 with pressure compensation (example size 2)

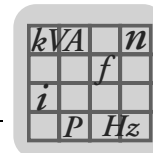
Features

MOVIMOT® drives in IP66 with pressure compensation are characterized by the following features:

- [1] IP66 motor with condensation bore and corrosion protection (OS1)
- [2] IP66 terminal box with cable outlet on one end (MM../RA1A or MM../RA2A)
- [3] Wiring board with increased resistance to moisture condensation (coated)
- [4] F1 potentiometer plug, also available in stainless steel, see page 35
- [5] Stainless steel retaining screws in MOVIMOT® inverter
- [6] Stainless steel screw plugs with internal gasket
- [7] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)
- [8] Pressure compensation fitting (M16)



55797AXX



3.1.3 Available combinations

MOVIMOT® in IP66

280 – 1400 1/min $\triangle$ 3 x 380 – 500 V (400 V)

IEC or C  US

Type	P _n [kW]	M _n [Nm]	M _a /M _n	n _n [1/ min]	I _{n1} [A]	cosφ	J _{mot}		M _{Bmax} [Nm]	m	
							[10 ⁻⁴ kgm ²] without brake	[10 ⁻⁴ kgm ²] with brake		[kg] without brake	[kg] with brake
DT71D4/.../MM03/RA1A	0.37	2.52	1.6	1400	1.3	0.99	4.61	5.51	5	8.6	11.4
DT80K4/.../MM05/RA1A	0.55	3.75	1.6	1400	1.6	0.99	6.55	7.45	10	11.5	14.2
DT80N4/.../MM07/RA1A	0.75	5.1	1.6	1400	1.9	0.99	8.7	9.6	10	13.1	15.8
DT90S4/.../MM11/RA1A	1.1	7.5	1.6	1400	2.4	0.99	25	30.4	20	17.6	27.5
DT90L4/.../MM15/RA1A	1.5	10.2	1.6	1400	3.5	0.99	34	39.4	20	19.6	29.5
DV100M4/.../MM22/RA2A	2.2	15.0	1.1	1400	5.0	0.99	53	59	40	30.5	40.5
DV100L4/.../MM30/RA2A	3.0	20.5	1.6	1400	6.7	0.99	65	71	40	33	43

290 – 2900 1/min $\triangle$ 3 x 380 – 500 V (400 V)

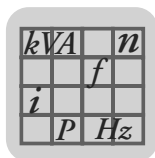
IEC or C  US

Type	P _n [kW]	M _n [Nm]	M _a /M _n	n _n [1/ min]	I _{n1} [A]	cosφ	J _{mot}		M _{Bmax} [Nm]	m	
							[10 ⁻⁴ kgm ²] without brake	[10 ⁻⁴ kgm ²] with brake		[kg] without brake	[kg] with brake
DT71D4/.../MM05/RA1A	0.55	1.81	1.3	2900	1.6	0.99	4.61	5.51	5	8.6	11.4
DT80K4/.../MM07/RA1A	0.75	2.47	1.6	2900	1.9	0.99	6.55	7.45	10	11.5	14.2
DT80N4/.../MM11/RA1A	1.1	3.62	1.6	2900	2.4	0.99	8.7	9.6	10	13.1	15.8
DT90S4/.../MM15/RA1A	1.5	4.95	1.6	2900	3.5	0.99	25	30.4	20	17.6	27.5
DT90L4/.../MM22/RA2A	2.2	7.25	1.5	2900	5.0	0.99	34	39.4	20	21.0	31.0
DV100M4/.../MM30/RA2A	3.0	9.9	1.2	2900	6.7	0.99	53	59	40	30.5	40.5

Thermal classification F as standard



Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").


MOVIMOT® in IP66 with increased short-term torque
280 – 1400 1/min $\curvearrowright$ 3 x 380 – 500 V (400 V)
IEC or C  US

Type	P_n	M_n	M_a/M_n	n_n	I_{n1}	$\cos\varphi$	J_{mot}		M_{Bmax}	m	
	[kW]	[Nm]		[1/ min]	[A]		[10 ⁻⁴ kgm ²] without brake	[10 ⁻⁴ kgm ²] with brake	[Nm]	[kg] without brake	[kg] with brake
DT71D4/.../MM05/RA1A	0.37	2.52	2.2	1400	1.3	0.99	4.61	5.51	5	8.6	11.4
DT80K4/.../MM07/RA1A	0.55	3.75	2.0	1400	1.6	0.99	6.55	7.45	10	11.5	14.2
DT80N4/.../MM11/RA1A	0.75	5.1	2.2	1400	1.9	0.99	8.7	9.6	10	13.1	15.8
DT90S4/.../MM15/RA1A	1.1	7.5	2.2	1400	2.4	0.99	25	30.4	20	17.6	27.5
DT90L4/.../MM22/RA2A	1.5	10.2	2.1	1400	3.5	0.99	34	39.4	20	19.6	29.5
DV100M4/.../MM30/RA2A	2.2	15.0	1.9	1400	5.0	0.99	53	59	40	30.5	40.5
DV100L4/.../MM3X/RA2A	3.0	20.5	2.2	1400	6.7	0.99	65	71	40	33	43

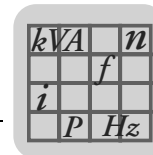
290 – 2900 1/min $\triangle$ 3 x 380 – 500 V (400 V)
IEC or C  US

Type	P_n	M_n	M_a/M_n	n_n	I_{n1}	$\cos\varphi$	J_{mot}		M_{Bmax}	m	
	[kW]	[Nm]		[1/ min]	[A]		[10 ⁻⁴ kgm ²] without brake	[10 ⁻⁴ kgm ²] with brake	[Nm]	[kg] without brake	[kg] with brake
DT71D4/.../MM07/RA1A	0.55	1.81	1.9	2900	1.6	0.99	4.61	5.51	5	8.6	11.4
DT80K4/.../MM11/RA1A	0.75	2.47	2.2	2900	1.9	0.99	6.55	7.45	10	11.5	14.2
DT80N4/.../MM15/RA1A	1.1	3.62	2.2	2900	2.4	0.99	8.7	9.6	10	13.1	15.8
DT90S4/.../MM22/RA2A	1.5	4.95	2.2	2900	3.5	0.99	25	30.4	20	17.6	27.5
DT90L4/.../MM30/RA2A	2.2	7.25	2.0	2900	5.0	0.99	34	39.4	20	21.0	31.0
DV100M4/.../MM3X/RA2A	3.0	9.9	1.8	2900	6.7	0.99	53	59	40	30.5	40.5

1) Increased short-term torque in S3 operation, 25 % cdf

Thermal classification F as standard

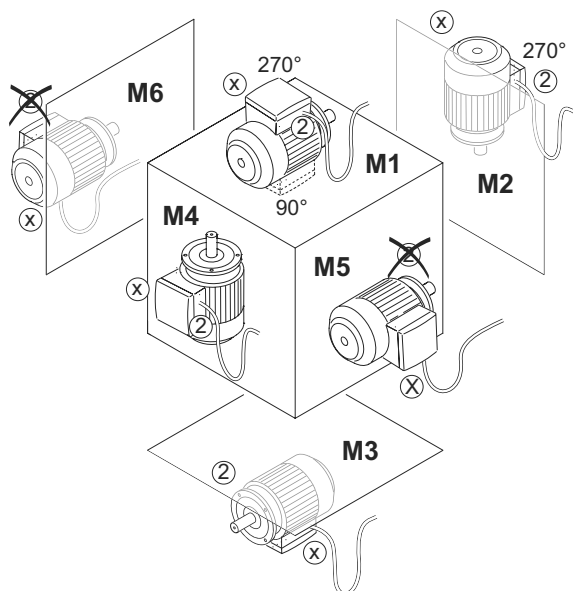
Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").



3.1.4 Available mounting positions/cable entries

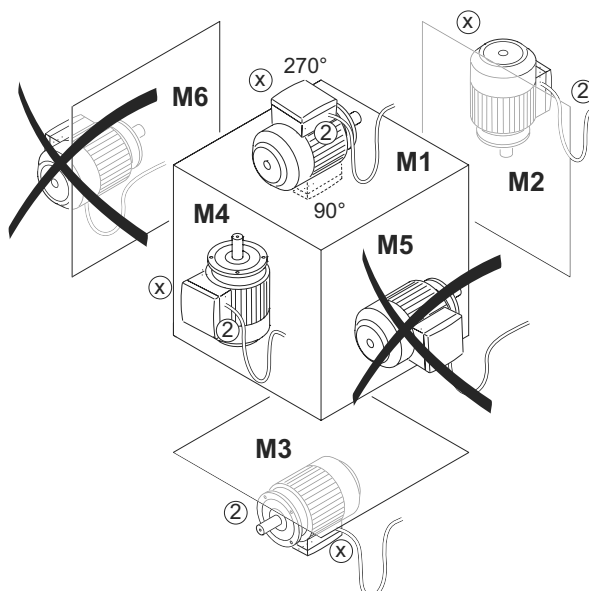
Without pressure compensation

Terminal box position 270° or 90°



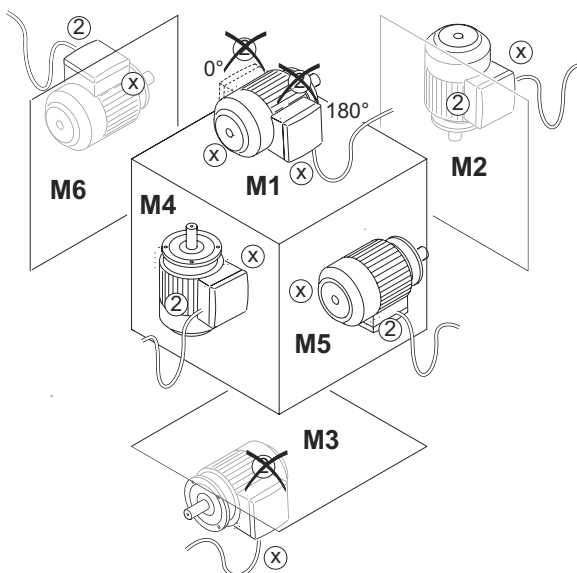
With pressure compensation

Terminal box position 270° or 90°



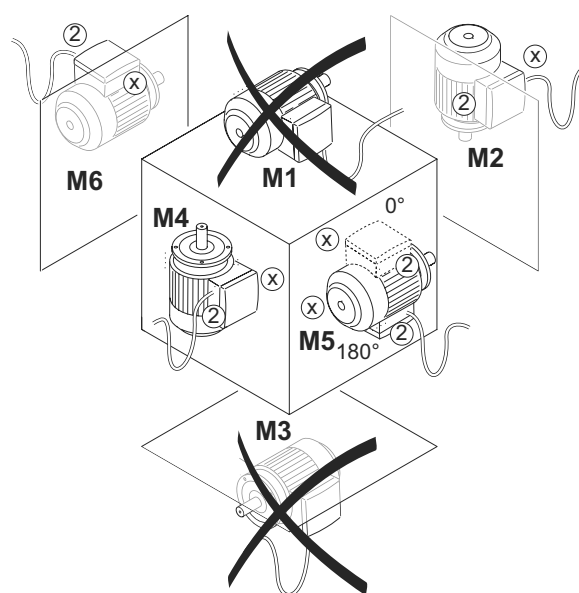
Without pressure compensation

Terminal box position 180° or 0°

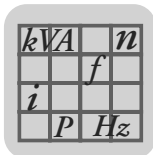


With pressure compensation

Terminal box position 180° or 0°



55665AEN



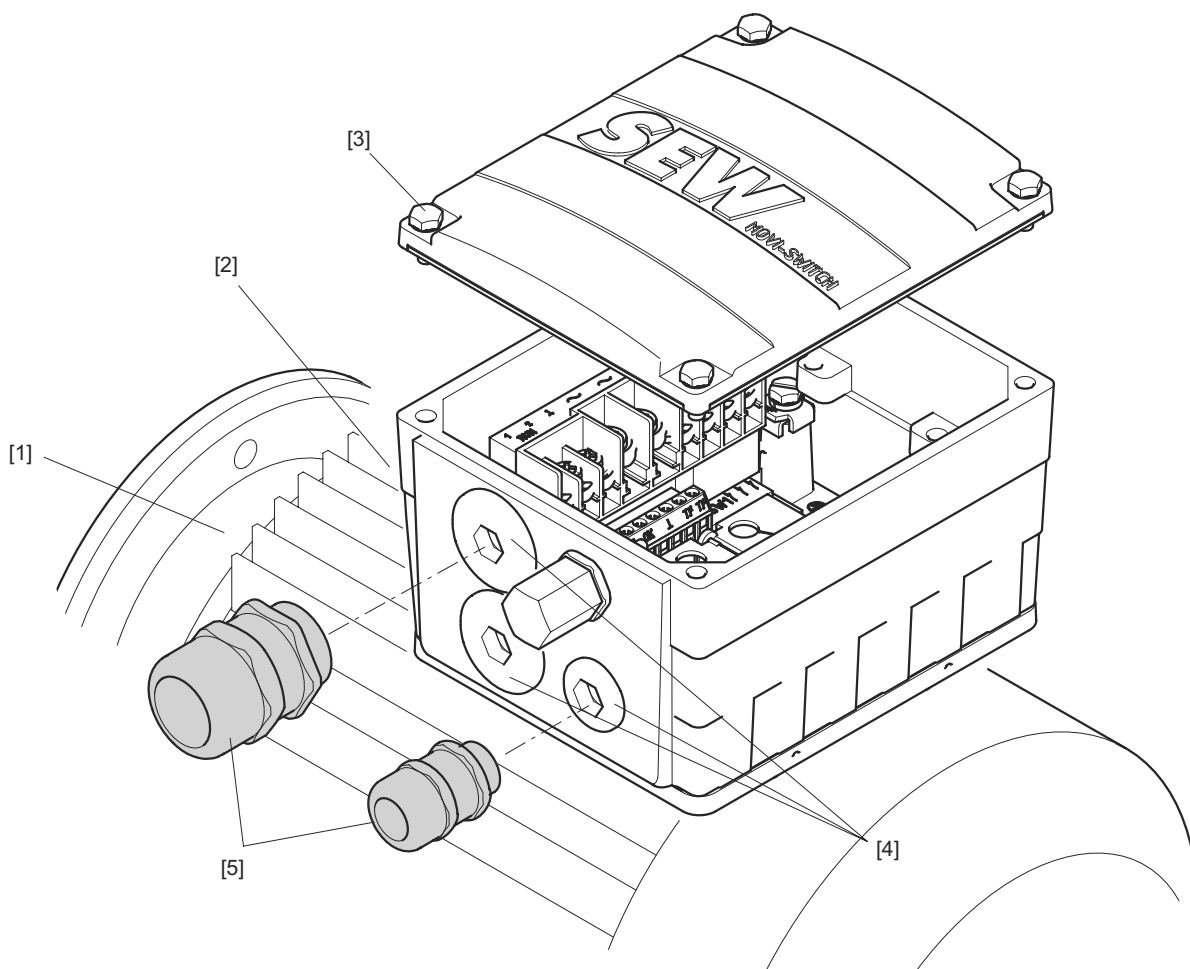
3.2 MOVI-SWITCH® 1E

3.2.1 MOVI-SWITCH® 1E in IP66 without pressure compensation (example size 1)

Features

MOVI-SWITCH® 1E drives in IP66 without pressure compensation are characterized by the following features:

- [1] IP66 motor with condensation bore and corrosion protection (OS1)
- [2] IP66 terminal box with cable outlet on one end (../RA1A or ../RA2A)
- [3] Stainless steel retaining screws in terminal box cover
- [4] Stainless steel screw plugs with internal gasket
- [5] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)

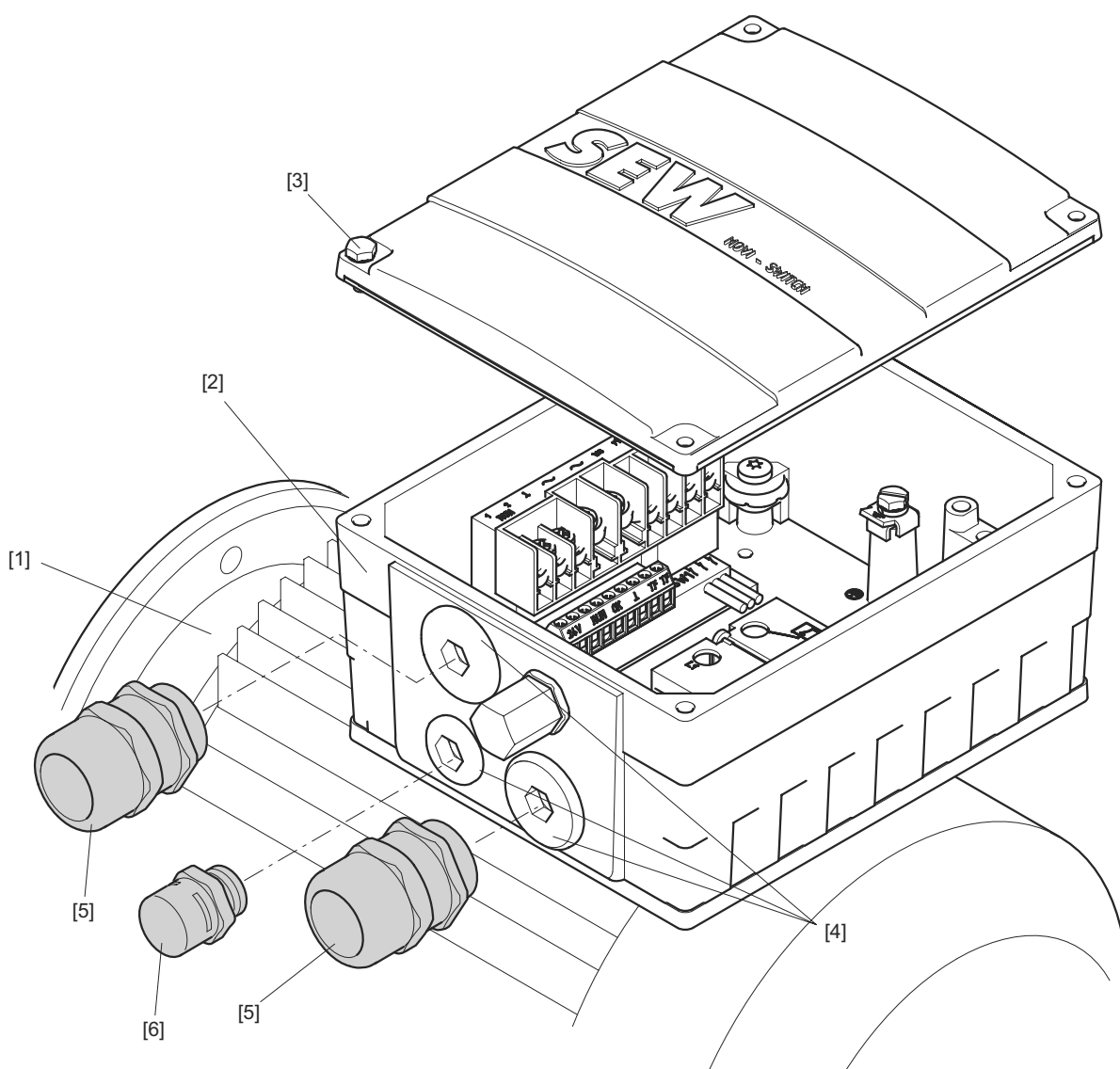


55934AXX

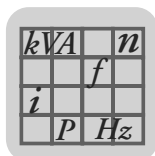
3.2.2 MOVI-SWITCH® 1E in IP66 with pressure compensation (example size 2)

MOVI-SWITCH® 1E drives in IP66 with pressure compensation are characterized by the following features:

- [1] IP66 motor with condensation bore and corrosion protection (OS1)
- [2] IP66 terminal box with cable outlet on one end (../RA1A or ../RA2A)
- [3] Stainless steel retaining screws in terminal box cover
- [4] Stainless steel screw plugs with internal gasket
- [5] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)
- [6] Pressure compensation fitting (M16)



55933AXX



3.2.3 Available combinations

3000 rpm S1

Motor type	P_N M_N	n_N [1/ min]	I_N 380 -415 V (400 V) [A]	$\cos\varphi$	EFF 3	$\eta_{75\%}$ $\eta_{100\%}$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax} [Nm]	m	
	[kW] [Nm]					[%]			1) [10 ⁻⁴ kgm ²]	2)		1) [kg]	2)
DT71D2/MSW/RA1A	0.55 1.9	2700	1.75 (1.65)	0.78	-	-	3.2	2.2 1.9	4.6	5.5	5	7.0	9.9
DT80K2/MSW/RA1A	0.75 2.7	2700	2.35 (2.0)	0.86	-	-	3.7	2.0 1.8	6.6	7.5	10	9.9	12.7
DT80N2/MSW/RA1A	1.1 3.9	2700	2.7 (2.65)	0.84	EFF 3	74.4 72.6	4.0	2.0 1.8	8.7	9.6	10	11.5	14.3
DT90S2/MSW/RA1A	1.5 5.3	2800	3.95 (3.8)	0.82	EFF 3	71.4 71.7	4.2	2.3 2.1	25	31	20	16	26
DT90L2/MSW/RA1A	2.2 7.5	2810	5.8 (5.1)	0.82	EFF 3	74.1 74.3	4.8	2.5 2.2	34	40	20	18	28
DV100M2/MSW/RA2A	3 10.2	2800	6.4 (5.9)	0.94	EFF 3	81.0 78.6	5.0	2.0 1.8	53	59	40	27	37

1) without brake

2) with brake

1500 rpm S1

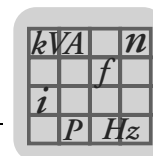
Motor type	P_N M_N	n_N [1/ min]	I_N 380 -415 V (400 V) [A]	$\cos\varphi$	EFF 2	$\eta_{75\%}$ $\eta_{100\%}$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax} [Nm]	m	
	[kW] [Nm]					[%]			1) [10 ⁻⁴ kgm ²]	2)		1) [kg]	2)
DT71D4/MSW/RA1A	0.37 2.6	1380	1.24 (1.15)	0.76	-	-	3.0	1.8 1.7	4.6	5.5	5	7.0	9.9
DT80K4/MSW/RA1A	0.55 3.9	1360	1.75 (1.75)	0.72	-	-	3.4	2.1 1.8	6.6	7.5	10	9.9	12.7
DT80N4/MSW/RA1A	0.75 5.2	1380	2.15 (2.1)	0.73	-	-	3.8	2.2 2.0	8.7	9.6	10	11.5	14.3
DT90S4/MSW/RA1A	1.1 7.5	1400	2.8 (2.8)	0.77	EFF 2	77.5 76.5	4.3	2.0 1.9	25	31	20	16	26
DT90L4/MSW/RA1A	1.5 10.2	1410	3.7 (3.55)	0.78	EFF 2	80.2 79.0	5.3	2.6 2.3	34	40	20	18	28
DV100M4/MSW/RA2A	2.2 15	1410	4.9 (4.7)	0.83	EFF 2	82.8 82.0	5.9	2.7 2.3	53	59	40	27	37
DV100L4/MSW/RA2A	3 20.5	1400	6.5 (6.3)	0.83	EFF 2	84.5 83.0	5.6	2.7 2.2	65	71	40	30	40

1) without brake

2) with brake



Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").



1000 rpm S1

Motor type	P_N	M_N	n_N	I_N	$\cos\varphi$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax}	m	
	[kW]	[Nm]	[1/ min]	380 -415 V (400 V) [A]				1) [10 ⁻⁴ kgm ²]	2)		1) [kg]	2)
DT71D6/MSW/RA1A	0.25	2.7	880	0.9 (0.85)	0.72	2.7	1.6 1.6	8.3	9.2	5	7.0	9.9
DT80K6/MSW/RA1A	0.37	3.9	900	1.44 (1.29)	0.68	3.0	1.9 1.9	10.3	11.2	10	9.9	12.7
DT80N6/MSW/RA1A	0.55	5.8	900	1.78 (1.7)	0.73	3.0	1.8 1.7	14.1	15	10	11.5	14.3
DT90S6/MSW/RA1A	0.75	8	900	2.4 (2.35)	0.70	3.1	2.0 1.9	25	31	20	16	26
DT90L6/MSW/RA1A	1.1	11.4	920	3.35 (3.3)	0.69	3.5	2.2 2.1	34	40	20	18	28
DV100M6/MSW/RA2A	1.5	15.6	920	4.1 (4.05)	0.70	4.0	2.3 2.0	53	59	40	27	37

1) without brake

2) with brake

750 rpm S1

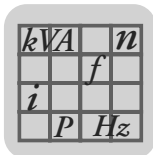
Motor type	P_N	M_N	n_N	I_N	$\cos\varphi$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax}	m	
	[kW]	[Nm]	[1/ min]	400 V [A]				1) [10 ⁻⁴ kgm ²]	2)		1) [kg]	2)
DT71D8/MSW/RA1A	0.15	2.2	650	0.69	0.72	2.2	1.4 1.4	8.3	9.2	5	7.0	9.9
DT80N8/MSW/RA1A	0.25	3.5	680	1.24	0.55	2.6	1.9 1.9	14.1	15	10	11.5	14.3
DT90S8/MSW/RA1A	0.37	5.2	680	1.55	0.62	2.5	1.4 1.4	25	31	20	16	26
DT90L8/MSW/RA1A	0.55	7.7	680	2.3	0.60	2.5	1.5 1.5	34	40	20	18	28
DV100M8/MSW/RA2A	0.75	10.3	690	2.9	0.59	2.6	2.1 2.0	53	59	40	27	37
DV100L8/MSW/RA2A	1.1	15.6	670	4.1	0.60	2.8	1.9 1.7	65	71	40	30	40

1) without brake

2) with brake



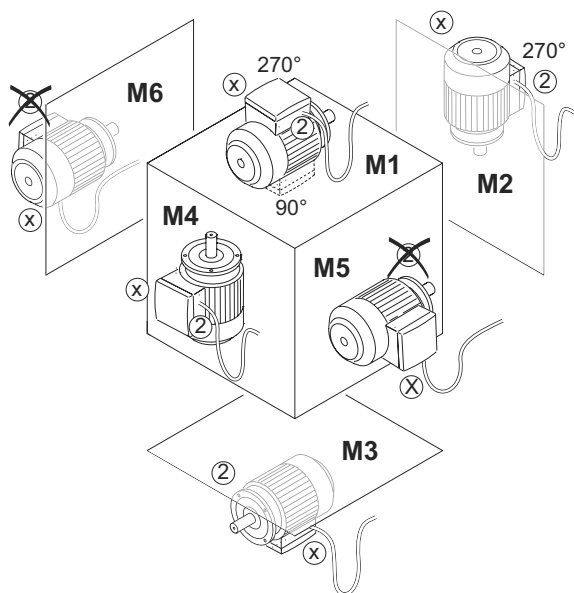
Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").



3.2.4 Available mounting positions/cable entries

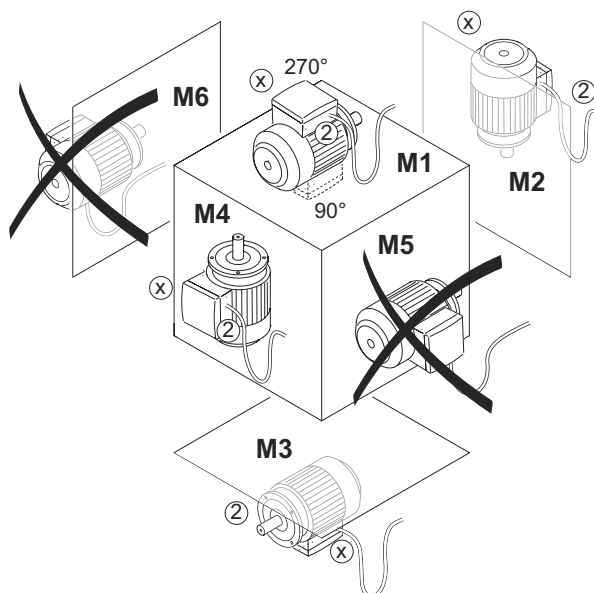
Without pressure compensation

Terminal box position 270° or 90°



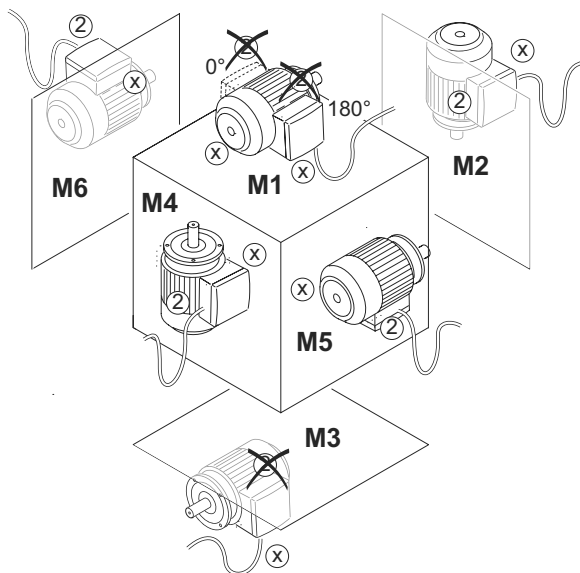
With pressure compensation

Terminal box position 270° or 90°



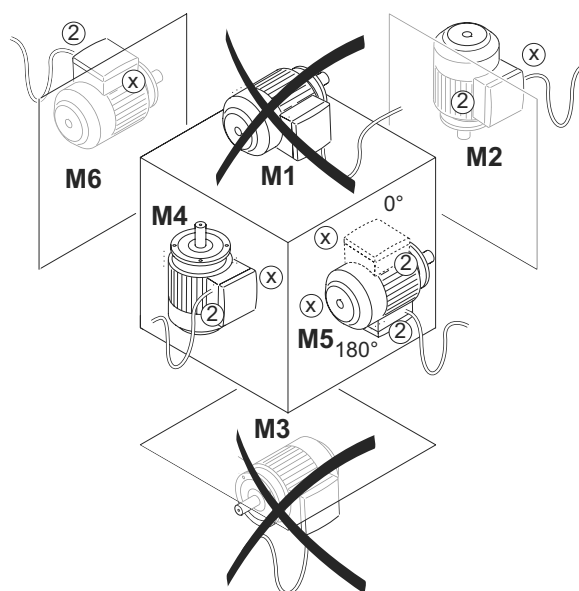
Without pressure compensation

Terminal box position 180° or 0°



With pressure compensation

Terminal box position 180° or 0°



55665AEN

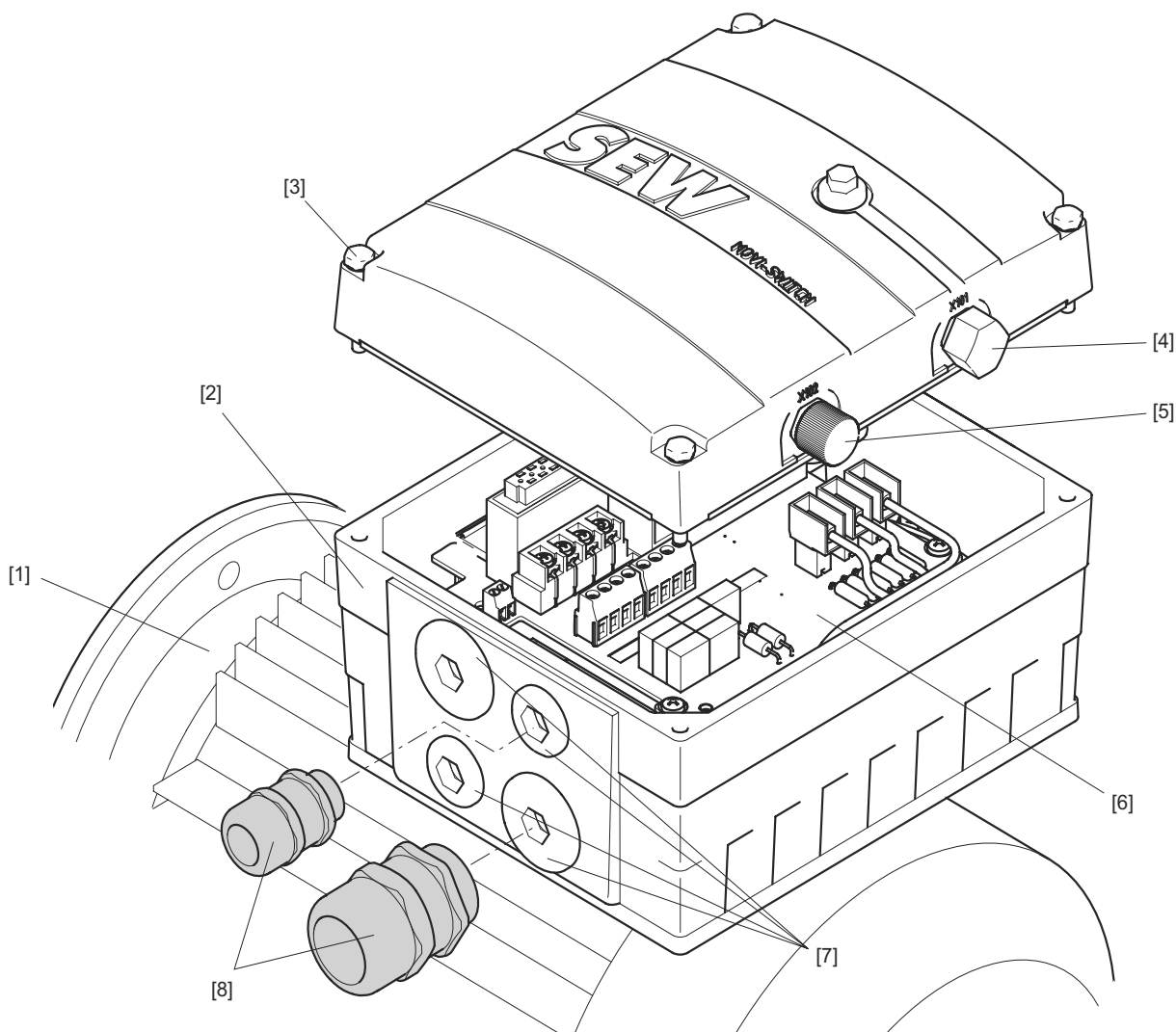
3.3 MOVI-SWITCH® 2S

3.3.1 MOVI-SWITCH® 2S in IP66 without pressure compensation

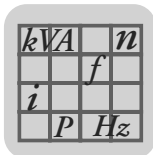
Features

MOVI-SWITCH® 2S drives in IP66 without pressure compensation are characterized by the following features:

- [1] IP66 motor with condensation bore and corrosion protection (OS1)
- [2] IP66 terminal box with cable outlet on one end (../RA2A)
- [3] Stainless steel retaining screws in MSW control section
- [4] M12 connection with screw plug
- [5] M12 connection
- [6] Wiring board with increased resistance to moisture condensation (coated)
- [7] Stainless steel screw plugs with internal gasket
- [8] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)



55766AXX

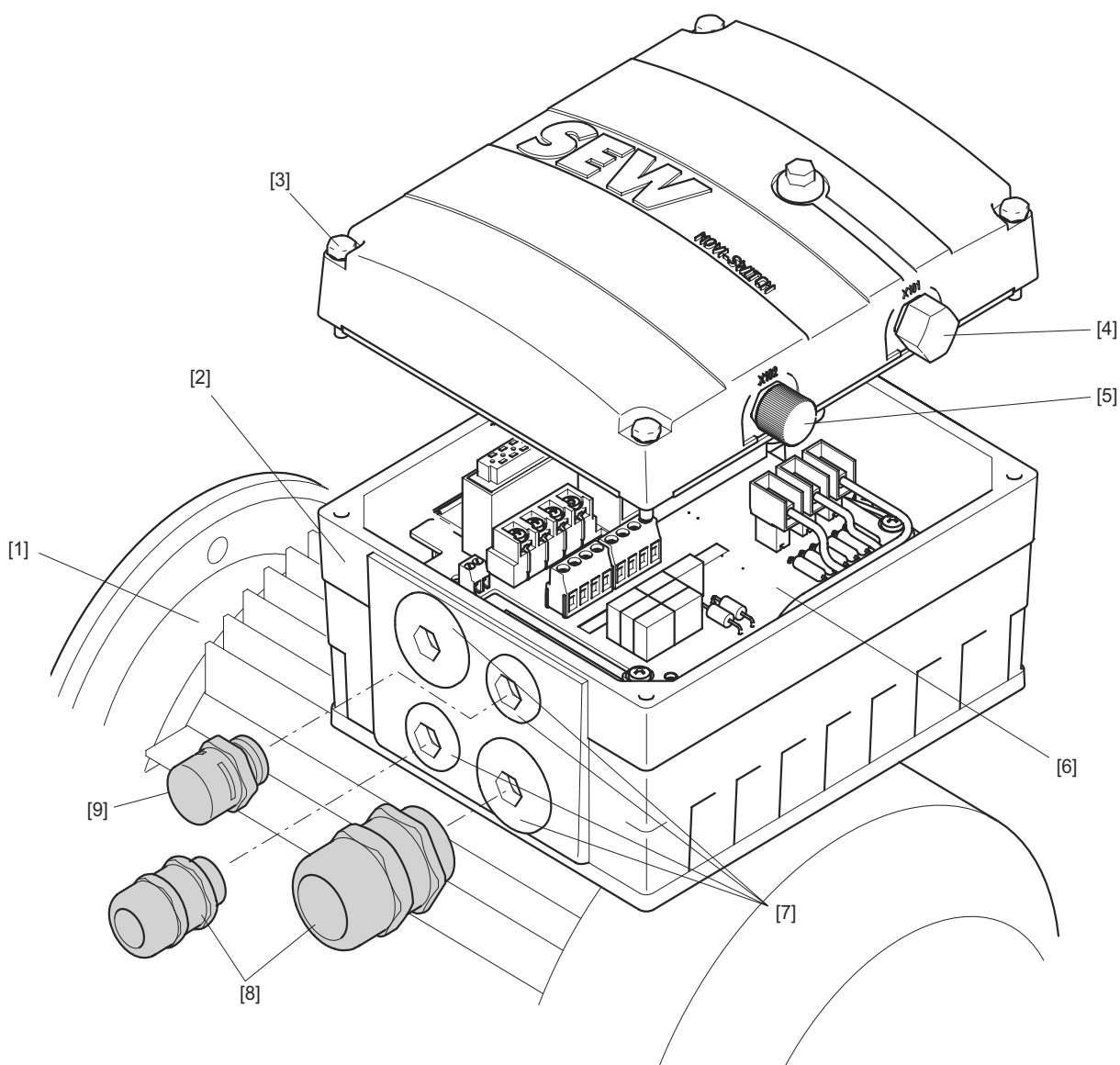


3.3.2 MOVI-SWITCH® 2S with pressure compensation

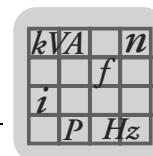
Features

MOVI-SWITCH® 2S drives in IP66 with pressure compensation are characterized by the following features:

- [1] IP66 motor with condensation bore and corrosion protection (OS1)
- [2] IP66 terminal box with cable outlet on one end (../RA2A)
- [3] Stainless steel retaining screws in MSW control section
- [4] M12 connection with screw plug
- [5] M12 connection
- [6] Wiring board with increased resistance to moisture condensation (coated)
- [7] Stainless steel screw plugs with internal gasket
- [8] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)
- [9] Pressure compensation fitting (M16)



55932AXX



3.3.3 Available combinations

3000 rpm S1

Motor type	P_N M_N	n_N	I_N 380 -415 V (400 V)	$\cos\phi$	ϵ_{FF3}	$\eta_{75\%}$ $\eta_{100\%}$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax}	m	
	[kW] [Nm]	[1/ min]	[A]			[%]			1) [10 ⁻⁴ kgm ²]	2)	[Nm]	1) [kg]	2)
DT71D2/MSW/RA2A/CB0	0.55 1.9	2700	1.75 (1.65)	0.78	-	-	3.2	2.2 1.9	4.6	5.5	5	7.0	9.9
DT80K2/MSW/RA2A/CB0	0.75 2.7	2700	2.35 (2.0)	0.86	-	-	3.7	2.0 1.8	6.6	7.5	10	9.9	12.7
DT80N2/MSW/RA2A/CB0	1.1 3.9	2700	2.7 (2.65)	0.84	EFF 3	74.4 72.6	4.0	2.0 1.8	8.7	9.6	10	11.5	14.3
DT90S2/MSW/RA2A/CB0	1.5 5.3	2800	3.95 (3.8)	0.82	EFF 3	71.4 71.7	4.2	2.3 2.1	25	31	20	16	26
DT90L2/MSW/RA2A/CB0	2.2 7.5	2810	5.8 (5.1)	0.82	EFF 3	74.1 74.3	4.8	2.5 2.2	34	40	20	18	28
DV100M2/MSW/RA2A/CB0	3 10.2	2800	6.4 (5.9)	0.94	EFF 3	81.0 78.6	5.0	2.0 1.8	53	59	40	27	37

1) without brake

2) with brake

1500 rpm S1

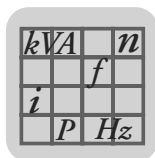
Motor type	P_N M_N	n_N	I_N 380 -415 V (400 V)	$\cos\phi$	ϵ_{FF2}	$\eta_{75\%}$ $\eta_{100\%}$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax}	m	
	[kW] [Nm]	[1/ min]	[A]			[%]			1) [10 ⁻⁴ kgm ²]	2)	[Nm]	1) [kg]	2)
DT71D4/MSW/RA2A/CB0	0.37 2.6	1380	1.24 (1.15)	0.76	-	-	3.0	1.8 1.7	4.6	5.5	5	7.0	9.9
DT80K4/MSW/RA2A/CB0	0.55 3.9	1360	1.75 (1.75)	0.72	-	-	3.4	2.1 1.8	6.6	7.5	10	9.9	12.7
DT80N4/MSW/RA2A/CB0	0.75 5.2	1380	2.15 (2.1)	0.73	-	-	3.8	2.2 2.0	8.7	9.6	10	11.5	14.3
DT90S4/MSW/RA2A/CB0	1.1 7.5	1400	2.8 (2.8)	0.77	EFF 2	77.5 76.5	4.3	2.0 1.9	25	31	20	16	26
DT90L4/MSW/RA2A/CB0	1.5 10.2	1410	3.7 (3.55)	0.78	EFF 2	80.2 79.0	5.3	2.6 2.3	34	40	20	18	28
DV100M4/MSW/RA2A/CB0	2.2 15	1410	4.9 (4.7)	0.83	EFF 2	82.8 82.0	5.9	2.7 2.3	53	59	40	27	37
DV100L4/MSW/RA2A/CB0	3 20.5	1400	6.5 (6.3)	0.83	EFF 2	84.5 83.0	5.6	2.7 2.2	65	71	40	30	40

1) without brake

2) with brake



Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").


1000 rpm S1

Motor type	P_N	M_N	n_N	I_N	$\cos\varphi$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax}	m	
	[kW]	[Nm]	[1/ min]	380 -415 V (400 V) [A]				1) [10 ⁻⁴ kgm ²]	2)		1) [kg]	2)
DT71D6/MSW/RA2A/CB0	0.25	2.7	880	0.9 (0.85)	0.72	2.7	1.6 1.6	8.3	9.2	5	7.0	9.9
DT80K6/MSW/RA2A/CB0	0.37	3.9	900	1.44 (1.29)	0.68	3.0	1.9 1.9	10.3	11.2	10	9.9	12.7
DT80N6/MSW/RA2A/CB0	0.55	5.8	900	1.78 (1.7)	0.73	3.0	1.8 1.7	14.1	15	10	11.5	14.3
DT90S6/MSW/RA2A/CB0	0.75	8	900	2.4 (2.35)	0.70	3.1	2.0 1.9	25	31	20	16	26
DT90L6/MSW/RA2A/CB0	1.1	11.4	920	3.35 (3.3)	0.69	3.5	2.2 2.1	34	40	20	18	28
DV100M6/MSW/RA2A/CB0	1.5	15.6	920	4.1 (4.05)	0.70	4.0	2.3 2.0	53	59	40	27	37

1) without brake

2) with brake

750 rpm S1

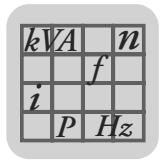
Motor type	P_N	M_N	n_N	I_N	$\cos\varphi$	I_A/I_N	M_A/M_N M_H/M_N	J_{Mot}		M_{Bmax}	m	
	[kW]	[Nm]	[1/ min]	400 V [A]				1) [10 ⁻⁴ kgm ²]	2)		1) [kg]	2)
DT71D8/MSW/RA2A/CB0	0.15	2.2	650	0.69	0.72	2.2	1.4 1.4	8.3	9.2	5	7.0	9.9
DT80N8/MSW/RA2A/CB0	0.25	3.5	680	1.24	0.55	2.6	1.9 1.9	14.1	15	10	11.5	14.3
DT90S8/MSW/RA2A/CB0	0.37	5.2	680	1.55	0.62	2.5	1.4 1.4	25	31	20	16	26
DT90L8/MSW/RA2A/CB0	0.55	7.7	680	2.3	0.60	2.5	1.5 1.5	34	40	20	18	28
DV100M8/MSW/RA2A/CB0	0.75	10.3	690	2.9	0.59	2.6	2.1 2.0	53	59	40	27	37
DV100L8/MSW/RA2A/CB0	1.1	15.6	670	4.1	0.60	2.8	1.9 1.7	65	71	40	30	40

1) without brake

2) with brake



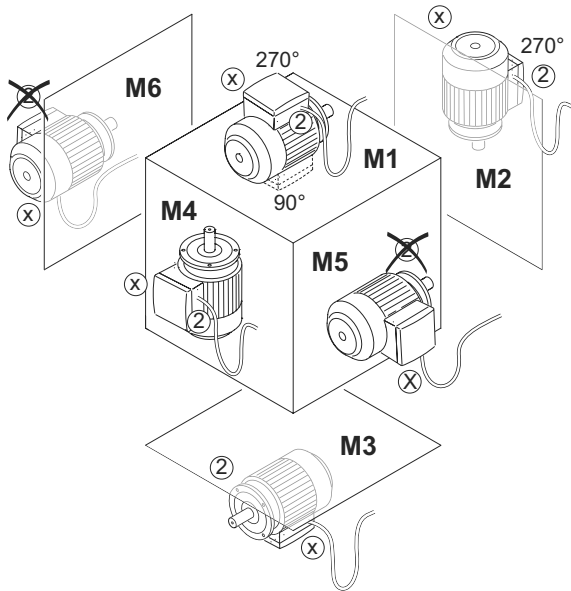
Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").



3.3.4 Available mounting positions/cable entries

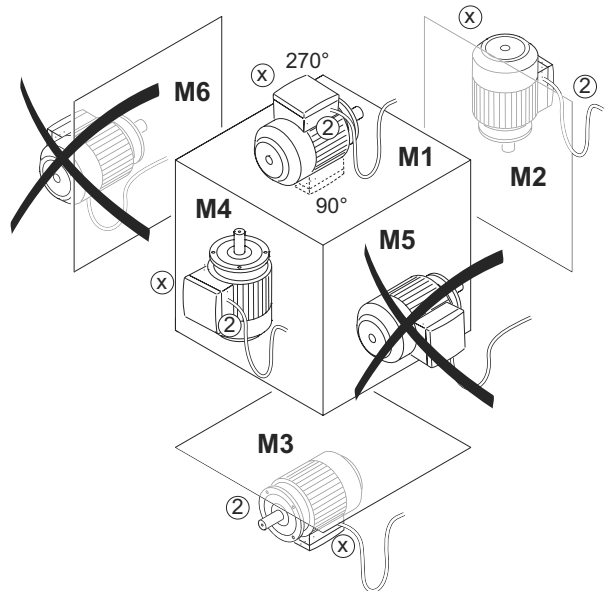
Without pressure compensation

Terminal box position 270° or 90°



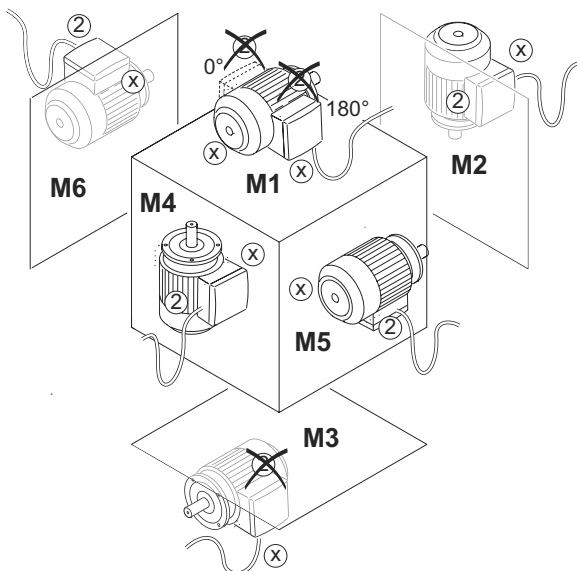
With pressure compensation

Terminal box position 270° or 90°



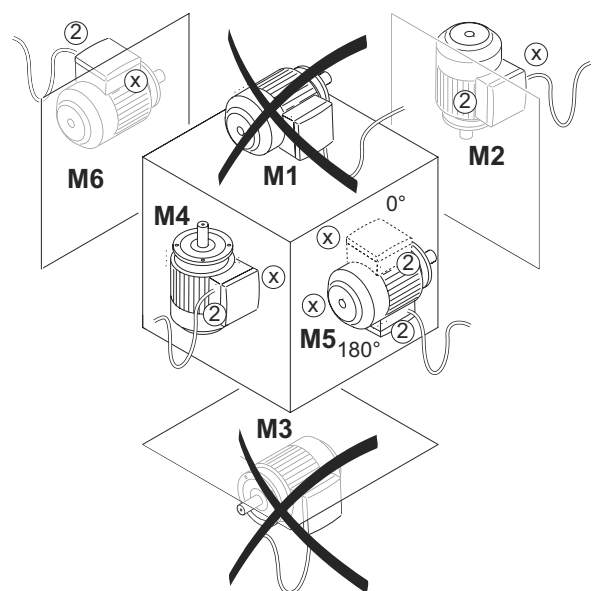
Without pressure compensation

Terminal box position 180° or 0°

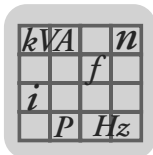


With pressure compensation

Terminal box position 180° or 0°



55665AEN



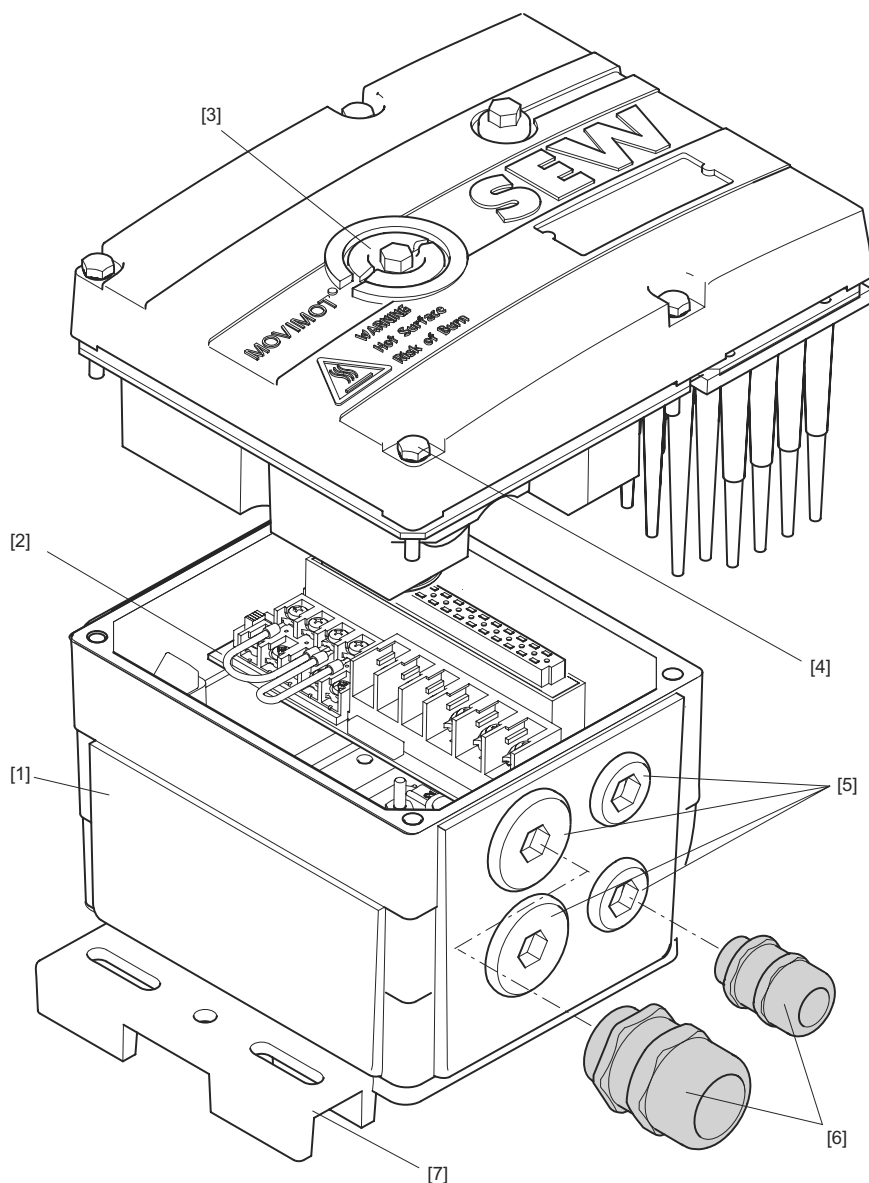
3.4 MOVIMOT® with P2.A option for mounting close to the motor

3.4.1 Without pressure compensation

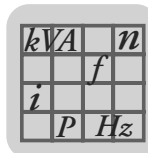
Features

MOVIMOT® with P2.A option in IP66 without pressure compensation are characterized by the following features:

- [1] IP66 terminal box with cable outlet on one end
- [2] Wiring board with increased resistance to moisture condensation (coated)
- [3] F1 potentiometer plug,
also available in stainless steel, see page 35
- [4] Stainless steel retaining screws in MOVIMOT® inverter
- [5] Stainless steel screw plugs with internal gasket
- [6] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)
- [7] With field mounting platform P2.A



55758AXX

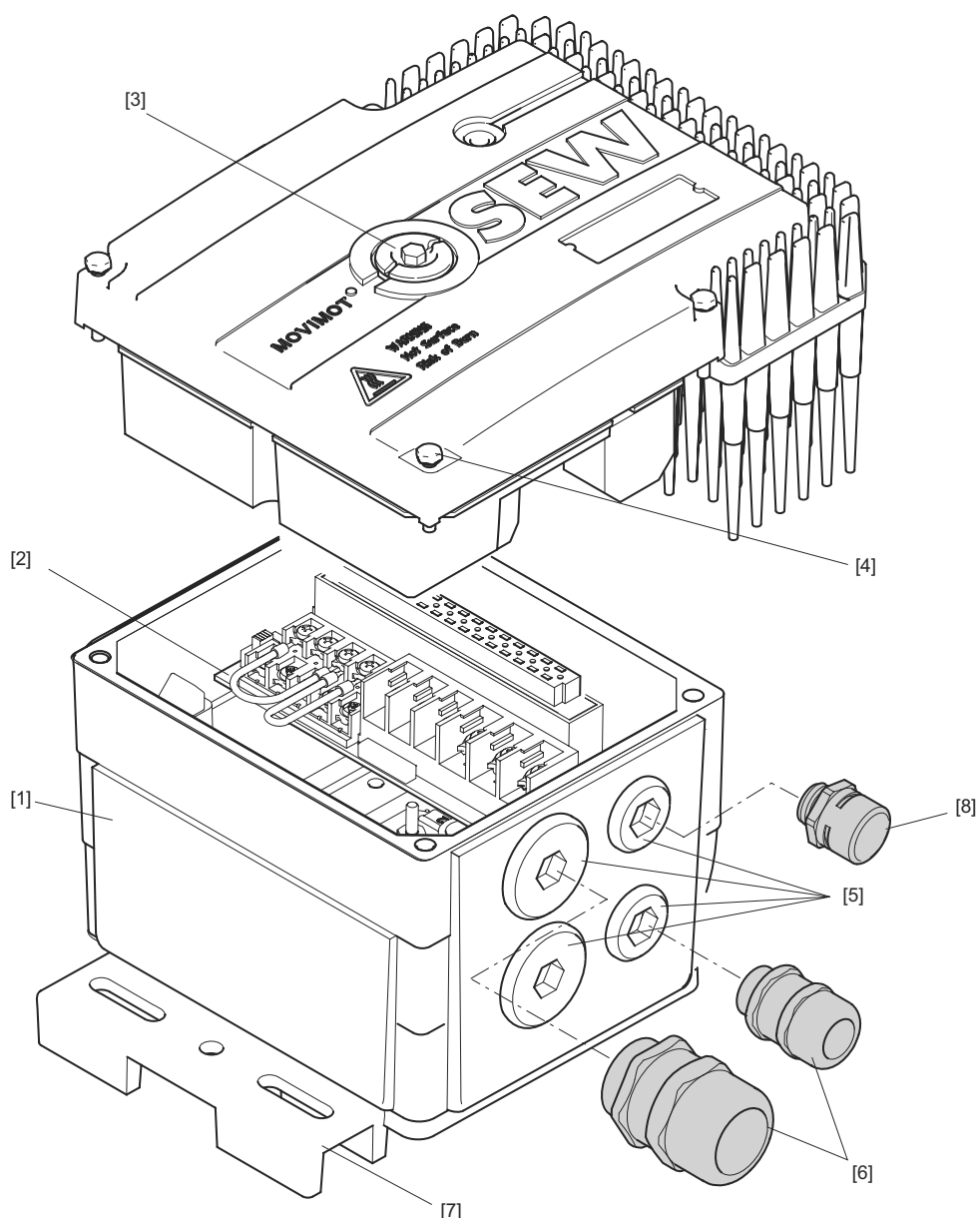


3.4.2 With pressure compensation

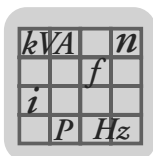
Features

MOVIMOT® with P2.A option in IP66 with pressure compensation are characterized by the following features:

- [1] IP66 terminal box with cable outlet on one end
- [2] Wiring board with increased resistance to moisture condensation (coated)
- [3] F1 potentiometer plug,
also available in stainless steel, see page 35
- [4] Stainless steel retaining screws in MOVIMOT® inverter
- [5] Stainless steel screw plugs with internal gasket
- [6] Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)
- [7] With field mounting platform P2.A
- [8] Pressure compensation fitting (M16)



56180AXX



Available Components

MOVIMOT® with P2.A option for mounting close to the motor

3.4.3 Available combinations

The following designs are available:

Connection to motor	MOVIMOT® size	1)	MOVIMOT®
Terminals	MM03-MM15		MM..C-503-00/0/ P21A/RA1B
			MM..C-503-00/1/ P21A/RA1B
	MM22-MM3X		MM..C-503-00/0/ P22A/RA2A
			MM..C-503-00/1/ P22A/RA2A

1) Connection type of connected motor



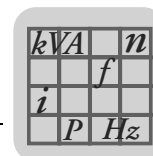
Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").

3.4.4 Assignment of motors (1400 1/min) → MOVIMOT® with P2.A option

Power [kW]	Motor 1)	MOVIMOT® with IP66 and P2.A option
0.25	DFR63L4/TH	— MM03C-503-00/0/ BW1 /P21A/RA1B ²⁾
	DFR63L4/ BMG /TH.	— MM03C-503-00/0/P21A/RA1B ²⁾
0.37	DT71D4/TH	MM03C-503-00/0/ BW1 /P21A/RA1B MM05C-503-00/0/ BW1 /P21A/RA1B ²⁾
	DT71D4/ BMG /TH.	MM03C-503-00/0/P21A/RA1B MM05C-503-00/0/P21A/RA1B ²⁾
0.55	DT80K4/TH	MM05C-503-00/0/ BW1 /P21A/RA1B MM07C-503-00/0/ BW1 /P21A/RA1B ²⁾
	DT80K4/ BMG /TH.	MM05C-503-00/0/P21A/RA1B MM07C-503-00/0/P21A/RA1B ²⁾
0.75	DT80N4/TH	MM07C-503-00/0/ BW1 /P21A/RA1B MM11C-503-00/0/ BW1 /P21A/RA1B ²⁾
	DT80N4/ BMG /TH.	MM07C-503-00/0/P21A/RA1B MM11C-503-00/0/P21A/RA1B ²⁾
1.1	DT90S4/TH	MM11C-503-00/0/ BW1 /P21A/RA1B MM05C-503-00/0/ BW1 /P21A/RA1B ²⁾
	DT90S4/ BMG /TH.	MM11C-503-00/0/P21A/RA1B MM15C-503-00/0/P21A/RA1B ²⁾
1.5	DT90L4/TH	MM05C-503-00/0/ BW1 /P21A/RA1B MM22C-503-00/0/ BW2 /P22A/RA2A ²⁾
	DT90L4/ BMG /TH.	MM15C-503-00/0/P21A/RA1B MM22C-503-00/0/P22A/RA2A ²⁾
2.2	DV100M4/TH	MM22C-503-00/0/ BW2 /P22A/RA2A MM30C-503-00/0/ BW2 /P22A/RA2A ²⁾
	DV100M4/ BMG /TH.	MM22C-503-00/0/P22A/RA2A MM30C-503-00/0/P22A/RA2A ²⁾
3	DV100L4/TH	MM30C-503-00/0/ BW2 /P22A/RA2A MM3XC-503-00/0/ BW2 /P22A/RA2A ²⁾
	DV100L4/ BMG /TH.	MM30C-503-00/0/P22A/RA2A MM3XC-503-00/0/P22A/RA2A ²⁾

1) Make sure to order the assigned motor in IP66.

2) Combination with increased short-term torque

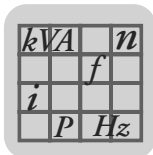


3.4.5 Assignment of motors (2800 1/min) → MOVIMOT® with P2.A option

Power [kW]	Motor $\triangle$ 1)	MOVIMOT® with IP66 and P2.A option
0.37	DFR63L4/TH	MM03C-503-00/1/BW1/P21A/RA1B MM05C-503-00/1/BW1/P21A/RA1B ²⁾
	DFR63L4/BMG/TH.	MM03C-503-00/1/P21A/RA1B MM05C-503-00/1/P21A/RA1B ²⁾
0.55	DT71D4/TH	MM05C-503-00/1/BW1/P21A/RA1B MM07C-503-00/1/BW1/P21A/RA1B ²⁾
	DT71D4/BMG/TH.	MM05C-503-00/1/P21A/RA1B MM07C-503-00/1/P21A/RA1B ²⁾
0.75	DT80K4/TH	MM07C-503-00/1/BW1/P21A/RA1B MM11C-503-00/1/BW1/P21A/RA1B ²⁾
	DT80K4/BMG/TH.	MM07C-503-00/1/P21A/RA1B MM11C-503-00/1/P21A/RA1B ²⁾
1.1	DT80N4/TH	MM11C-503-00/1/BW1/P21A/RA1B MM05C-503-00/1/BW1/P21A/RA1B ²⁾
	DT80N4/BMG/TH.	MM11C-503-00/1/P21A/RA1B MM15C-503-00/1/P21A/RA1B ²⁾
1.5	DT90S4/TH	MM05C-503-00/1/BW1/P21A/RA1B MM22C-503-00/1/BW2/P22A/RA2A ²⁾
	DT90S4/BMG/TH.	MM15C-503-00/1/P21A/RA1B MM22C-503-00/1/P22A/RA2A ²⁾
2.2	DT90L4/TH	MM22C-503-00/1/BW2/P22A/RA2A MM30C-503-00/1/BW2/P22A/RA2A ²⁾
	DT90L4/BMG/TH.	MM22C-503-00/1/P22A/RA2A MM30C-503-00/1/P22A/RA2A ²⁾
3	DV100M4/TH	MM30C-503-00/1/BW2/P22A/RA2A MM3XC-503-00/1/BW2/P22A/RA2A ²⁾
	DV100M4/BMG/TH.	MM30C-503-00/1/P22A/RA2A MM3XC-503-00/1/P22A/RA2A ²⁾

1) Make sure to order the assigned motor in IP66.

2) Combination with increased short-term torque



3.5 Fieldbus interfaces

3.5.1 MF../Z.1, MQ../Z.1 fieldbus interfaces

Features

[A] Standard package fieldbus interfaces

[A1] The enclosed plastic screw plugs are not suitable for applications in IP66. Place a separate order for the matching metal screw plugs.

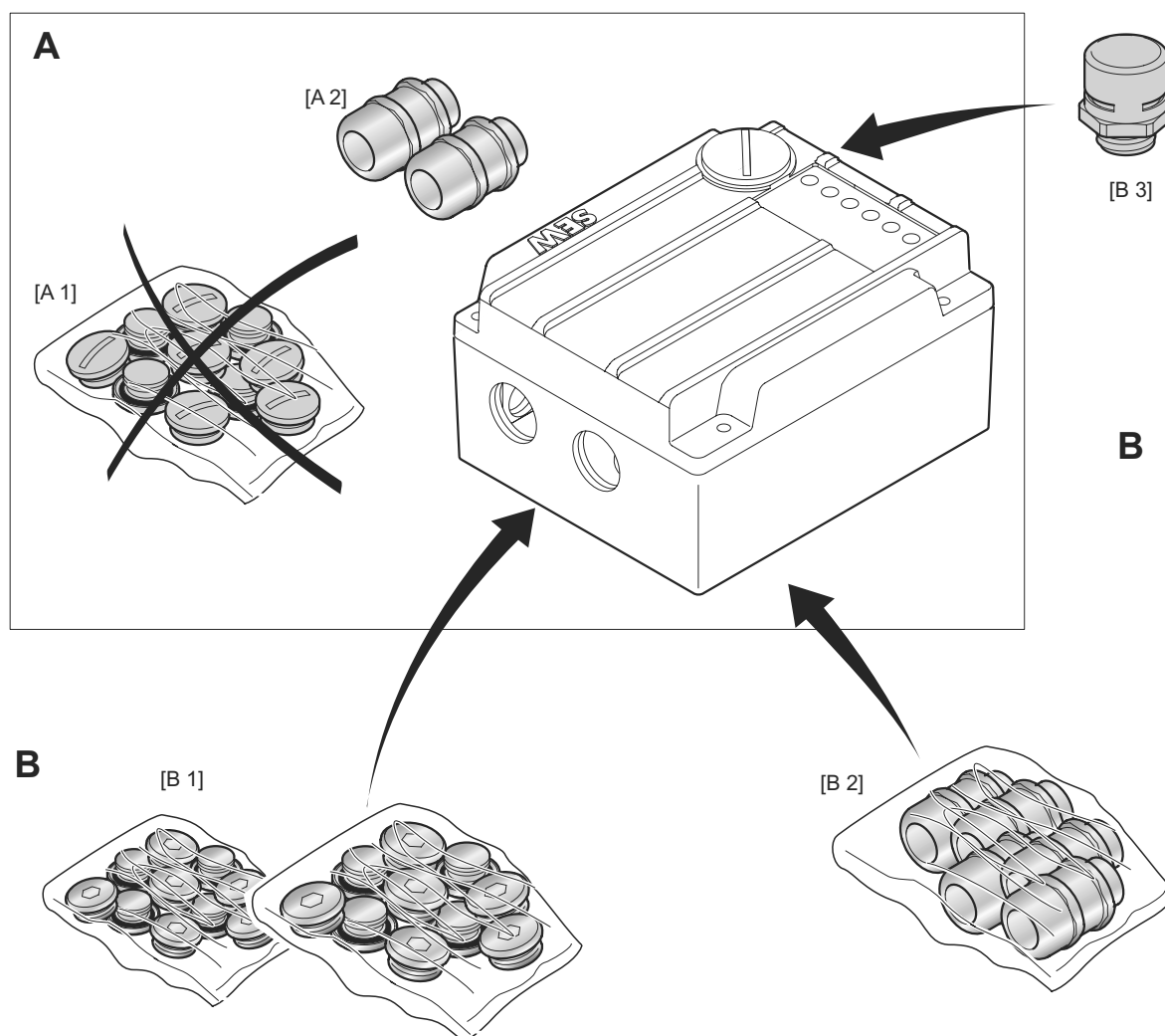
[A2] 2 x Metal cable glands
(suitable for applications in IP66, additional cable glands can be ordered)

[B] Options for IP66 (order separately)

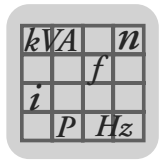
[B1] Stainless steel screw plugs, see page 35

[B2] Metal cable glands, see page 35

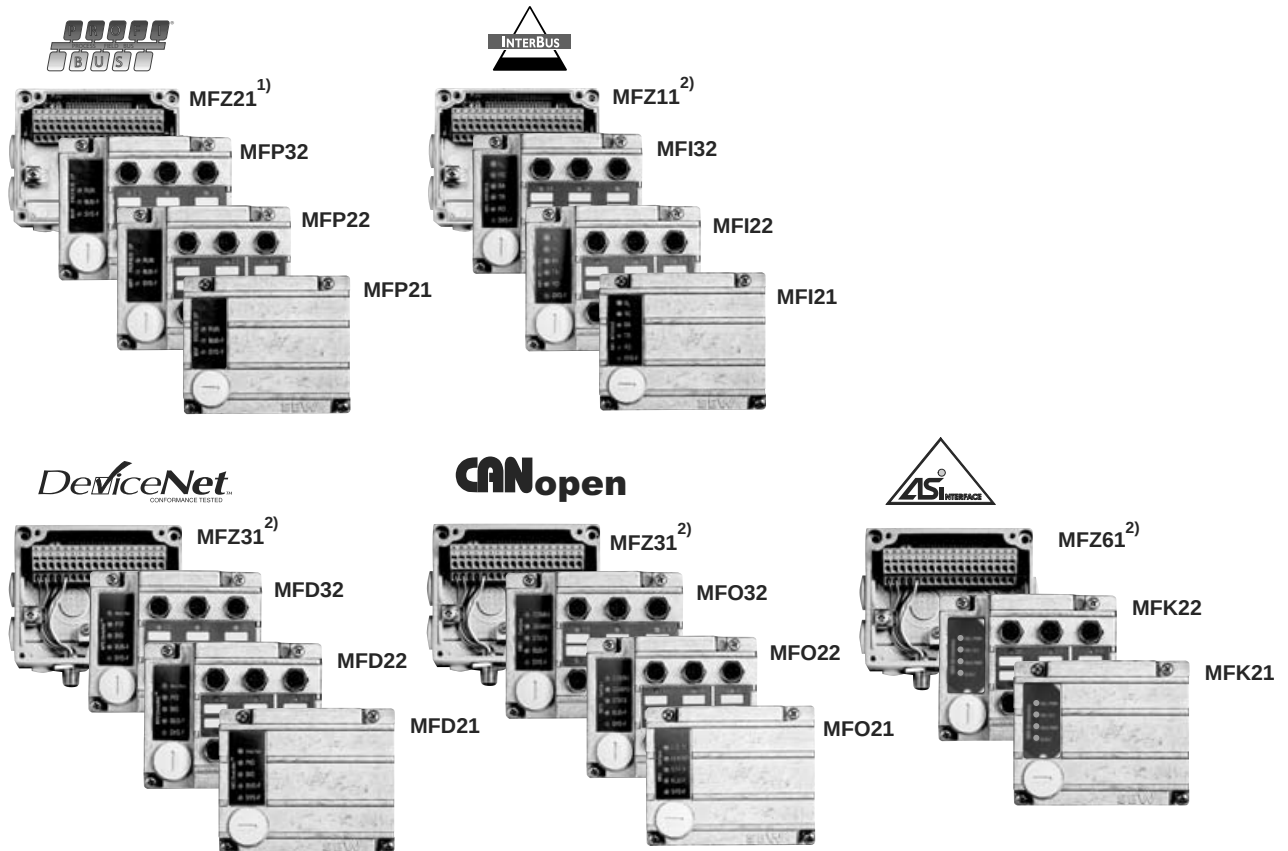
[B3] Pressure compensation fitting for fieldbus interfaces (diagnostics interfaces), see page 35



55771AXX



3.5.2 Available MF../Z.1 fieldbus interface combinations



56336AXX

- 1 Red terminal imprint
- 2 Black terminal imprint

Variants

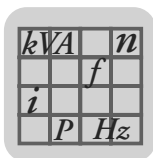


Module type	MFP21D	MFP22D	MFP32D
Part number	823 624 0	823 625 9	823 626 7
Connection technology Sensors / Actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Corresponding module carrier	MFZ21D 823 627 5		MFZ21D/AVT2/AWT2 824 299 2
Fieldbus connection technology	Terminals		M12 plug connector
Module + module carrier	MFP21D/Z21D..	MFP21D/Z21D..	MFP32D/Z21D..

Variants



Module type	MFI21A	MFI22A	MFI32A
Part number	823 526 0	823 527 9	823 528 7
Connection technology Sensors / Actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Corresponding module carrier	MFZ11A 823 514 7		
Fieldbus connection technology	Terminals		
Module + module carrier	MFI21A/Z11A	MFI22A/Z11A	MFI32A/Z11A



Available Components

Fieldbus interfaces

Variants



Module type Part number	MFD21A 823 551 1	MFD22A 823,552 X	MFD32A 823 553 8
Connection technology Sensors / Actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Corresponding module carrier Part number Fieldbus connection technology	MFZ31A 823 548 1 Micro-style connector		
Module + module carrier	MFD21A/Z31A	MFD22A/Z31A	MFD32A/Z31A

Variants

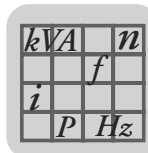


Module type Part number	MFO21A 823 957 6	MFO22A 823 958 4	MFO32A 823 959 2
Connection technology Sensors / Actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Corresponding module carrier Part number Fieldbus connection technology	MFZ31A 823 548 1 M12 plug connector		
Module + module carrier	MFO21A/Z31A	MFO22A/Z31A	MFO32A/Z31A

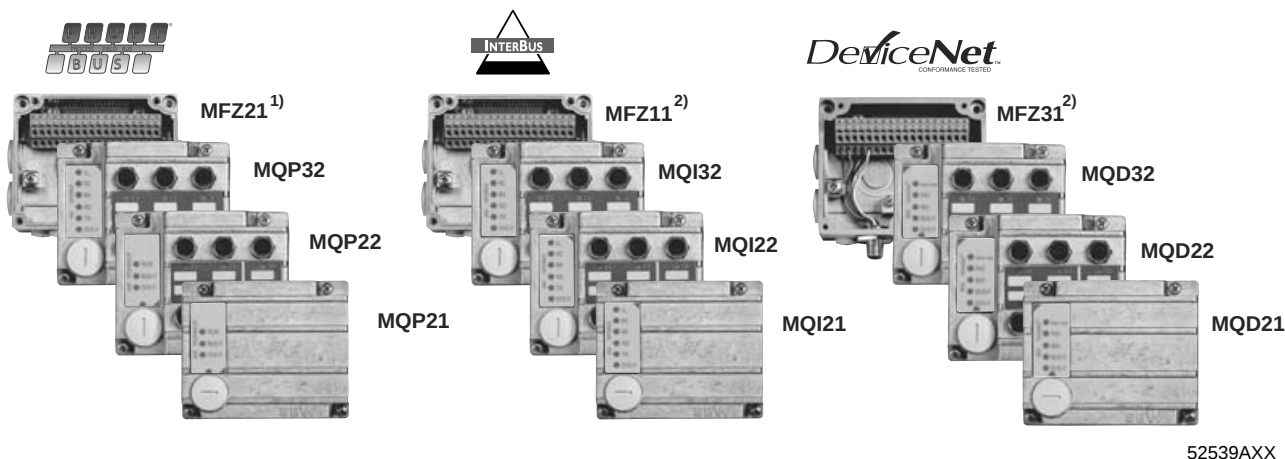
Variants



Module type Part number	MFK21A 824 537 1	MFK22A 824 539 8
Connection technology Sensors / Actuators	Terminals	M12 and terminals
Digital inputs	4	4
Digital outputs	2	2
Corresponding module carrier Part number Connection technology AS-inter- face	MFZ61A 824 574 6 M12 plug connector	
Module + module carrier	MFK21A/Z61A	MFK22A/Z61A



3.5.3 Available MQ../Z.1 fieldbus interface combinations



52539AXX

- 1 Red terminal imprint
2 Black terminal imprint

Variants



Module type	MQP21D	MQP22D	MQP32D
Part number	824 190 2	824 191 0	824 192 9
Connection technology	Terminals	M12 and terminals	M12 and terminals
Sensors / Actuators			
Digital inputs	4	4	6
Digital outputs	2	2	0
Corresponding module carrier	MFZ21D		
Part number	823 627 5		
Fieldbus connection technology	Terminals		
Module + module carrier	MQP21D/Z21D..	MQP22D/Z21D..	MQP32D/Z21D..

Variants

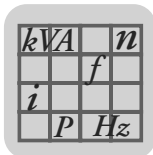


Module type	MQI21A	MQI22A	MQI32A
Part number	824 203 8	824 204 6	824 205 4
Connection technology	Terminals	M12 and terminals	M12 and terminals
Sensors / Actuators			
Digital inputs	4	4	6
Digital outputs	2	2	0
Corresponding module carrier	MFZ11A		
Part number	823 514 7		
Fieldbus connection technology	Terminals		
Module + module carrier	MQI21A/Z11A	MQI22A/Z11A	MQI32A/Z11A

Variants



Module type	MQD21A	MQD22A	MQD32A
Part number	824 200 3	824 201 1	824,202 X
Connection technology	Terminals	M12 and terminals	M12 and terminals
Sensors / Actuators			
Digital inputs	4	4	6
Digital outputs	2	2	0
Corresponding module carrier	MFZ31A		
Part number	823 548 1		
Fieldbus connection technology	Micro-style connector		
Module + module carrier	MQD21A/Z31A	MQD22A/Z31A	MQD32A/Z31A



3.6 Field distributors

3.6.1 MFZ.3 field distributor

Features

[A] Standard package field distributor

[A1] The enclosed plastic screw plugs are not suitable for applications in IP66. Place a separate order for the matching metal screw plugs.

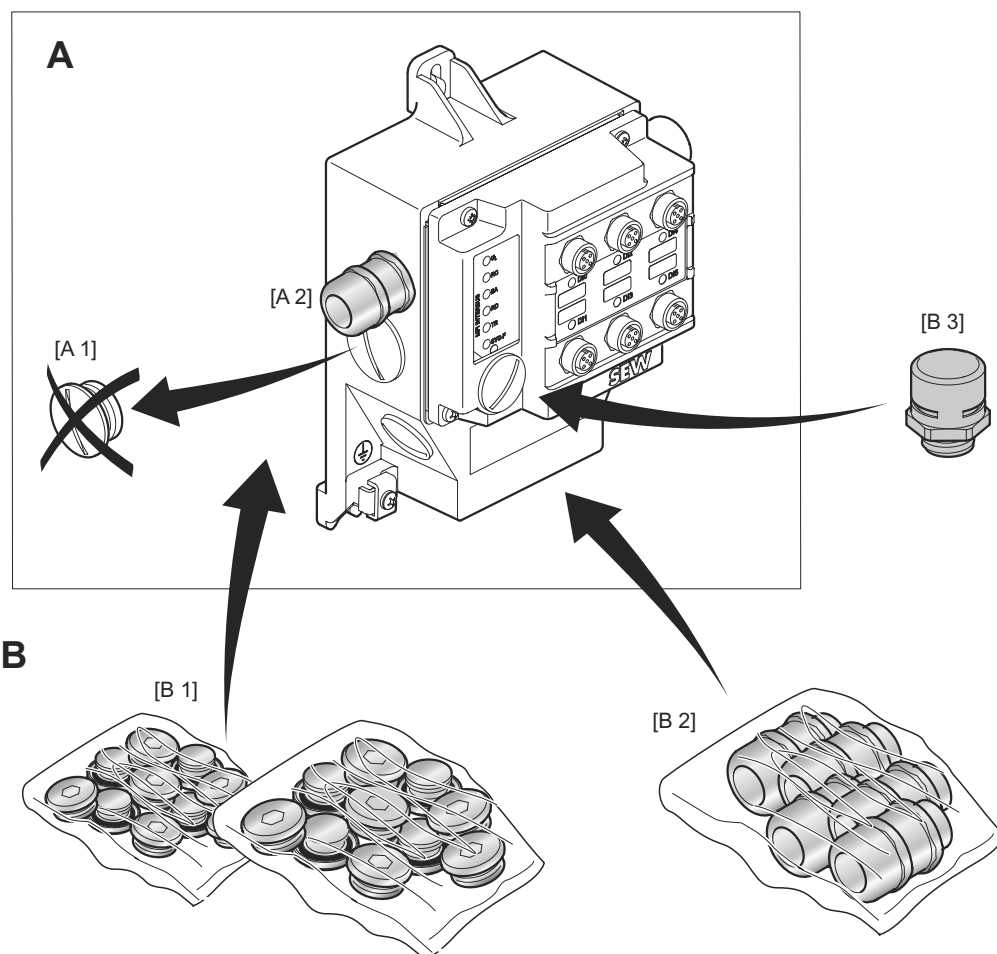
[A2] 2 x Metal cable glands (suitable for applications in IP66, additional cable glands can be ordered)

[B] Options for IP66 (order separately)

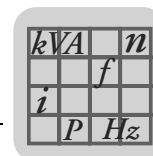
[B1] Stainless steel screw plugs, see page 35

[B2] Metal cable glands, see page 35

[B3] Pressure compensation fitting for fieldbus interfaces (diagnostics interfaces), see page 35



55776AXX

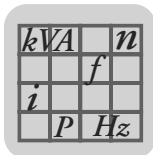


**Available
MF../Z.3. combi-
nations**

	no I/O 	4 x I / 2 x O (M12) 	6 x I (M12) 
InterBus	MFI21A/Z13A	MFI22A/Z13A	MFI32A/Z13A
PROFIBUS	MFP21D/Z23D	MFP22D/Z23D	MFP32D/Z23D
PROFIBUS with M12 plug connector for bus connection	MFP21D/Z23D/ AVT2/AWT2	MFP22D/Z23D/ AVT2/AWT2	MFP32D/Z23D/ AVT2/AWT2
DeviceNet	MFD21A/Z33A	MFD22A/Z33A	MFD32A/Z33A
CANopen	MFO21A/Z33A	MFO22A/Z33A	MFO32A/Z33A
AS-interface	MFK21A/Z63A	MFK22A/Z63A	—

**Available
MQ../Z.3. combi-
nations**

	no I/O 	4 x I / 2 x O (M12) 	6 x I (M12) 
InterBus	MQI21A/Z13A	MQI22A/Z13A	MQI32A/Z13A
PROFIBUS	MQP21D/Z23D	MQP22D/Z23D	MQP32D/Z23D
PROFIBUS with M12 plug connector for bus connection	MQP21D/Z23D/ AVT2/AWT2	MQP22D/Z23D/ AVT2/AWT2	MQP32D/Z23D/ AVT2/AWT2
DeviceNet	MQD21A/Z33A	MQD22A/Z33A	MQD32A/Z33A



3.6.2 MFZ.7 field distributors

Features

[A] Standard package field distributor

[A1] The enclosed plastic screw plugs are not suitable for applications in IP66. Place a separate order for the matching metal screw plugs.

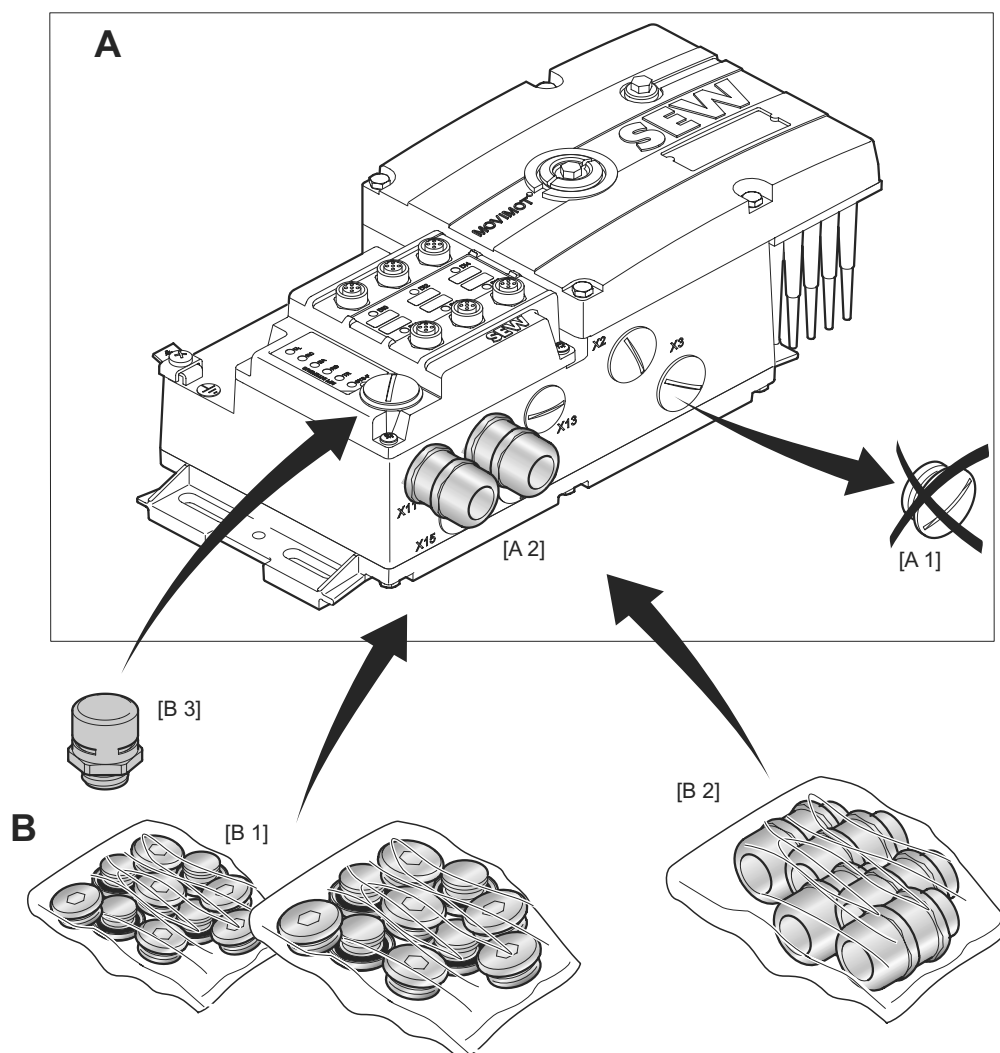
[A2] 2 x Metal cable glands
(suitable for applications in IP66, additional cable glands can be ordered)

[B] Options for IP66

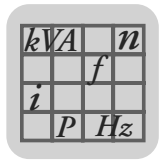
[B1] Stainless steel screw plugs, see page 35

[B2] Metal cable glands, see page 35

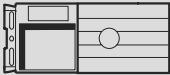
[B3] Pressure compensation fitting for fieldbus interfaces
(diagnostics interfaces), see page 35



55777AXX

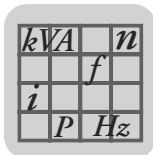


Possible combinations
MF../MM../Z.7.

		4 x I / 2 x O (terminals)	4 x I / 2 x O (M12)	6 x I (M12)
				
InterBus		MFI21A/MM../C/Z17F 0	MFI22A/MM../C/Z17F 0	MFI32A/MM../C/Z17F 0
		MFI21A/MM../C/Z17F 1	MFI22A/MM../C/Z17F 1	MFI32A/MM../C/Z17F 1
PROFIBUS		MFP21D/MM../C/Z27F 0	MFP22D/MM../C/Z27F 0	MFP32D/MM../C/Z27F 0
		MFP21D/MM../C/Z27F 1	MFP22D/MM../C/Z27F 1	MFP32D/MM../C/Z27F 1
DeviceNet		MFD21A/MM../C/Z37F 0	MFD22A/MM../C/Z37F 0	MFD32A/MM../C/Z37F 0
		MFD21A/MM../C/Z37F 1	MFD22A/MM../C/Z37F 1	MFD32A/MM../C/Z37F 1
CANopen		MFO21A/MM../C/Z37F 0	MFO22A/MM../C/Z37F 0	MFO32A/MM../C/Z37F 0
		MFO21A/MM../C/Z37F 1	MFO22A/MM../C/Z37F 1	MFO32A/MM../C/Z37F 1
AS-interface		MFK21A/MM../C/Z67F 0	MFK22A/MM../C/Z67F 0	—
		MFK21A/MM../C/Z67F 1	MFK22A/MM../C/Z67F 1	—

Possible combinations
MQ../MM../Z.7.

		4 x I / 2 x O (terminals)	4 x I / 2 x O (M12)	6 x I (M12)
				
InterBus		MFI21A/MM../C/Z17F 0	MFI22A/MM../C/Z17F 0	MFI32A/MM../C/Z17F 0
		MFI21A/MM../C/Z17F 1	MFI22A/MM../C/Z17F 1	MFI32A/MM../C/Z17F 1
PROFIBUS		MFP21D/MM../C/Z27F 0	MFP22D/MM../C/Z27F 0	MFP32D/MM../C/Z27F 0
		MFP21D/MM../C/Z27F 1	MFP22D/MM../C/Z27F 1	MFP32D/MM../C/Z27F 1
DeviceNet		MFD21A/MM../C/Z37F 0	MFD22A/MM../C/Z37F 0	MFD32A/MM../C/Z37F 0
		MFD21A/MM../C/Z37F 1	MFD22A/MM../C/Z37F 1	MFD32A/MM../C/Z37F 1



Available Components

Field distributors

Motors →
field distributor
MF../MM../Z.7.,
MQ../MM../Z.7.

1400 1/min:

Power [kW]	Motor $\triangle$ ¹⁾	Field distributor	
		with MF.. fieldbus interface	with MQ.. interface
0.25	DFR63L4/TH	– MF../ MM03C / Z.7F 0 / BW1 ²⁾	– MQ../ MM03C / Z.7F 0 / BW1 ²⁾
	DFR63L4/BMG/TH.	– MF../ MM03C / Z.7F 0 ²⁾	– MQ../ MM03C / Z.7F 0 ²⁾
0.37	DT71D4/TH	MF../ MM03C / Z.7F 0 / BW1 MF../ MM05C / Z.7F 0 / BW1 ²⁾	MQ../ MM03C / Z.7F 0 / BW1 MQ../ MM05C / Z.7F 0 / BW1 ²⁾
	DT71D4/BMG/TH.	MF../ MM03C / Z.7F 0 MF../ MM05C / Z.7F 0 ²⁾	MQ../ MM03C / Z.7F 0 MQ../ MM05C / Z.7F 0 ²⁾
0.55	DT80K4/TH	MF../ MM05C / Z.7F 0 / BW1 MF../ MM07C / Z.7F 0 / BW1 ²⁾	MQ../ MM05C / Z.7F 0 / BW1 MQ../ MM07C / Z.7F 0 / BW1 ²⁾
	DT80K4/BMG/TH.	MF../ MM05C / Z.7F 0 MF../ MM07C / Z.7F 0 ²⁾	MQ../ MM05C / Z.7F 0 MQ../ MM07C / Z.7F 0 ²⁾
0.75	DT80N4/TH	MF../ MM07C / Z.7F 0 / BW1 MF../ MM11C / Z.7F 0 / BW1 ²⁾	MQ../ MM07C / Z.7F 0 / BW1 MQ../ MM11C / Z.7F 0 / BW1 ²⁾
	DT80N4/BMG/TH.	MF../ MM07C / Z.7F 0 MF../ MM11C / Z.7F 0 ²⁾	MQ../ MM07C / Z.7F 0 MQ../ MM11C / Z.7F 0 ²⁾
1.1	DT90S4/TH	MF../ MM11C / Z.7F 0 / BW1 MF../ MM15C / Z.7F 0 / BW1 ²⁾	MQ../ MM11C / Z.7F 0 / BW1 MQ../ MM15C / Z.7F 0 / BW1 ²⁾
	DT90S4/BMG/TH.	MF../ MM11C / Z.7F 0 MF../ MM15C / Z.7F 0 ²⁾	MQ../ MM11C / Z.7F 0 MQ../ MM15C / Z.7F 0 ²⁾
1.5	DT90L4/TH	MF../ MM15C / Z.7F 0 / BW1 –	MQ../ MM15C / Z.7F 0 / BW1 –
	DT90L4/BMG/TH.	MF../ MM15C / Z.7F 0 –	MQ../ MM15C / Z.7F 0 –

1) Make sure to order the assigned motor in IP66.

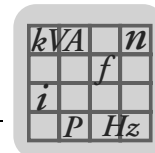
2) Combination with increased short-term torque

2900 1/min:

Power [kW]	Motor $\triangle$ ¹⁾	Field distributor	
		with MF.. fieldbus interface	with MQ.. interface
0.37	DFR63L4/TH	MF../ MM03C / Z.7F 1 / BW1 MF../ MM05C / Z.7F 1 / BW1 ²⁾	MQ../ MM03C / Z.7F 1 / BW1 MQ../ MM05C / Z.7F 1 / BW1 ²⁾
	DFR63L4 / BMG / TH .	MF../ MM03C / Z.7F 1 MF../ MM05C / Z.7F 1 ²⁾	MQ../ MM03C / Z.7F 1 MQ../ MM05C / Z.7F 1 ²⁾
0.55	DT71D4/TH	MF../ MM05C / Z.7F 1 / BW1 MF../ MM07C / Z.7F 1 / BW1 ²⁾	MQ../ MM05C / Z.7F 1 / BW1 MQ../ MM07C / Z.7F 1 / BW1 ²⁾
	DT71D4 / BMG / TH .	MF../ MM05C / Z.7F 1 MF../ MM07C / Z.7F 1 ²⁾	MQ../ MM05C / Z.7F 1 MQ../ MM07C / Z.7F 1 ²⁾
0.75	DT80K4/TH	MF../ MM07C / Z.7F 1 / BW1 MF../ MM11C / Z.7F 1 / BW1 ²⁾	MQ../ MM07C / Z.7F 1 / BW1 MQ../ MM11C / Z.7F 1 / BW1 ²⁾
	DT80K4 / BMG / TH .	MF../ MM07C / Z.7F 1 MF../ MM11C / Z.7F 1 ²⁾	MQ../ MM07C / Z.7F 1 MQ../ MM11C / Z.7F 1 ²⁾
1.1	DT80N4/TH	MF../ MM11C / Z.7F 1 / BW1 MF../ MM15C / Z.7F 1 / BW1 ²⁾	MQ../ MM11C / Z.7F 1 / BW1 MQ../ MM15C / Z.7F 1 / BW1 ²⁾
	DT80N4 / BMG / TH .	MF../ MM11C / Z.7F 1 MF../ MM15C / Z.7F 1 ²⁾	MQ../ MM11C / Z.7F 1 MQ../ MM15C / Z.7F 1 ²⁾
1.5	DT90S4/TH	MF../ MM15C / Z.7F 1 / BW1 –	MQ../ MM15C / Z.7F 1 / BW1 –
	DT90S4 / BMG / TH .	MF../ MM15C / Z.7F 1 –	MQ../ MM15C / Z.7F 1 –

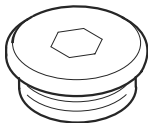
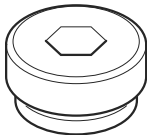
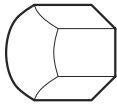
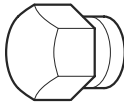
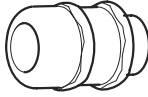
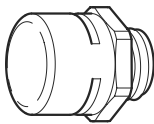
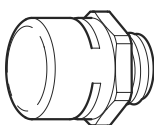
1) Make sure to order the assigned motor in IP66.

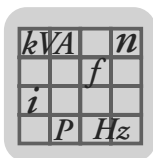
2) Combination with increased short-term torque



3.7 Options

3.7.1 Metal cable glands

Type	Figure	Contents	Size	Part number
Blanking plug cable entries (made of stainless steel)		10 pieces	M12 x 1.5	1820 222 5
		10 pieces	M16 x 1.5	1820 223 3
		10 pieces	M20 x 1.5	1820 224 1
		10 pieces	M25 x 1.5	1820 226 8
MOVIMOT® f1 potentiometer plug (made of stainless steel)		10 pieces	M24 x 1.5	1820 266 7
MOVI-SWITCH® M12 plug (made of stainless steel)		10 pieces	M12 x 1.0	1820 279 9
Fieldbus interface M12 plug (made of stainless steel)		10 pieces	M12 x 1.0	1820 227 6
EMC cable gland		10 pieces	M12 x 1.5	1820 477 5
		10 pieces	M16 x 1.5	1820 478 3
		10 pieces	M20 x 1.5	1820 479 1
		10 pieces	M25 x 1.5	1820 480 5
Pressure compensation fitting (made of stainless steel) for MOVIMOT® and MOVI-SWITCH®		1 pieces	M16 x 1.5	1820 409 0
Pressure compensation fitting (made of stainless steel) for fieldbus inter- faces (diagnostics interface)		1 pieces	M20 x 1.5	1820 432 5



3.7.2 Corrosion and surface protection

SEW-EURODRIVE offers various optional protective measures for operation of MOVIMOT®/MOVI-SWITCH® gearmotors under special ambient conditions.

Special protective measures

Gearmotor output shafts can be treated with special optional protective measures for operation subject to severe environmental pollution or in particularly demanding applications.

Action	Protection principle	Suitable for
Kanisil coating	Surface coating of the oil seal contact surface	Severe environmental pollution and in conjunction with FKM oil seal (Viton®)
Stainless steel output shaft	Surface protection through high-quality material	Particularly exacting applications in terms of exterior surface protection

NOCO®-FLUID

As standard, SEW-EURODRIVE supplies NOCO®-FLUID corrosion protection and lubricant with every hollow shaft gear unit. Use NOCO®-FLUID when installing hollow shaft gear units. This will reduce any possible fretting corrosion and facilitate possible removal later on.

NOCO®-FLUID is also suitable for protecting machined metal surfaces that do not have corrosion protection. These include parts of shaft ends or flanges. You can also order larger quantities of NOCO®-FLUID from SEW-EURODRIVE.

NOCO®-FLUID is food grade according to USDA-H1. You can tell that NOCO®-FLUID is a food grade oil by the USDA-H1 identification label on its packaging.



4 Project Planning

4.1 Drive selection

4.1.1 MOVIMOT®/MOVI-SWITCH®

Variants

The following MOVIMOT® or MOVI-SWITCH® designs are available in IP66:

- IP66 without pressure compensation
- IP66 with pressure compensation



In which cases do you need a pressure compensation fitting?

SEW-EURODRIVE recommends using a pressure compensation fitting under the following circumstances:

- Large temperature differences (e.g. in case the drive is cleaned with cold water immediately after operation).
- In case of changing temperatures (e. g. "refrigerated storage door")
- In case sealing surfaces come into contact with water during operation
- Cleaning the drive with water containing a wetting agent
- In case of cycle operation (S3) in cold and/or humid environment

Features

Drives in IP66 are characterized by the following features:

- IP66 motor with condensation bore and corrosion protection (OS1)
- IP66 terminal box with cable outlet on one end
- Wiring board with increased resistance to moisture condensation (coated)
- Stainless steel retaining screws in MOVIMOT® inverter or MOVI-SWITCH® control unit
- Stainless steel screw plugs with internal gasket
- Two metal cable glands (1 x M25 and 1 x M16, enclosed loose)

The only difference between drives in IP66 with pressure compensation and those without pressure compensation is an additional pressure compensation fitting.

Always indicate the requested design in your order ("with pressure compensation" or "without pressure compensation").

See section "Available components" for additional information.

Installation



Correct installation is the decisive factor in ensuring the degree of protection in IP66 drives. See the corresponding comments in the section "Installation."



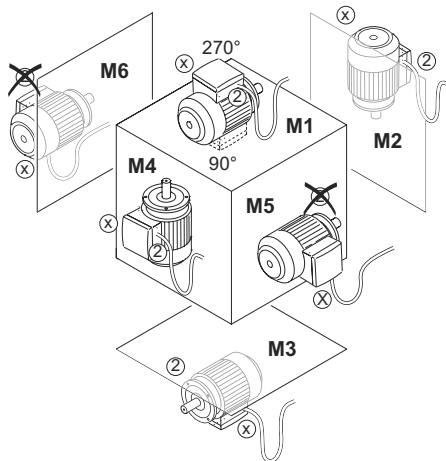
Limitations

Limitations without pressure compensation fitting

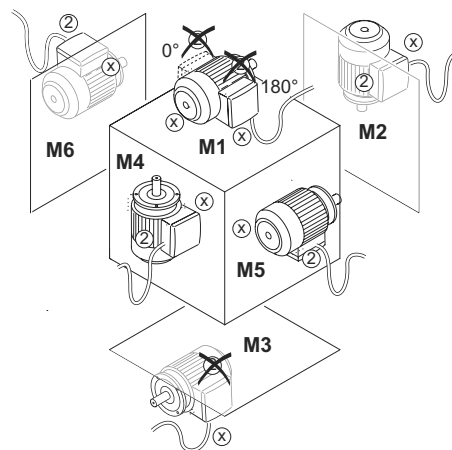
Cable entry "2" is not available in the following mounting positions:

- Terminal box position 270°/90°: M5 and M6
- Terminal box position 180°/0°: M1 and M3

Terminal box position 270° or 90°



Terminal box position 180° or 0°



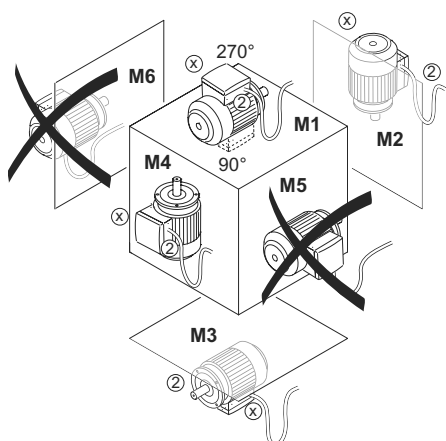
56243AEN

Limitations when using pressure compensation fittings

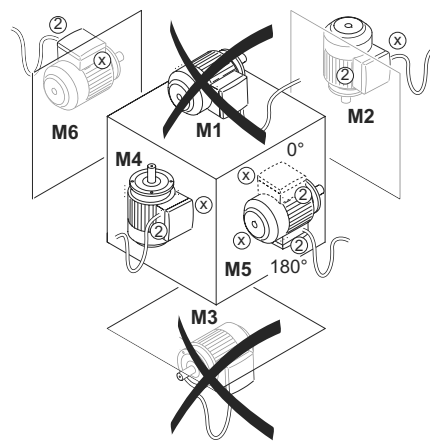
The following mounting positions are not available when using a pressure compensation fitting:

- Terminal box position 270°/90°: M5 and M6
- Terminal box position 180°/0°: M1 and M3

Terminal box position 270° or 90°



Terminal box position 180° or 0°



56242AEN



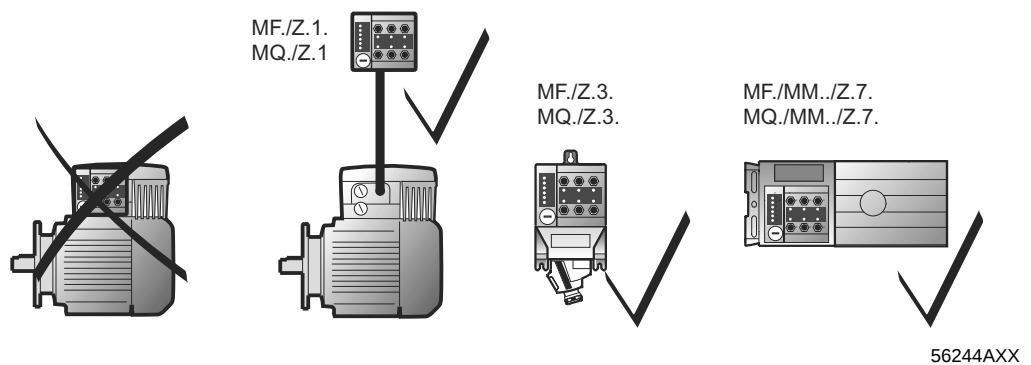
4.1.2 Options/field distributors



The following options are suitable for IP66:

Suitable for applications in IP66 are:

- MF./Z.1 or MQ./Z.1. fieldbus interfaces (only in case of remote installation of fieldbus interface)
- MF./Z.3. or MQ./Z.3. field distributors
- MF.../MM../Z.7. or MQ.../MM../Z.7 field distributors



IP66 will be accomplished permanently by using suitable fittings and cable entries even in case of continuous or cyclical contact with water containing acidic or alkaline additives as well as wetting agents.

The stainless steel screw plugs specified by SEW-EURODRIVE with seals on the inside are available in packages of 10 pieces each in different sizes and have to be ordered and installed in addition to the standard unit (IP65) for applications in IP66.

We recommend using the pressure compensation fitting (M20x1.5) instead of the diagnostics socket cover on the fieldbus module.



4.1.3 Required cable glands

The table shows an overview of existing cable entries in the components to determine the screw fittings that are required in addition to the standard package.

Component	Cable entries M12 plug connector	Standard included <u>metal</u> cable glands
MOVIMOT® (see also page 7)	2 x M25 + 2 x M16 1 x M24 (potentiometer cover)	- Cable glands¹⁾ – 1 x M25 – 1 x M16 - All additional cable entries come with factory-installed metal screw plugs.
MOVIMOT® with P.2A option (see also page 22)	2 x M25 + 2 x M16 1 x M24 (potentiometer cover)	
MOVI-SWITCH® 1E (see also page 12)	2 x M25 + 1 x M16 1 x M12 plug connector	
MOVI-SWITCH® 2S (see also page 17)	2 x M25 + 2 x M16 2 x M12 plug connector	
MF../Z.1 fieldbus interface/ MQ../Z.1 fieldbus interface/ (see also page 26)	2 x M12 + 6 x M20 1 x M20 (diagnostics interface) 6 x M12 plug connector (in M..22../.. or M..32../.. design only)	2 x metal cable screw fitting M20
MF../Z.3./field distributor MQ../Z.3./field distributor (see also page 30)	2 x M16 + 2 x M20 + 2 x M25 1 x M20 (diagnostics interface) 6 x M12 plug connector (in M..22../.. or M..32../.. design only)	
MF../MM../Z.7 field distributor MQ../MM../Z.7 field distributor (see also page 32)	5 x M20 + 2 x M25 1 x M20 (diagnostics interface) 6 x M12 plug connector (in M..22../.. or M..32../.. design only)	

1) You will receive a pressure compensation fitting M16 when ordering the version "with pressure compensation."



All available screw fittings are listed on page 35.



4.2 Features of sealing material and surfaces

4.2.1 Sealing material

EPDM is the standard sealing material for components in IP66. The following table shows a selection of various EPDM features. Include this information when planning your system.

Property	EPDM stability
Alkali resistance	very good
Resistance to ageing	very good
Ammonia (no water)	very good
Ethanol	very good
Gasoline resistance	low
Vapor	up to 130 °C
Hot water	very good
Lye	very good
Carbonic acid	very good
Methanol	very good
Sodium chloride	very good
Oil (vegetable, ethereal)	good to medium
Oil and grease resistance	low
Ozone resistance	very good
Phosphoric acid (50 %)	very good
Nitric acid (40 %)	good
Hydrochloric acid (38 %)	very good
Acid resistance	very good
Sulfuric acid (30 %)	very good
Silicone oils and greases	very good
Drinking water	very good
Suds (laundry detergent)	very good
Sugar (watery)	very good
Permitted temperature range	-25 ... +150 °C



The low rated stability of EPDM in case of contact with oils, gasoline, grease etc. results from the fact that EPDM swells up when it comes into contact with these materials. These chemicals do not destroy EPDM.

4.2.2 Surface protection

The OS1 surface protection is standard for MOVIMOT[®]/MOVI-SWITCH[®] gearmotors in IP66.

Surface protection	Coat structure	Coat thickness [μm]	Suitable for
OS1	1 × dip priming 1 × two-pack base coat 1 × two-pack top coat	ca. 120-150	- Low environmental impact - Relative humidity max. 95% - Surface temperature up to max. 120 °C - Corrosivity category C2¹⁾

1) according to DIN EN ISO 12 944-2

Some chemicals will dull units with uncoated aluminum housing. The sealing properties and the functionality of the units are usually not affected.



4.3 Questionnaire



To better prepare for a consultation with SEW-EURODRIVE, we ask that you submit the following questionnaire to the nearest SEW location.

Company:

Contact person:

Phone/fax:

E-mail:

Street:

Zip code:

Place, date:

1. Information on location

- Detailed description of system (e.g. bottle filling, transportation of empty bottles, cans etc.?)

.....

.....

.....

- What is the average ambient temperature in the plant?

In the summer: In the winter:

- What is the relative humidity in the vicinity of the motor?

min.: max.:

- In which duty type does the motor run? (e.g. S1, S3 etc.)

.....

.....



- Are there extreme temperature fluctuations at the motor/inverter? (e.g. does the motor run for an extended period of time and then cool down or does the operating environment heat up and then cool down again?)

.....

.....

.....

- Are you operating other products not supplied by SEW in the same area?

.....

.....

2. Cleaning the location

- How often does the cleaning take place?

..... times daily times weekly

- Are you using pressure washers to clean the location? (e.g. Kärcher)

☐ Yes, with ☐ No

- Does the water contain solvents or cleansing agents?

☐ Yes, with ☐ No

- Does the motor regularly come into contact with liquids, emulsions or other substances used in the current production?

☐ Yes, with ☐ No

- Are the components compatible with sealing compounds?

☐ Yes ☐ No



5 Installation

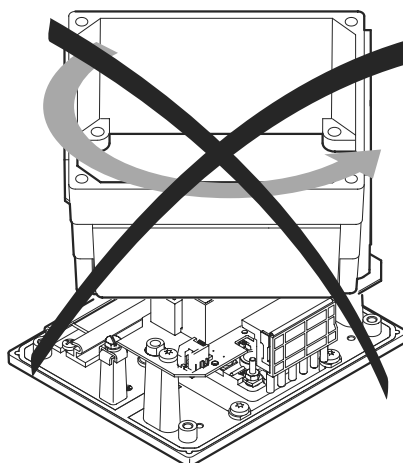


Consult the respective operating instructions/manuals for installation of units!

- Operating instructions
 - MOVIMOT® MM03C to MM3XC
 - MOVI-SWITCH®
- Manuals (depending on the respective bus system)
 - PROFIBUS Interfaces, Field Distributors
 - Interbus Interfaces, Field Distributors
 - DeviceNet/CANopen Interfaces, Field Distributors
 - AS-interface Interfaces, AS-interface Field Distributors

5.1 Installation instructions

- Close the unit during extended breaks in installation to prevent humidity or dirt from entering.
- Check seals and sealing surfaces during assembly following electrical installation.
- Avoid rotating the modular terminal box to not decrease the sealing effect.



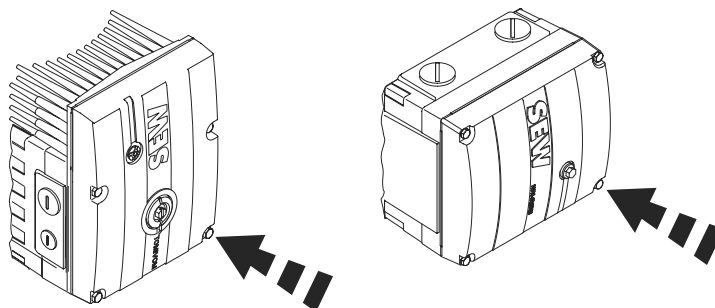
56348AXX

- Use only the enclosed metal cable screw fittings / metal screw fittings offered by SEW-EURODRIVE, see page 35.
- Make sure to install the cable with a dripping loop. You will find examples on page 53 and page 58.
- Note the permitted mounting position during installation shown on page 52 and page 54.
- Close unused cable entries and plug connectors with suitable screw plugs, see page 35.



5.2 Tightening torques

MOVIMOT® inverter or MOVI-SWITCH® control unit:

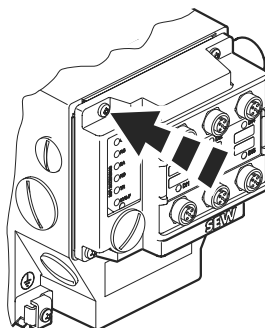


56357AXX

Take the following approach when installing the MOVIMOT® inverter or MOVI-SWITCH® control unit:

1. Position MOVIMOT® inverter or MOVI-SWITCH® control unit with 1.2 Nm on the terminal box/field distributor.
2. Tighten screws diagonally with 1.8 Nm.
3. Tighten screws diagonally with 2.6 Nm.
4. Tighten screws with 3.0 Nm.

Fieldbus interfaces:



56358AXX

Use the following approach when installing fieldbus interfaces:

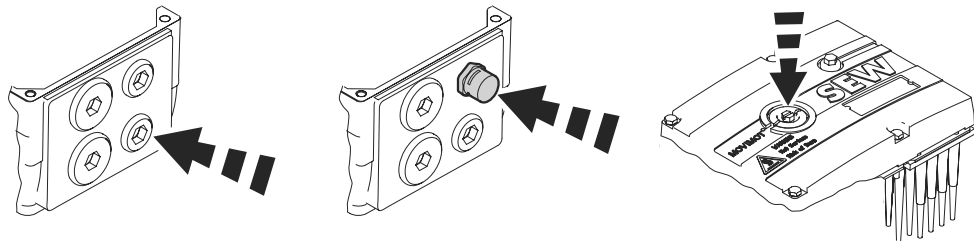
1. Position fieldbus interfaces with 0.5 Nm on the connection module/field distributor.
2. Tighten screws diagonally with 1.2 Nm.
3. Tighten screws diagonally with 2.0 Nm.
4. Tighten screws with 2.5 Nm.



Installation

Tightening torques

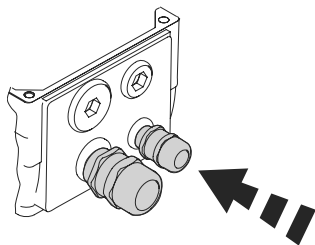
Blanking plug cable entries, F1 potentiometer plug and pressure compensation fittings



56361AXX

Tighten blanking plugs, pressure compensation fittings and F1 potentiometer screw plugs with 2.5 Nm.

EMC cable glands



56360AXX

Tighten EMC cable glands with the following torques:

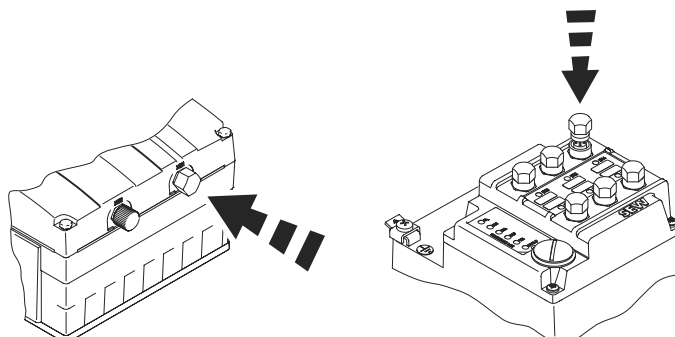
Fitting	Tightening torque
M12 x 1.5	2.5 Nm to 3.5 Nm
M16 x 1.5	3.0 Nm to 4.0 Nm
M20 x 1.5	3.5 Nm to 5.0 Nm
M25 x 1.5	4.0 Nm to 5.5 Nm

The cable retention in the cable gland has to withstand the following removal force of the cable from the cable gland:

- Cable with outer diameter > 10 mm: ≥ 160 N
- Cable with outer diameter < 10 mm: $= 100$ N

M12 plug

Tighten M12 screw plugs with 2 Nm.

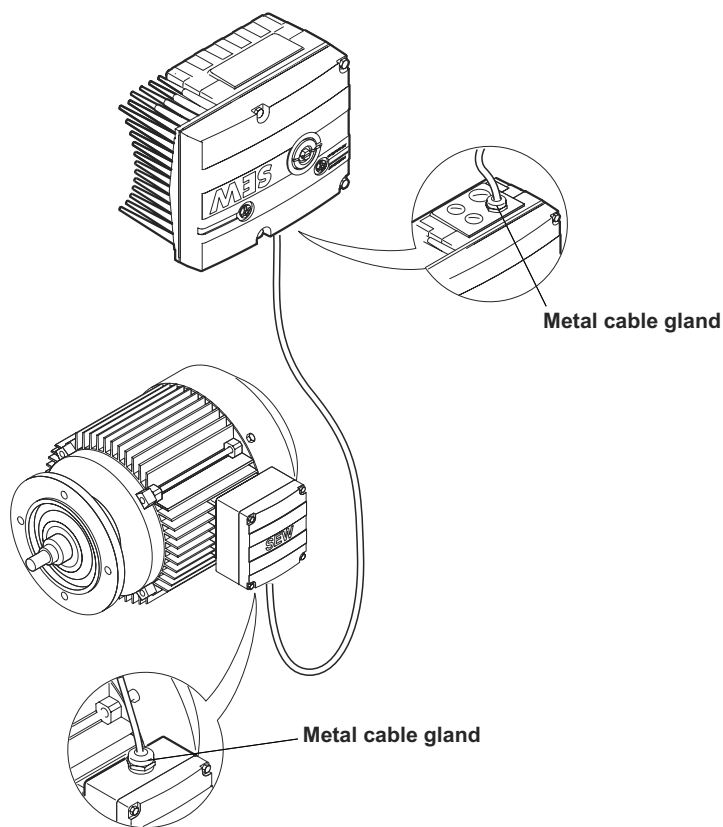


56422AXX



5.3 Connection of MOVIMOT® in IP66 close to the motor

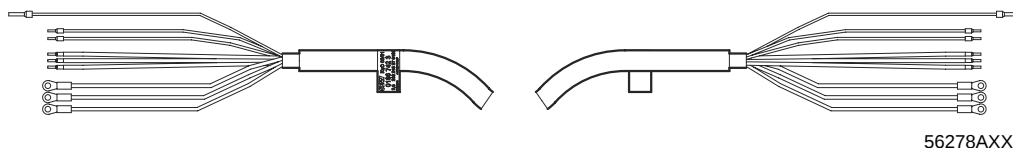
Contrary to the representation in the "MOVIMOT® MM03C to MM3XC" operating instructions, the connection to the motor is implemented without plug connector when installing the MOVIMOT® in IP66 close to the motor.



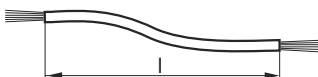
56345AEN

5.3.1 Hybrid cable

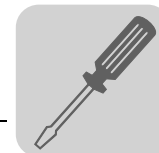
The following hybrid cable is available for MOVIMOT® with P2.A option in IP66 for connection to the motor.



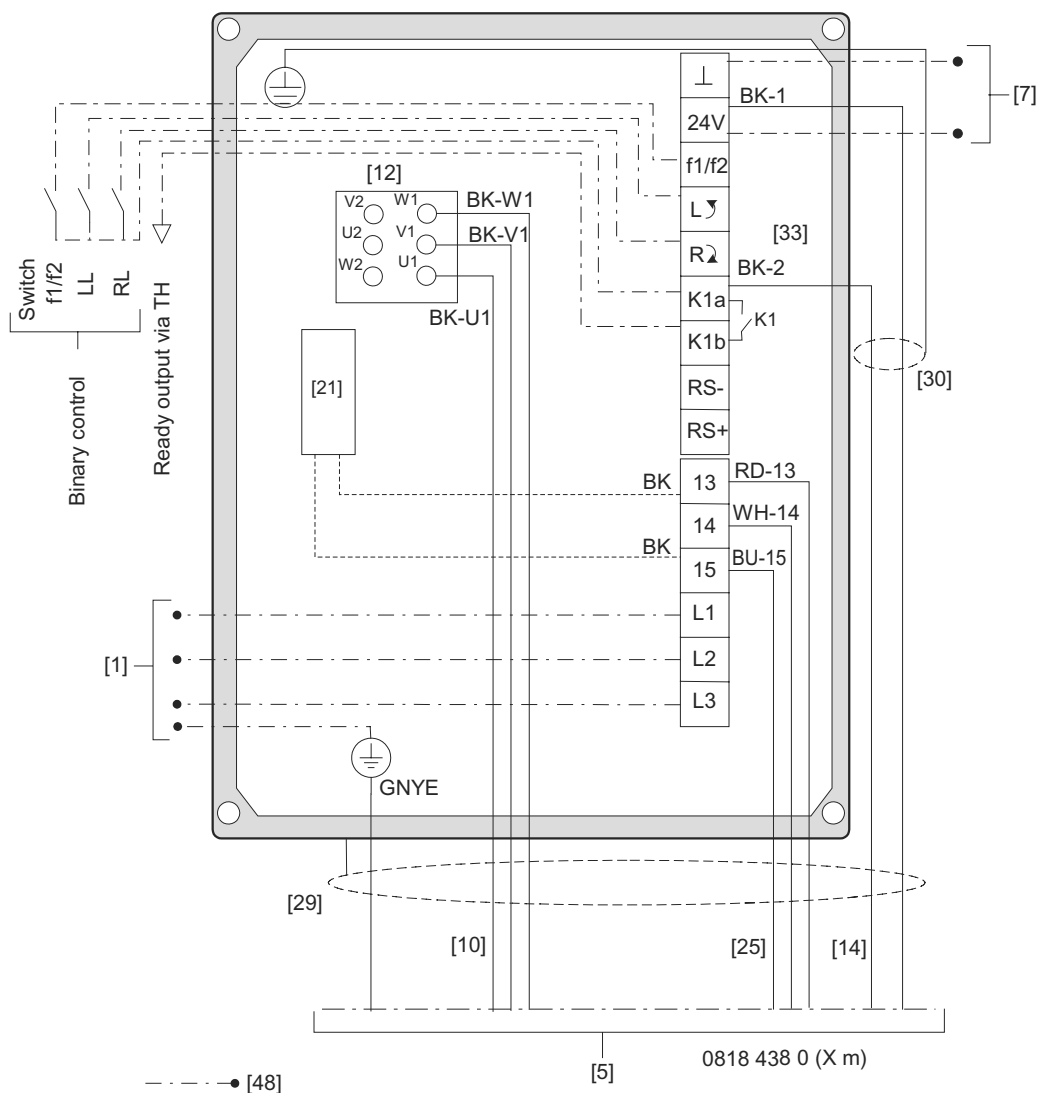
- Part number: 0818 438 0
- Available cable length:



- $l = 1$ to 9.5 m (increments 0.5 m)
- $l = 10$ to 15 m (increments 1 m)



Connection at MOVIMOT® (binary control)



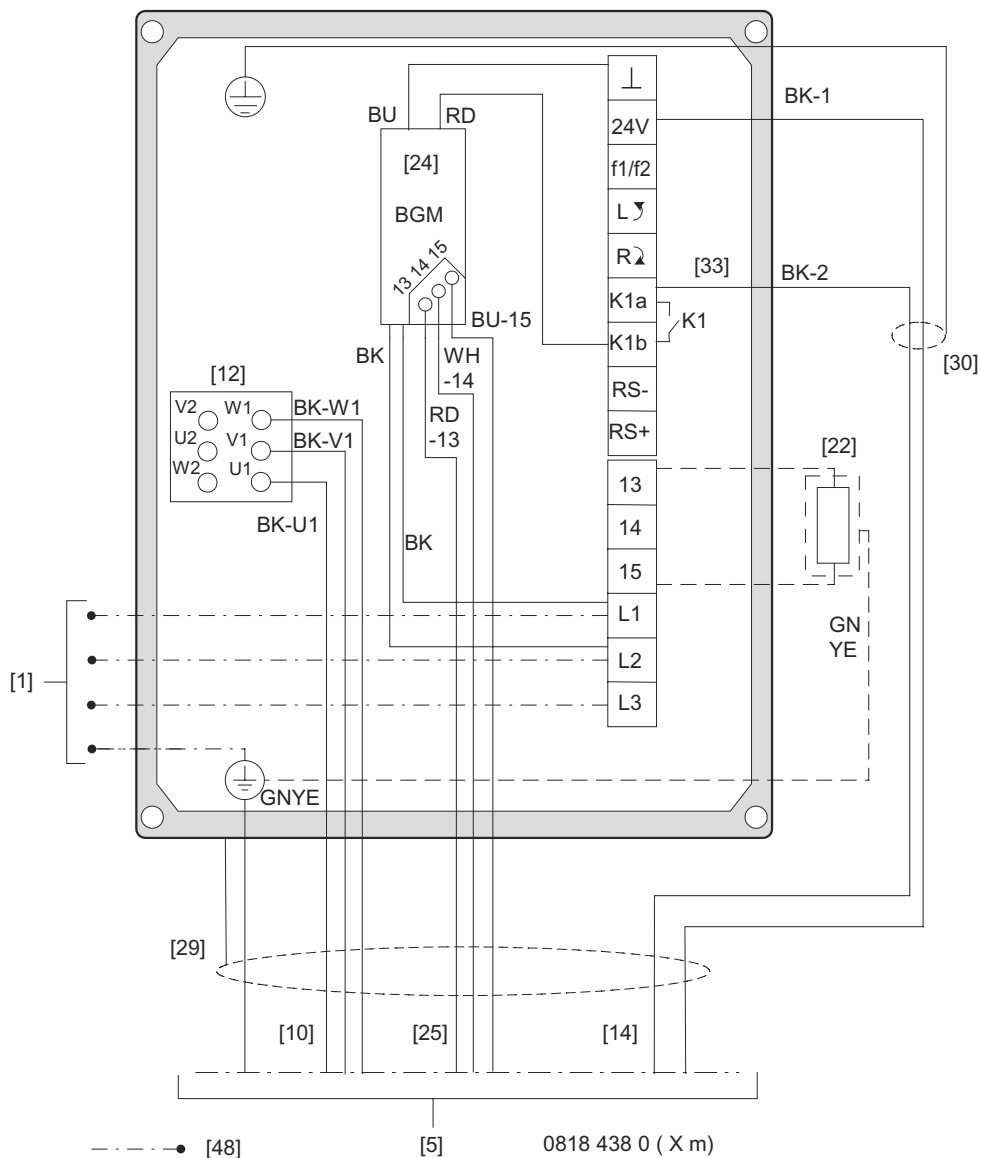
- [1] Mains
- [5] Cable connection to the motor
- [7] Auxiliary voltage (24 V)
- [10] Motor winding
- [12] Terminal block MOVIMOT®
- [14] TH temperature switch TH
- [21] Braking resistor (for motors without brake only)
- [25] Brake coil
- [29] EMC cable gland
- [30] Connection shield to control cable
- [33] Motor protection via TH of motors is implemented by turning off 24 V supply at terminals to enable the direction of rotation.
- [48] Wiring by customer



Installation

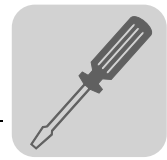
Connection of MOVIMOT® in IP66 close to the motor

Connection at MOVIMOT® in connection with BGM option

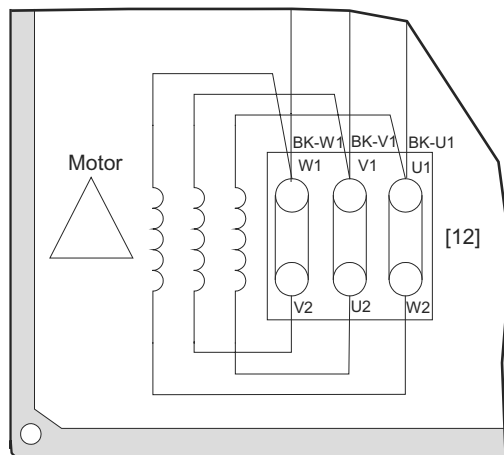
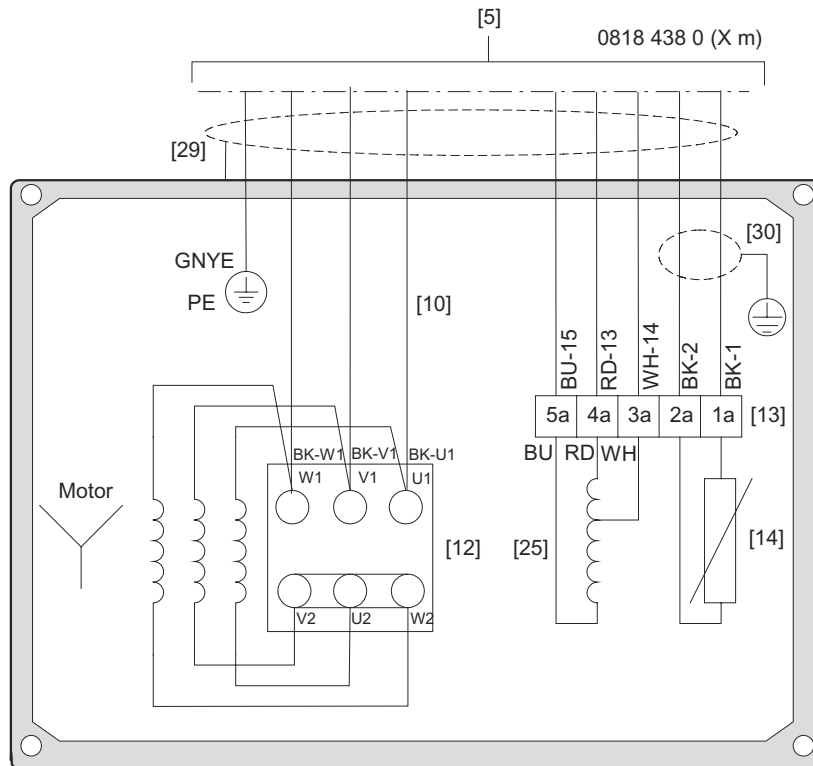


56283AXX

- [1] Mains
- [5] Cable connection to the motor
- [10] Motor winding
- [12] Terminal block MOVIMOT®
- [14] TH temperature switch TH
- [21] Braking resistor (for motors without brake only)
- [22] External braking resistor
- [25] Brake coil
- [29] EMC cable gland
- [30] Connection shield to control cable
- [33] Motor protection via TH of motors is implemented by turning off 24 V supply at terminals to enable the direction of rotation.
- [48] Wiring by customer



Connection at motor



56285ADE

- [5] Cable connection to the MOVIMOT®
- [10] Motor winding
- [12] Motor terminal board
- [13] Auxiliary terminal strip
- [14] TH temperature switch TH
- [25] Brake coil
- [29] EMC cable gland
- [30] Connection shield to control cable



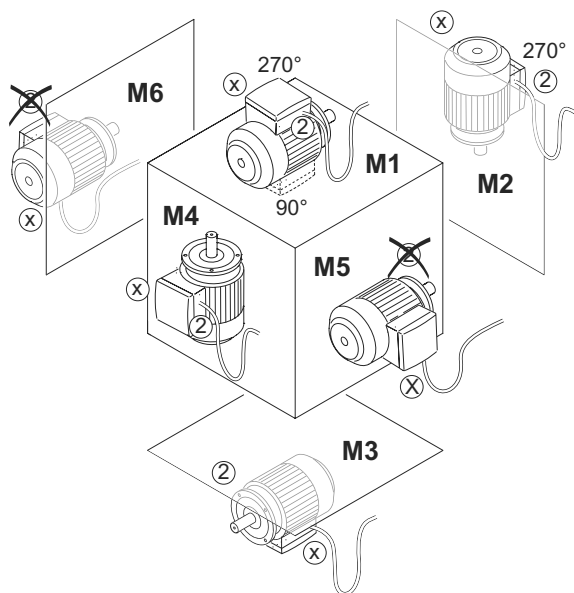
Installation

Approved installation positions for MOVIMOT®/MOVI-SWITCH® drives

5.4 Approved installation positions for MOVIMOT®/MOVI-SWITCH® drives

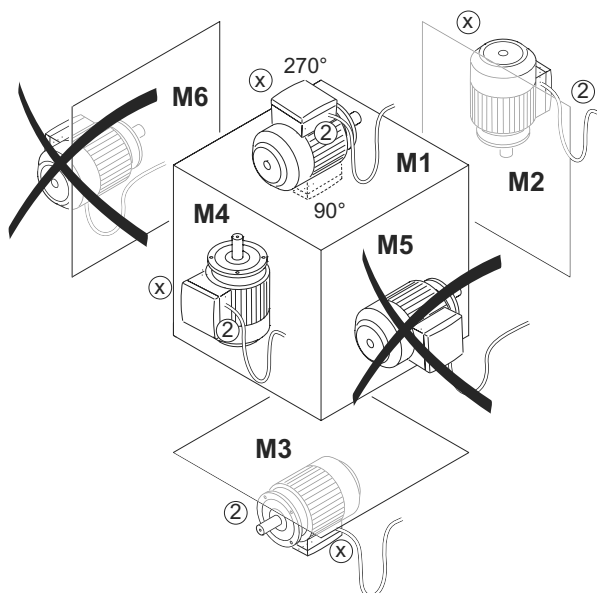
Without pressure compensation

Terminal box position 270° or 90°



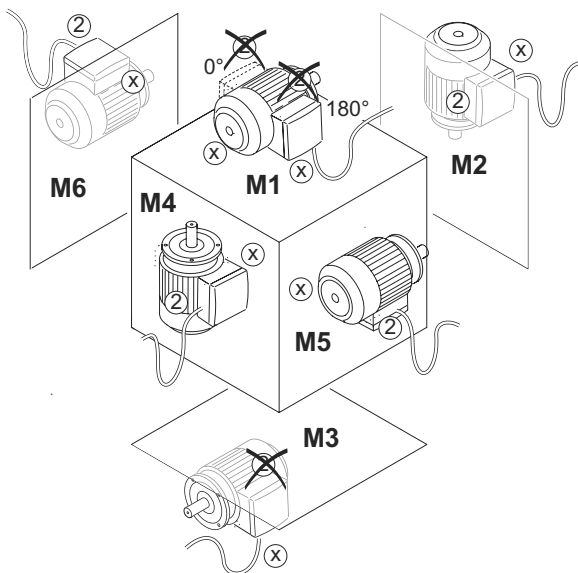
With pressure compensation

Terminal box position 270° or 90°



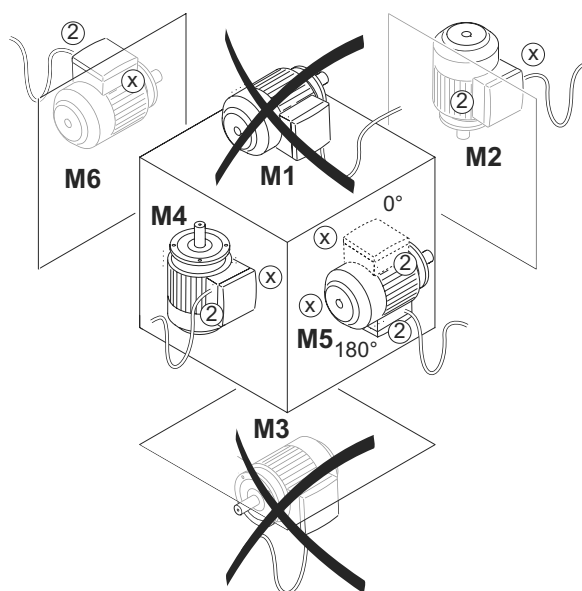
Without pressure compensation

Terminal box position 180° or 0°



With pressure compensation

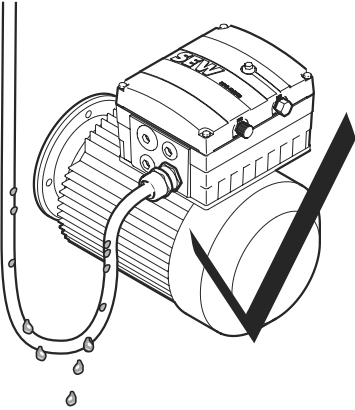
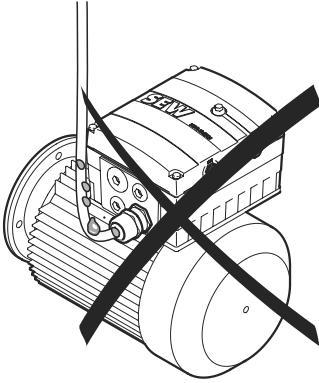
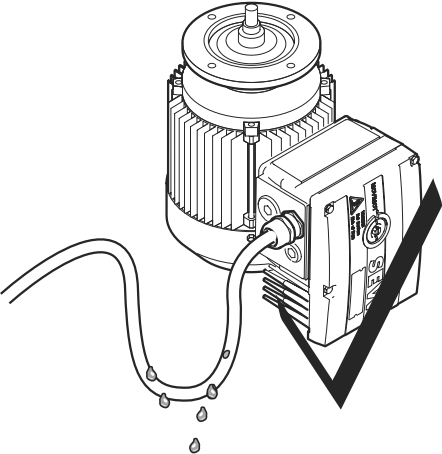
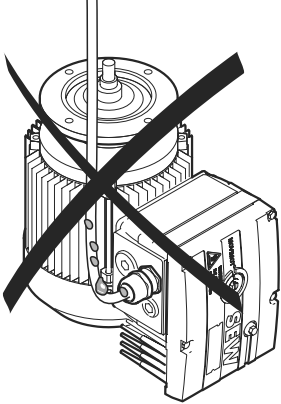
Terminal box position 180° or 0°



55665AEN



5.5 Examples for cable run in MOVIMOT®/MOVI-SWITCH® drives

Approved cable run with drip loop	Non-approved cable run
 56192AXX	 56193AXX
 56194AXX	 55847AXX

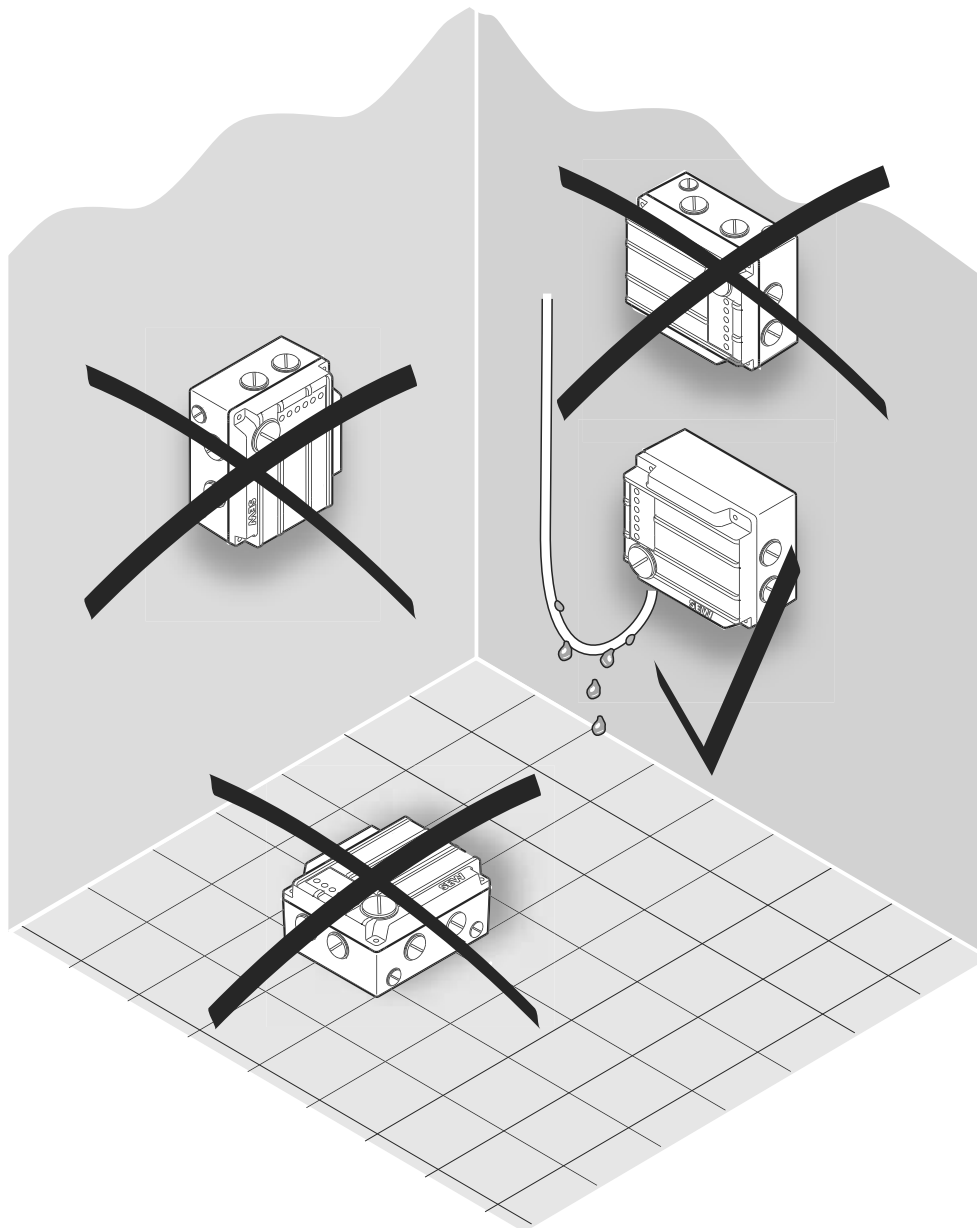


Installation

Recommended installation positions for fieldbus interfaces, field distributors

5.6 Recommended installation positions for fieldbus interfaces, field distributors

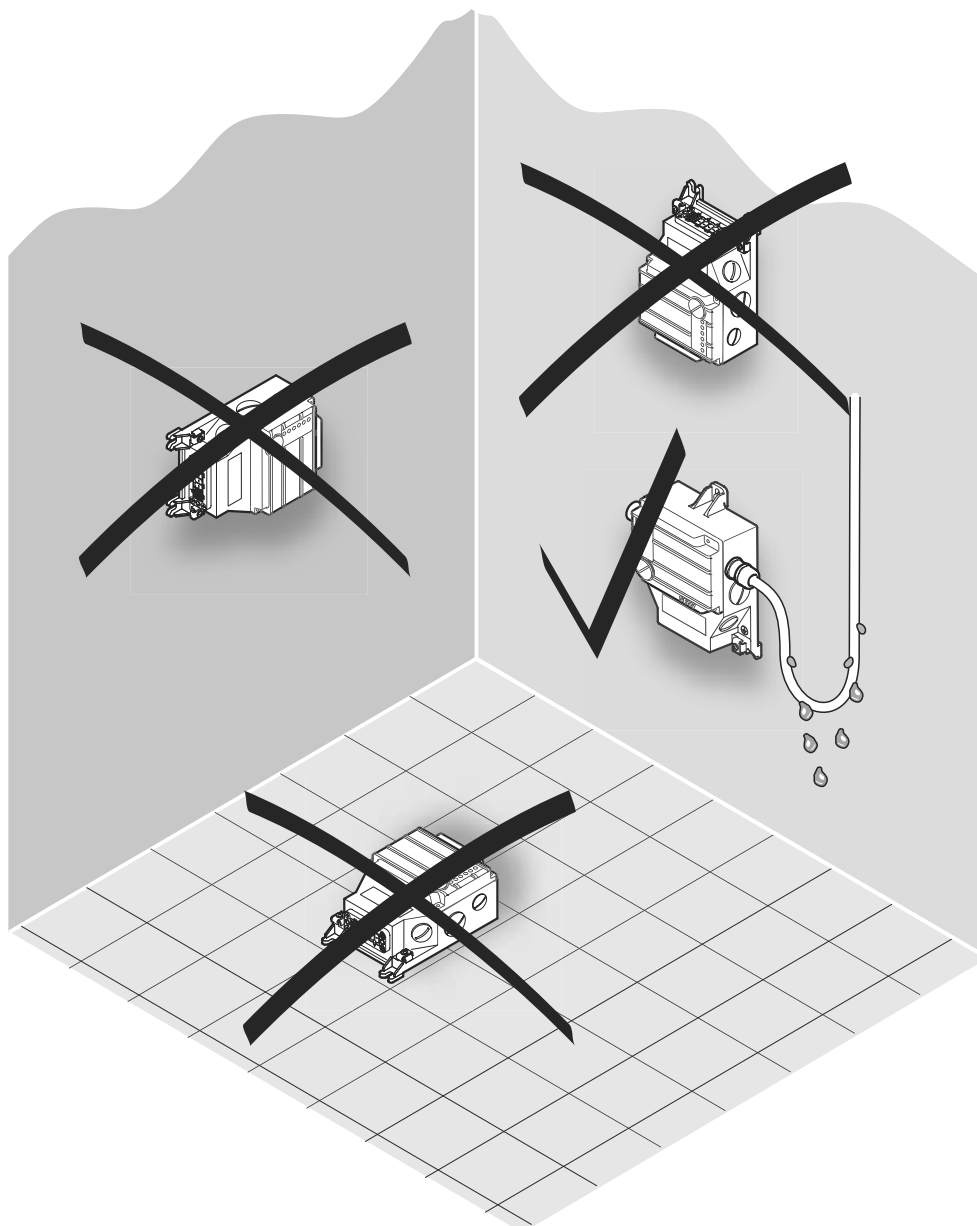
5.6.1 MF../Z.1/fieldbus interface



55857AXX



5.6.2 MF../Z.3./field distributor



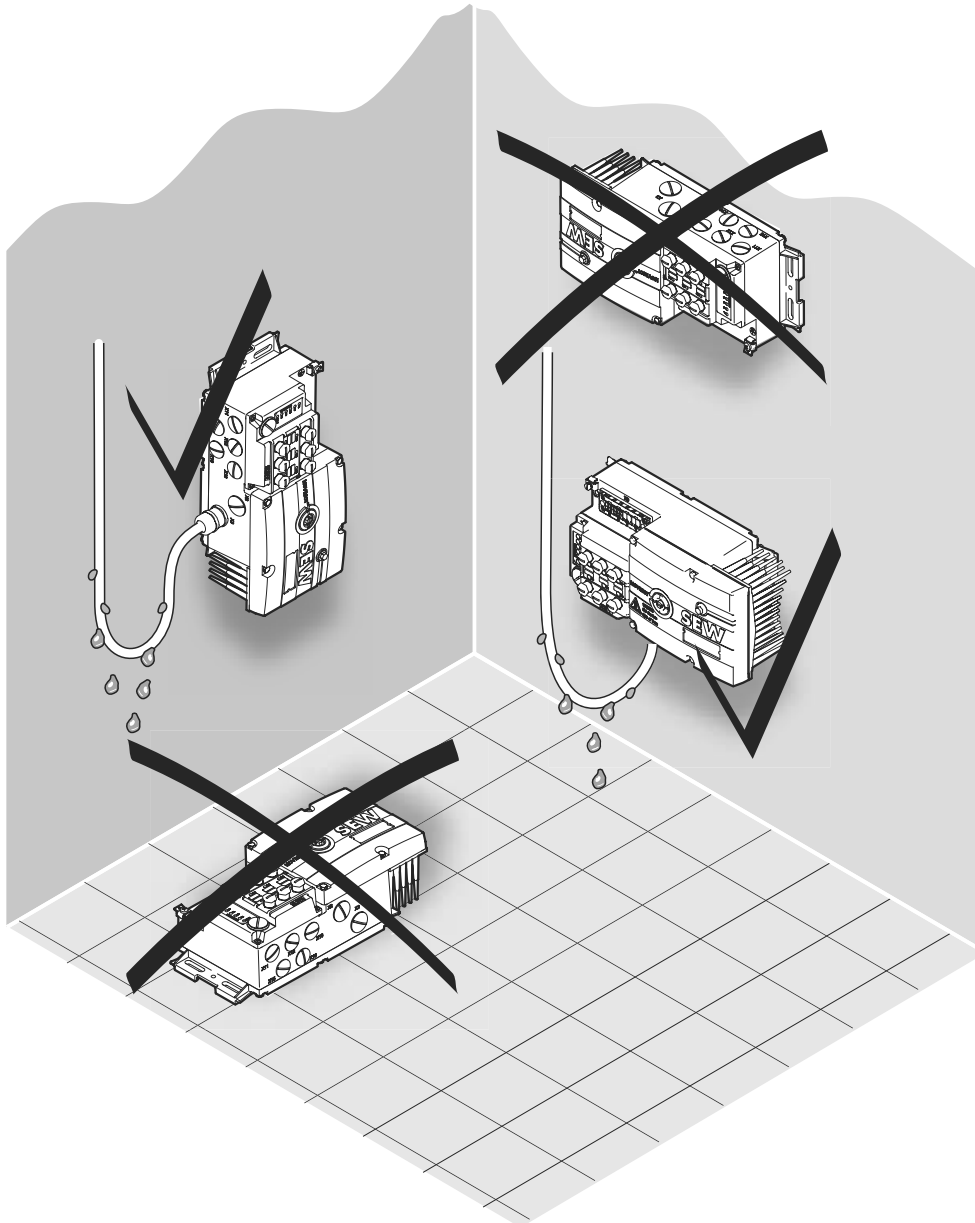
55865AXX



Installation

Recommended installation positions for fieldbus interfaces, field distributors

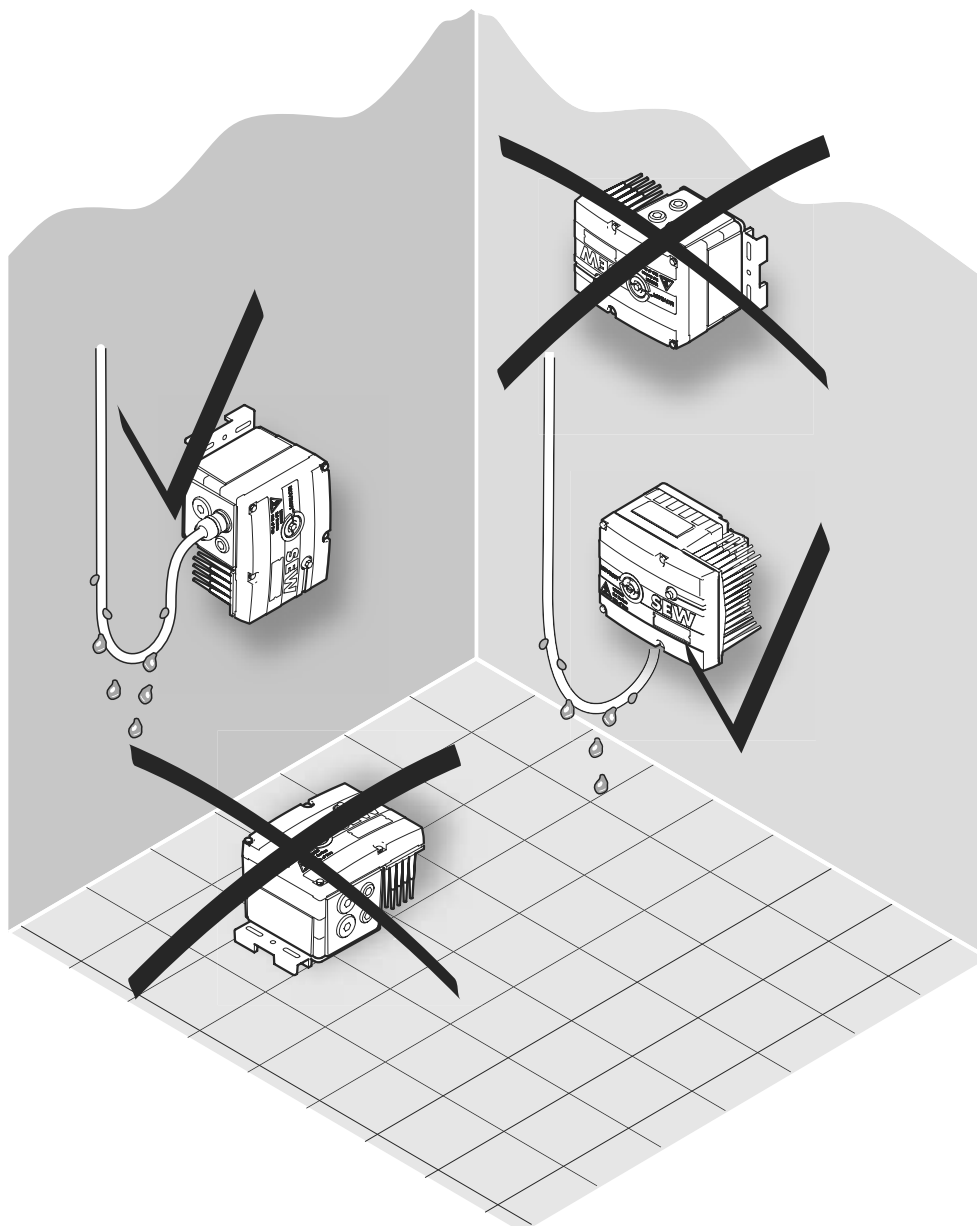
5.6.3 MF../MM../Z.7 field distributor



55879AXX



5.6.4 MOVIMOT® with P2.A option for mounting close to the motor



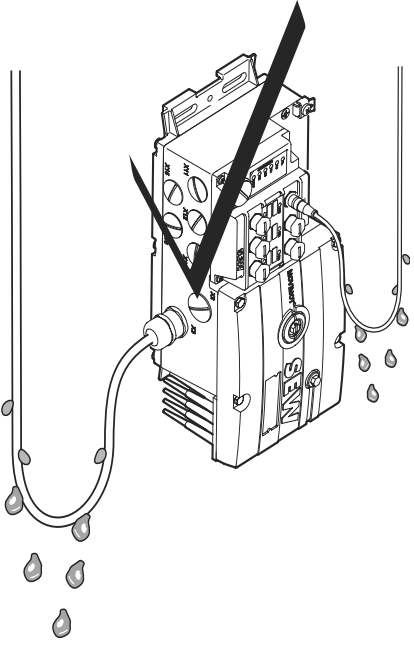
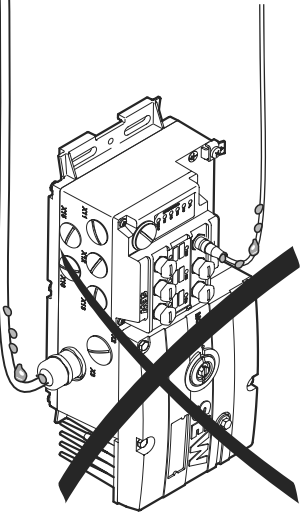
56418AXX



Installation

Examples for cable run in fieldbus interfaces, field distributors

5.7 Examples for cable run in fieldbus interfaces, field distributors

Approved cable run with drip loop	Non-approved cable run
 55923AXX	 56201AXX



Address List

Germany			
Headquarters Production Sales	Bruchsal	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal P.O. Box Postfach 3023 · D-76642 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 http://www.sew-eurodrive.de sew@sew-eurodrive.de
Service Competence Center	Central Gear units / Motors	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf	Tel. +49 7251 75-1710 Fax +49 7251 75-1711 sc-mitte-gm@sew-eurodrive.de
	Central Electronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 sc-mitte-e@sew-eurodrive.de
	North	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 40-42 D-30823 Garbsen (near Hannover)	Tel. +49 5137 8798-30 Fax +49 5137 8798-55 sc-nord@sew-eurodrive.de
	East	SEW-EURODRIVE GmbH & Co KG Dänkritzter Weg 1 D-08393 Meerane (near Zwickau)	Tel. +49 3764 7606-0 Fax +49 3764 7606-30 sc-ost@sew-eurodrive.de
	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 D-85551 Kirchheim (near München)	Tel. +49 89 909552-10 Fax +49 89 909552-50 sc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 D-40764 Langenfeld (near Düsseldorf)	Tel. +49 2173 8507-30 Fax +49 2173 8507-55 sc-west@sew-eurodrive.de
	Drive Service Hotline / 24 Hour Service		+49 180 5 SEWHELP +49 180 5 7394357
	Additional addresses for service in Germany provided on request!		
France			
Production Sales Service	Hagenau	SEW-USOCOME 48-54, route de Soufflenheim B. P. 20185 F-67506 Hagenau Cedex	Tel. +33 3 88 73 67 00 Fax +33 3 88 73 66 00 http://www.usocomme.com sew@usocomme.com
Assembly Sales Service	Bordeaux	SEW-USOCOME Parc d'activités de Magellan 62, avenue de Magellan - B. P. 182 F-33607 Pessac Cedex	Tel. +33 5 57 26 39 00 Fax +33 5 57 26 39 09
	Lyon	SEW-USOCOME Parc d'Affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. +33 4 72 15 37 00 Fax +33 4 72 15 37 15
	Paris	SEW-USOCOME Zone industrielle 2, rue Denis Papin F-77390 Verneuil l'Etang	Tel. +33 1 64 42 40 80 Fax +33 1 64 42 40 88
Additional addresses for service in France provided on request!			
Algeria			
Sales	Alger	Réducom 16, rue des Frères Zagnoun Bellevue El-Harrach 16200 Alger	Tel. +213 21 8222-84 Fax +213 21 8222-84
Argentina			
Assembly Sales Service	Buenos Aires	SEW EURODRIVE ARGENTINA S.A. Centro Industrial Garin, Lote 35 Ruta Panamericana Km 37,5 1619 Garin	Tel. +54 3327 4572-84 Fax +54 3327 4572-21 sewar@sew-eurodrive.com.ar



Address List

Australia			
Assembly Sales Service	Melbourne	SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043	Tel. +61 3 9933-1000 Fax +61 3 9933-1003 http://www.sew-eurodrive.com.au enquires@sew-eurodrive.com.au
	Sydney	SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164	Tel. +61 2 9725-9900 Fax +61 2 9725-9905 enquires@sew-eurodrive.com.au
Austria			
Assembly Sales Service	Wien	SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Strasse 24 A-1230 Wien	Tel. +43 1 617 55 00-0 Fax +43 1 617 55 00-30 http://sew-eurodrive.at sew@sew-eurodrive.at
Belgium			
Assembly Sales Service	Brüssel	SEW Caron-Vector S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.caron-vector.be info@caron-vector.be
Brazil			
Production Sales Service	Sao Paulo	SEW-EURODRIVE Brasil Ltda. Avenida Amâncio Gaiolli, 50 Caixa Postal: 201-07111-970 Guarulhos/SP - Cep.: 07251-250	Tel. +55 11 6489-9133 Fax +55 11 6480-3328 http://www.sew.com.br sew@sew.com.br
	Additional addresses for service in Brazil provided on request!		
Bulgaria			
Sales	Sofia	BEVER-DRIVE GmbH Bogdanovetz Str.1 BG-1606 Sofia	Tel. +359 2 9532565 Fax +359 2 9549345 bever@fastbg.net
Cameroon			
Sales	Douala	Electro-Services Rue Drouot Akwa B.P. 2024 Douala	Tel. +237 4322-99 Fax +237 4277-03
Canada			
Assembly Sales Service	Toronto	SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, Ontario L6T3W1	Tel. +1 905 791-1553 Fax +1 905 791-2999 http://www.sew-eurodrive.ca l.reynolds@sew-eurodrive.ca
	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. 7188 Honeyman Street Delta. B.C. V4G 1 E2	Tel. +1 604 946-5535 Fax +1 604 946-2513 b.wake@sew-eurodrive.ca
	Montreal	SEW-EURODRIVE CO. OF CANADA LTD. 2555 Rue Leger Street LaSalle, Quebec H8N 2V9	Tel. +1 514 367-1124 Fax +1 514 367-3677 a.peluso@sew-eurodrive.ca
Additional addresses for service in Canada provided on request!			
Chile			
Assembly Sales Service	Santiago de Chile	SEW-EURODRIVE CHILE LTDA. Las Encinas 1295 Parque Industrial Valle Grande LAMP RCH-Santiago de Chile P.O. Box Casilla 23 Correo Quilicura - Santiago - Chile	Tel. +56 2 75770-00 Fax +56 2 75770-01 ventas@sew-eurodrive.cl
China			
Production Assembly Sales Service	Tianjin	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 46, 7th Avenue, TEDA Tianjin 300457	Tel. +86 22 25322612 Fax +86 22 25322611 gm-tianjin@sew-eurodrive.cn http://www.sew.com.cn



China			
Assembly Sales Service	Suzhou	SEW-EURODRIVE (Suzhou) Co., Ltd. 333, Suhong Middle Road Suzhou Industrial Park Jiangsu Province, 215021 P. R. China	Tel. +86 512 62581781 Fax +86 512 62581783 suzhou@sew.com.cn
Colombia			
Assembly Sales Service	Bogotá	SEW-EURODRIVE COLOMBIA LTDA. Calle 22 No. 132-60 Bodega 6, Manzana B Santafé de Bogotá	Tel. +57 1 54750-50 Fax +57 1 54750-44 sewcol@sew-eurodrive.com.co
Croatia			
Sales Service	Zagreb	KOMPEKS d. o. o. PIT Erdödy 4 II HR 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@net.hr
Czech Republic			
Sales	Praha	SEW-EURODRIVE CZ S.R.O. Business Centrum Praha Luná 591 CZ-16000 Praha 6 - Vokovice	Tel. +420 220121236 Fax +420 220121237 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz
Denmark			
Assembly Sales Service	Kopenhagen	SEW-EURODRIVEA/S Geminivej 28-30, P.O. Box 100 DK-2670 Greve	Tel. +45 43 9585-00 Fax +45 43 9585-09 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk
Estonia			
Sales	Tallin	ALAS-KUUL AS Paldiski mnt.125 EE 0006 Tallin	Tel. +372 6593230 Fax +372 6593231 veiko.soots@alas-kuul.ee
Finland			
Assembly Sales Service	Lahti	SEW-EURODRIVE OY Vesimäentie 4 FIN-15860 Hollola 2	Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi
Gabon			
Sales	Libreville	Electro-Services B.P. 1889 Libreville	Tel. +241 7340-11 Fax +241 7340-12
Great Britain			
Assembly Sales Service	Normanton	SEW-EURODRIVE Ltd. Beckbridge Industrial Estate P.O. Box No.1 GB-Normanton, West- Yorkshire WF6 1QR	Tel. +44 1924 893-855 Fax +44 1924 893-702 http://www.sew-eurodrive.co.uk info@sew-eurodrive.co.uk
Greece			
Sales Service	Athen	Christ. Boznos & Son S.A. 12, Mavromichali Street P.O. Box 80136, GR-18545 Piraeus	Tel. +30 2 1042 251-34 Fax +30 2 1042 251-59 http://www.boznos.gr info@boznos.gr
Hong Kong			
Assembly Sales Service	Hong Kong	SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong	Tel. +852 2 7960477 + 79604654 Fax +852 2 7959129 sew@sewhk.com



Address List

Hungary			
Sales Service	Budapest	SEW-EURODRIVE Kft. H-1037 Budapest Kunigunda u. 18	Tel. +36 1 437 06-58 Fax +36 1 437 06-50 office@sew-eurodrive.hu
India			
Assembly Sales Service	Baroda	SEW-EURODRIVE India Pvt. Ltd. Plot No. 4, Gidc Por Ramangamdi · Baroda - 391 243 Gujarat	Tel. +91 265 2831086 Fax +91 265 2831087 mdoffice@seweurodriveindia.com
Technical Offices	Bangalore	SEW-EURODRIVE India Private Limited 308, Prestige Centre Point 7, Edward Road Bangalore	Tel. +91 80 22266565 Fax +91 80 22266569 salesbang@seweurodriveinindia.com
	Mumbai	SEW-EURODRIVE India Private Limited 312 A, 3rd Floor, Acme Plaza Andheri Kurla Road, Andheri (E) Mumbai	Tel. +91 22 28348440 Fax +91 22 28217858 salesmumbai@seweurodriveindia.com
Ireland			
Sales Service	Dublin	Alperion Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11	Tel. +353 1 830-6277 Fax +353 1 830-6458
Israel			
Sales	Tel-Aviv	Liraz Handasa Ltd. Ahofer Str 34B / 228 58858 Holon	Tel. +972 3 5599511 Fax +972 3 5599512 lirazhandasa@barak-online.net
Italy			
Assembly Sales Service	Milano	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via Bernini,14 I-20020 Solaro (Milano)	Tel. +39 02 96 9801 Fax +39 02 96 799781 sewit@sew-eurodrive.it
Ivory Coast			
Sales	Abidjan	SICA Ste industrielle et commerciale pour l'Afrique 165, Bld de Marseille B.P. 2323, Abidjan 08	Tel. +225 2579-44 Fax +225 2584-36
Japan			
Assembly Sales Service	Toyoda-cho	SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Iwata Shizuoka 438-0818	Tel. +81 538 373811 Fax +81 538 373814 sewjapan@sew-eurodrive.co.jp
Korea			
Assembly Sales Service	Ansan-City	SEW-EURODRIVE KOREA CO., LTD. B 601-4, Banweol Industrial Estate Unit 1048-4, Shingil-Dong Ansan 425-120	Tel. +82 31 492-8051 Fax +82 31 492-8056 master@sew-korea.co.kr
Latvia			
Sales	Riga	SIA Alas-Kuul Katlakalna 11C LV-1073 Riga	Tel. +371 7139386 Fax +371 7139386 info@alas-kuul.ee
Lebanon			
Sales	Beirut	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 4947-86 +961 1 4982-72 +961 3 2745-39 Fax +961 1 4949-71 gacar@beirut.com



Lithuania			
Sales	Alytus	UAB Irseva Merkines g. 2A LT-62252 Alytus	Tel. +370 315 79204 Fax +370 315 56175 info@irseva.lt www.sew-eurodrive.lt
Luxembourg			
Assembly Sales Service	Brüssel	CARON-VECTOR S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.caron-vector.be info@caron-vector.be
Malaysia			
Assembly Sales Service	Johore	SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia	Tel. +60 7 3549409 Fax +60 7 3541404 kchtan@pd.jaring.my
Mexico			
Assembly Sales Service	Queretaro	SEW-EURODRIVE, Sales and Distribution, S. A. de C. V. Privada Tequisquiapan No. 102 Parque Ind. Queretaro C. P. 76220 Queretaro, Mexico	Tel. +52 442 1030-300 Fax +52 442 1030-301 scmexico@seweurodrive.com.mx
Morocco			
Sales	Casablanca	S. R. M. Société de Réalisations Mécaniques 5, rue Emir Abdelkader 05 Casablanca	Tel. +212 2 6186-69 + 6186-70 + 6186-71 Fax +212 2 6215-88 srm@marocnet.net.ma
Netherlands			
Assembly Sales Service	Rotterdam	VECTOR Aandrijftechniek B.V. Industrieweg 175 NL-3044 AS Rotterdam Postbus 10085 NL-3004 AB Rotterdam	Tel. +31 10 4463-700 Fax +31 10 4155-552 http://www.vector.nu info@vector.nu
New Zealand			
Assembly Sales Service	Auckland	SEW-EURODRIVE NEW ZEALAND LTD. P.O. Box 58-428 82 Greenmount drive East Tamaki Auckland	Tel. +64 9 2745627 Fax +64 9 2740165 sales@sew-eurodrive.co.nz
	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 10 Settlers Crescent, Ferryroad Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 sales@sew-eurodrive.co.nz
Norway			
Assembly Sales Service	Moss	SEW-EURODRIVE A/S Solgaard skog 71 N-1599 Moss	Tel. +47 69 241-020 Fax +47 69 241-040 sew@sew-eurodrive.no
Peru			
Assembly Sales Service	Lima	SEW DEL PERU MOTORES REDUCTORES S.A.C. Los Calderos, 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. +51 1 3495280 Fax +51 1 3493002 sewperu@sew-eurodrive.com.pe
Poland			
Assembly Sales Service	Lodz	SEW-EURODRIVE Polska Sp.z o.o. ul. Techniczna 5 PL-92-518 Lodz	Tel. +48 42 67710-90 Fax +48 42 67710-99 http://www.sew-eurodrive.pl sew@sew-eurodrive.pl



Address List

Portugal			
Assembly Sales Service	Coimbra	SEW-EURODRIVE, LDA. Apartado 15 P-3050-901 Mealhada	Tel. +351 231 20 9670 Fax +351 231 20 3685 http://www.sew-eurodrive.pt infosew@sew-eurodrive.pt
Romania			
Sales Service	Bucuresti	Sialco Trading SRL str. Madrid nr.4 011785 Bucuresti	Tel. +40 21 230-1328 Fax +40 21 230-7170 sialco@sialco.ro
Russia			
Sales	St. Petersburg	ZAO SEW-EURODRIVE P.O. Box 263 RUS-195220 St. Petersburg	Tel. +7 812 5357142 +812 5350430 Fax +7 812 5352287 http://www.sew-eurodrive.ru sew@sew-eurodrive.ru
Senegal			
Sales	Dakar	SENEMECA Mécanique Générale Km 8, Route de Rufisque B.P. 3251, Dakar	Tel. +221 849 47-70 Fax +221 849 47-71 senemeca@sentoo.sn
Serbia and Montenegro			
Sales	Beograd	DIPAR d.o.o. Kajmakcalanska 54 SCG-11000 Beograd	Tel. +381 11 3088677 / +381 11 3088678 Fax +381 11 3809380 dipar@yubc.net
Singapore			
Assembly Sales Service	Singapore	SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. +65 68621701 Fax +65 68612827 sewsingapore@sew-eurodrive.com
Slovakia			
Sales	Sereď	SEW-Eurodrive SK s.r.o. Trnavská 920 SK-926 01 Sereď	Tel. +421 31 7891311 Fax +421 31 7891312 sew@sew-eurodrive.sk
Slovenia			
Sales Service	Celje	Pakman - Pogonska Tehnika d.o.o. Ul. XIV. divizije 14 SLO – 3000 Celje	Tel. +386 3 490 83-20 Fax +386 3 490 83-21 pakman@siol.net
South Africa			
Assembly Sales Service	Johannesburg	SEW-EURODRIVE (PROPRIETARY) LIMITED Eurodrive House Cnr. Adcock Ingram and Aerodrome Roads Aeroton Ext. 2 Johannesburg 2013 P.O.Box 90004 Bertsham 2013	Tel. +27 11 248-7000 Fax +27 11 494-3104 dross@sew.co.za
	Capetown	SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442 Cape Town	Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 dswanepoel@sew.co.za
	Durban	SEW-EURODRIVE (PROPRIETARY) LIMITED 2 Monaceo Place Pinetown Durban P.O. Box 10433, Ashwood 3605	Tel. +27 31 700-3451 Fax +27 31 700-3847 dtait@sew.co.za

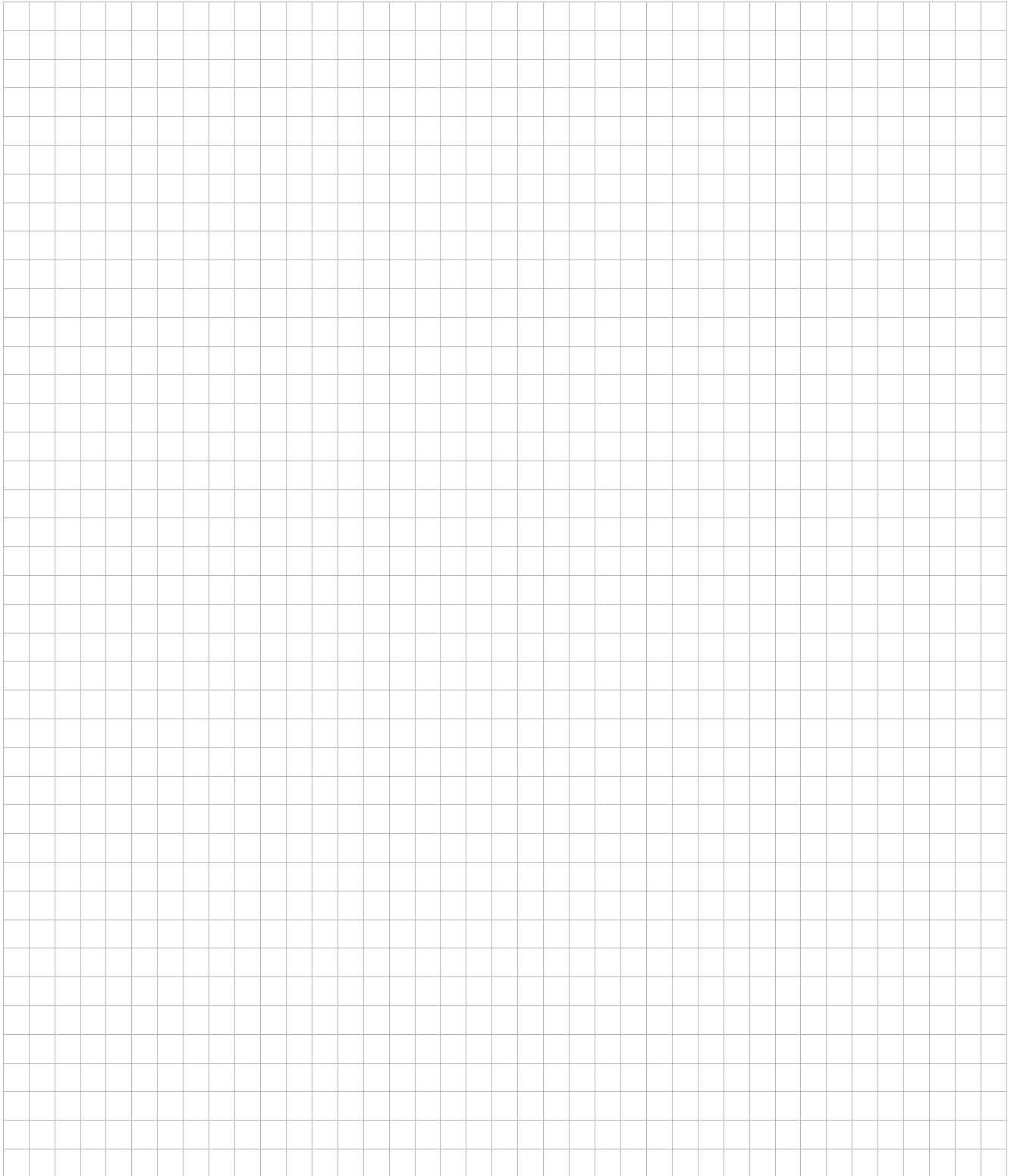


Spain			
Assembly Sales Service	Bilbao	SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 E-48170 Zamudio (Vizcaya)	Tel. +34 9 4431 84-70 Fax +34 9 4431 84-71 sew.spain@sew-eurodrive.es
Sweden			
Assembly Sales Service	Jönköping	SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping	Tel. +46 36 3442-00 Fax +46 36 3442-80 http://www.sew-eurodrive.se info@sew-eurodrive.se
Switzerland			
Assembly Sales Service	Basel	Alfred Imhof A.G. Jurastrasse 10 CH-4142 Münchenstein bei Basel	Tel. +41 61 41717-17 Fax +41 61 41717-00 http://www.imhof-sew.ch info@imhof-sew.ch
Thailand			
Assembly Sales Service	Chon Buri	SEW-EURODRIVE (Thailand) Ltd. Bangpakong Industrial Park 2 700/456, Moo.7, Tambol Donhuaroh Muang District Chon Buri 20000	Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.co.th
Tunisia			
Sales	Tunis	T. M.S. Technic Marketing Service 7, rue Ibn El Heithem Z.I. SMMT 2014 Mégrine Erriadh	Tel. +216 1 4340-64 + 1 4320-29 Fax +216 1 4329-76
Turkey			
Assembly Sales Service	Istanbul	SEW-EURODRIVE Hareket Sistemleri Sirketi Bagdat Cad. Koruma Cikmazi No. 3 TR-34846 Maltepe ISTANBUL	Tel. +90 216 4419163 + 216 4419164 + 216 3838014 Fax +90 216 3055867 sew@sew-eurodrive.com.tr
Ukraine			
Sales Service	Dnepropetrovsk	SEW-EURODRIVE Str. Rabochaja 23-B, Office 409 49008 Dnepropetrovsk	Tel. +380 56 370 3211 Fax +380 56 372 2078 m.piatnitsa@sew-eurodrive.de
USA			
Production Assembly Sales Service	Greenville	SEW-EURODRIVE INC. 1295 Old Spartanburg Highway P.O. Box 518 Lyman, S.C. 29365	Tel. +1 864 439-7537 Fax Sales +1 864 439-7830 Fax Manuf. +1 864 439-9948 Fax Ass. +1 864 439-0566 Telex 805 550 http://www.seweurodrive.com cslyman@seweurodrive.com
Assembly Sales Service	San Francisco	SEW-EURODRIVE INC. 30599 San Antonio St. Hayward, California 94544-7101	Tel. +1 510 487-3560 Fax +1 510 487-6381 cshayward@seweurodrive.com
	Philadelphia/PA	SEW-EURODRIVE INC. Pureland Ind. Complex 2107 High Hill Road, P.O. Box 481 Bridgeport, New Jersey 08014	Tel. +1 856 467-2277 Fax +1 856 845-3179 csbridgeport@seweurodrive.com
	Dayton	SEW-EURODRIVE INC. 2001 West Main Street Troy, Ohio 45373	Tel. +1 937 335-0036 Fax +1 937 440-3799 cstroy@seweurodrive.com
	Dallas	SEW-EURODRIVE INC. 3950 Platinum Way Dallas, Texas 75237	Tel. +1 214 330-4824 Fax +1 214 330-4724 csdallas@seweurodrive.com
Additional addresses for service in the USA provided on request!			



Address List

Venezuela			
Assembly Sales Service	Valencia	SEW-EURODRIVE Venezuela S.A. Av. Norte Sur No. 3, Galpon 84-319 Zona Industrial Municipal Norte Valencia, Estado Carabobo	Tel. +58 241 832-9804 Fax +58 241 838-6275 sewventas@cantv.net sewfinanzas@cantv.net



How we're driving the world

With people who think fast and develop the future with you.



With a global presence that offers responsive and reliable solutions. Anywhere.



With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.



With innovative technology that solves tomorrow's problems today.

With comprehensive knowledge in virtually every branch of industry today.



With online information and software updates, via the Internet, available around the clock.

With uncompromising quality that reduces the cost and complexity of daily operations.



SEW-EURODRIVE
Driving the world



SEW
EURODRIVE

SEW-EURODRIVE GmbH & Co KG
P.O. Box 3023 · D-76642 Bruchsal / Germany
Phone +49 7251 75-0 · Fax +49 7251 75-1970
sew@sew-eurodrive.com

→ www.sew-eurodrive.com