



Catalog



DI2015 Drive System for Decentralized Installation



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1 Introduction

1.1 The SEW-EURODRIVE group of companies

1.1.1 Global presence

Driving the world – with innovative drive solutions for all industries and for every application. Products and systems from SEW-EURODRIVE are used all over the world. Be it in the automotive, building materials, food and beverage or metal-processing industry – the decision to use drive technology "made by SEW-EURODRIVE" stands for reliability for both functionality and investment.

We are represented in the most important branches of industry all over the world: With 14 manufacturing plants and 79 Drive Technology Centers worldwide as well as our customer support, which we consider an integrative service that continues our commitment to outstanding quality.

1.1.2 Always the right drive

The SEW-EURODRIVE modular concept offers millions of combinations. This wide selection enables you to choose the correct drive for any application, each based on the required speed and torque range, space available and the ambient conditions. Gear units and gearmotors offering a unique and finely tuned performance range and the best economic prerequisites to face your drive challenges.

Our electronic components — MOVITRAC® frequency inverters, MOVIDRIVE® drive inverters and MOVIAXIS® multi-axis servo inverters — enhance the gearmotors, forming a combination that blends perfectly with the existing SEW-EURODRIVE systems program. As is the case for mechanical systems, development, production and assembly is carried out completely by SEW-EURODRIVE. In combination with our drive electronics, these drives provide the utmost in flexibility.

Products of the servo drive system, such as low backlash servo gear units, compact servomotors or MOVIAXIS® multi-axis servo inverters provide precision and dynamics. From single-axis or multi-axis applications all the way to synchronized process sequences, servo drive systems by SEW-EURODRIVE offer a flexible and customized implementation of your application.

For economical, decentralized installations, SEW-EURODRIVE offers components from its decentralized drive system, such as MOVIMOT®, the gearmotor with integrated frequency inverter or MOVI-SWITCH®, the gearmotor with integrated switching and protection function. SEW-EURODRIVE hybrid cables have been designed specifically to ensure cost-effective solutions, independent of the philosophy behind or the size of the system. The latest developments from SEW-EURODRIVE: DRC.. electronic motor, MOVIGEAR® mechatronic drive system, MOVIFIT® decentralized drive controller, MOVIPRO® decentralized drive, positioning, and application controller, as well as MOVITRANS® system components for contactless energy transfer.

Power, quality and sturdy design combined in one standard product: With high torque levels, industrial gear units from SEW-EURODRIVE realize major movements. The modular concept will once again provide optimum adaptation of industrial gear units to meet a wide range of different applications.

1.2 Products and systems from SEW-EURODRIVE

The products and systems from SEW-EURODRIVE are divided into 4 product groups. These 4 product groups are:

1. Gearmotors and frequency inverters
2. Servo drive systems
3. Decentralized drive systems
4. Industrial Gear Units

Products and systems used in applications of several groups are listed in a separate group entitled "products and systems covering several product groups". The following tables indicate the products and systems included in the respective product group:

1. Gearmotors and frequency inverters		
Gear units/gearmotors	Motors	Frequency inverters
• Helical gear units / helical gearmotors • Parallel-shaft helical gear units / parallel-shaft helical gearmotors • Helical-bevel gear units / helical-bevel gearmotors • Helical-worm gear units / helical-worm gearmotors • SPIROPLAN® right-angle gearmotors • Drives for electrified monorail systems • Geared torque motors • Pole-changing gearmotors • Variable speed gear units / variable speed gearmotors • Aseptic gearmotors • ATEX-compliant gear units / gearmotors • ATEX-compliant variable-speed gear units / variable-speed gearmotors	• Asynchronous AC motors / AC brakemotors • Pole-changing AC motors / AC brakemotors • Energy-efficient motors • Explosion-proof AC motors / AC brakemotors • Torque motors • Single-phase motors / Single-phase brakemotors • Asynchronous linear motors	• MOVITRAC® frequency inverters • MOVIDRIVE® drive inverters • Control, technology and communication options for inverters

2. Servo drive systems		
Servo gear units / servo gearmotors	Servomotors	Servo drive inverters / servo inverters
• Low backlash planetary servo gear units / planetary gearmotors • Low backlash helical-bevel servo gear units / helical-bevel gear motors • R, F, K, S, W gear units / gearmotors • Explosion-proof servo gear units / servo gearmotors	• Asynchronous servomotors / servo brake-motors • Synchronous servomotors / servo brakemotors • Explosion-proof servomotors / servo brake-motors • Synchronous linear motors	• MOVIDRIVE® servo drive inverters • MOVIAXIS® multi-axis servo inverter • Control, technology and communication options for servo drive inverters and servo inverters

3. Decentralized drive systems

Decentralized drives	Communication and installation	Contactless energy transfer
• DRC.. electronic motor / MOVIGEAR® mechatronic drive system – DBC – Direct Binary Communication – DAC – Direct AS-Interface Communication – DSC – Direct SBus Communication – SNI – Single Line Network Installation • MOVIMOT® gearmotors with integrated frequency inverter • MOVIMOT® motors / brakemotors with integrated frequency inverter • MOVI-SWITCH® gearmotors with integrated switching and protection functions • MOVI-SWITCH® motors / brake motors with integrated switching and protection functions • Explosion-proof MOVIMOT® and MOVI-SWITCH® gearmotors	• Fieldbus interfaces • Field distributors for decentralized installation • MOVIFIT® product range – MOVIFIT® FDC for controlling MOVIGEAR® and DRC.. drive units – MOVIFIT® MC for controlling MOVIMOT® drives – MOVIFIT® SC with integrated electronic motor starter – MOVIFIT® FC with integrated frequency inverter • MOVIPRO® product range – MOVIPRO® SDC decentralized drive and positioning control – MOVIPRO® ADC decentralized drive and application controller	• MOVITRANS® system – Stationary components for energy supply – Mobile components for energy consumption – Line cables and installation material

4. Industrial Gear Units

- Helical gear unit
- Bevel-helical gear units
- Planetary gear units

Products and systems covering several product groups

- Operator terminals
- MOVI-PLC® drive-based control system

In addition to products and systems, SEW-EURODRIVE offers a comprehensive range of services. These include:

- Technical consulting
- User software

- Seminars and training
- Extensive technical documentation
- Worldwide customer service

Visit our website at

→ **www.sew-eurodrive.com**

The website provides comprehensive information and services.

1.3 Content of this publication

The catalog "Drive System for Decentralized Installation" describes the following SEW-EURODRIVE product groups:

- Decentralized drive controllers
 - MOVIPRO® SDC, ADC
 - MOVIFIT® MC, SC, FC
 - Z.3, Z.6, Z.7, Z.8 field distributors
 - MOVIMOT® MM..D for mounting close to the motor
 - MOVI-SWITCH® 2S for mounting close to the motor

The catalog provides brief overviews of the corresponding drives and/or reference lists for a quick selection:

- Drives
 - MOVIMOT® MM..D
 - MOVI-SWITCH® 1EM, 1E, 2S
 - DRS., DRE., DRN.. series AC motors

1.4 Additional documentation

In addition to the brief overviews for drives in this catalog, the following publications contain comprehensive product descriptions, project planning information and dimension sheet:

- "MOVIGEAR® B" catalog
- "DRC.. Gearmotors" catalog
- "MOVIMOT® Gearmotors" catalog
- Addendum to the "MOVIMOT® Gearmotors (LSPM Technology)" catalog
- "DR.. Series AC Motors" catalog
- "DR.. Gearmotors" catalog

1.5 Copyright notice

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2 System description

2.1 Overview of components for decentralized installation

The following chapters provide an overview of the components for decentralized installation from SEW-EURODRIVE:

2.1.1 Decentralized drive controllers

MOVIPRO®

Drive, positioning, and application controller for complex applications are available in 2 designs:

- MOVIPRO® SDC decentralized drive and positioning control
- MOVIPRO® ADC decentralized drive and application control



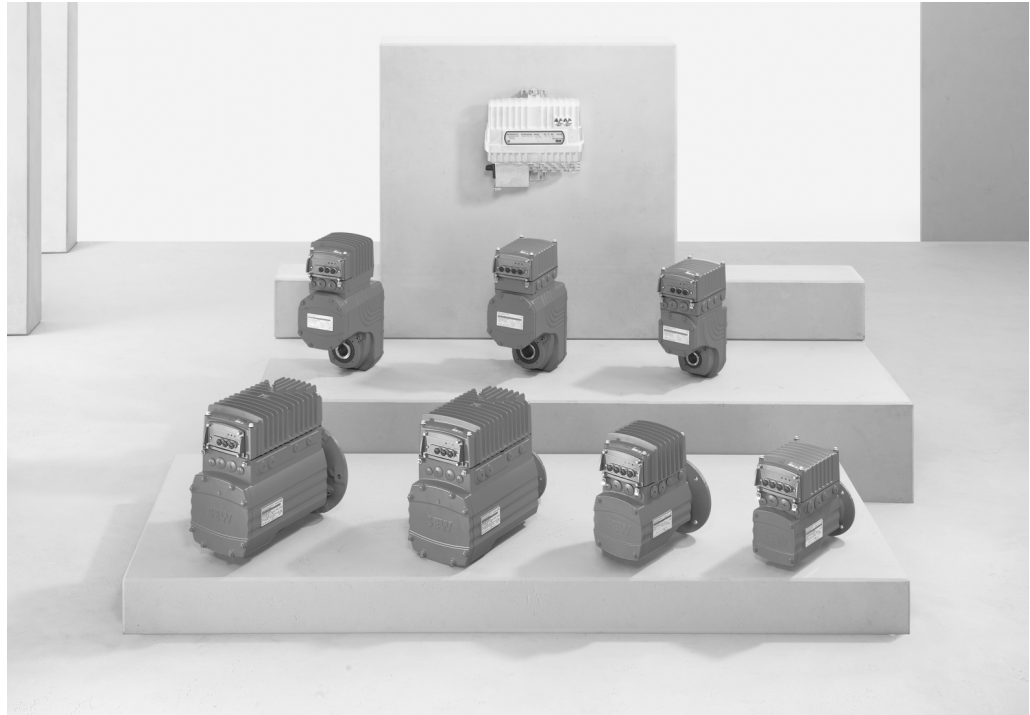
MOVIFIT®

The drive controller for innovative field installation.

The MOVIFIT® system combines the established advantages of SEW-EURODRIVE's decentralized installation technology with modern, application-oriented drive and communication functions:

MOVIFIT® FDC

For controlling up to 10 MOVIGEAR® or DRC.. drive units (see "MOVIGEAR® B" catalog or "DRC.. Gearmotors" catalog)



MOVIFIT® MC

For controlling up to 3 MOVIMOT® drives

**MOVIFIT® SC**

Motor starter for controlling drives with 2 directions of rotation, or controlling 2 drives with 1 direction of rotation.



MOVIFIT® FC

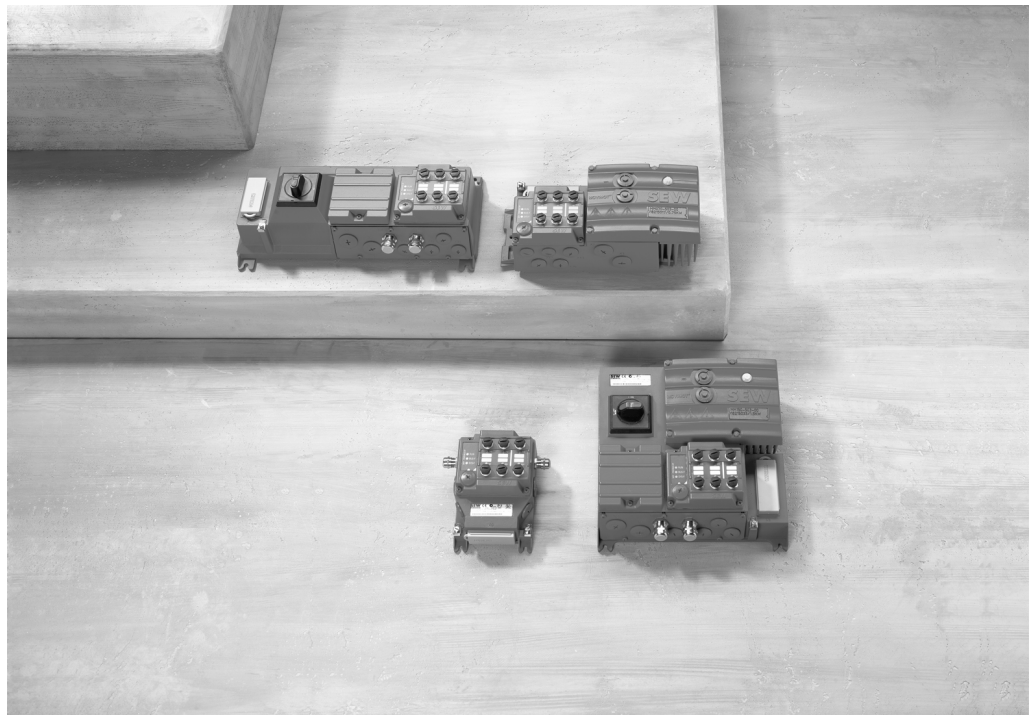
Frequency inverter for controlling AC motors

2



Fieldbus interfaces and field distributors

Field distributors establish an efficient connection between the drives and the power supply system, the 24 V control voltage and the fieldbus.

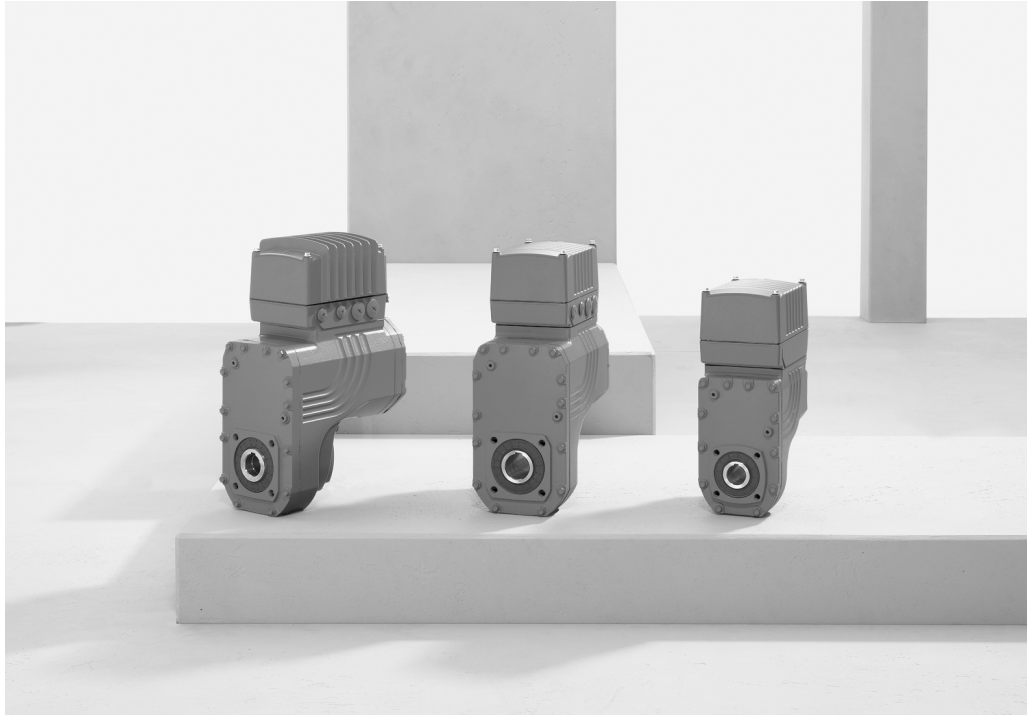


2.1.2 Drives**MOVIGEAR®**

The mechatronic drive system (see "MOVIGEAR® B" catalog)

MOVIGEAR® is a compact mechatronic drive system comprising a gear unit, a motor and drive electronics.

MOVIGEAR® impresses with its high level of system efficiency, which in turn helps lower the energy costs.

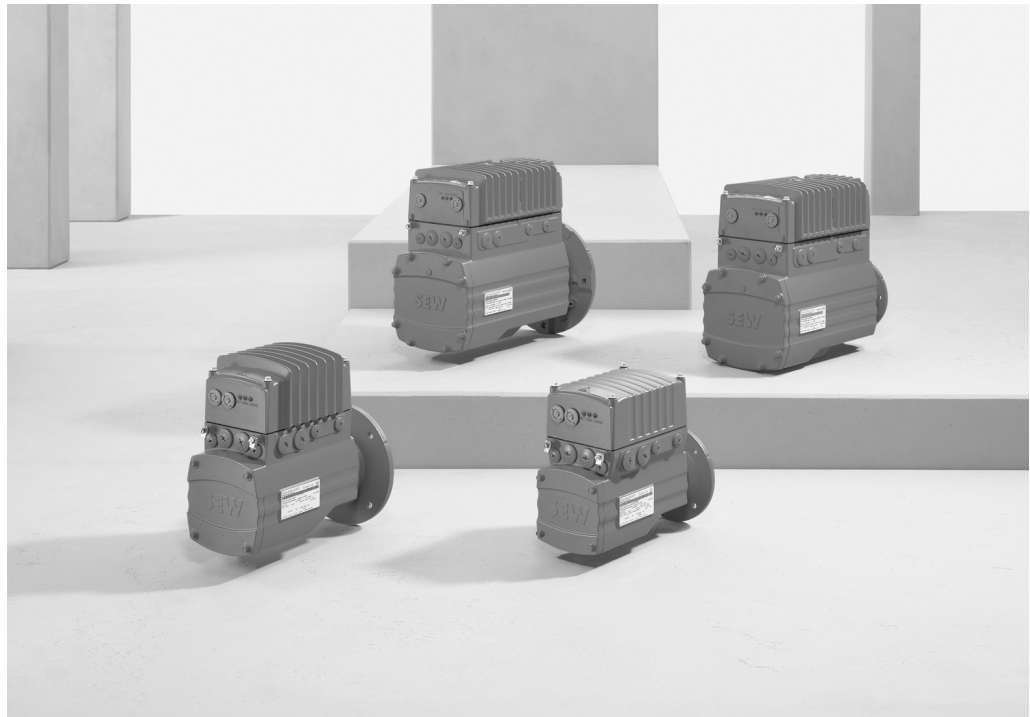


DRC.. electronic motor

The mechatronic drive solution (see "DRC.. Gearmotors" catalog)

The DRC.. electronic motor is a permanent-field synchronous motor with integrated drive electronics in motor efficiency class IE4. It saves up to 50 % of energy.

The DRC.. motor supplements the product portfolio of mechatronic drive systems by a particularly flexible drive solution for mounting to a large variety of gear unit types. Helical, parallel-shaft helical, or helical-bevel gear units are mounted to the DRC.. motor via a flange and a pinion shaft.



MOVIMOT®

The gearmotor with integrated frequency inverter

MOVIMOT® is the proven combination of a gearmotor and a digital frequency inverter in a power range from 0.37 – 4.0 kW. Despite the integrated frequency inverter, MOVIMOT® is not much larger than a conventional gearmotor.



The optional field mounting plate allows the MOVIMOT® inverter to be mounted close to the motor.



MOVI-SWITCH®

The gearmotor with integrated switching and protection function

MOVI-SWITCH® is a particularly efficient solution for decentralization with power performance up to 3 kW. The switching and protection functions integrated into the motor terminal box mean that this compact and sturdy gearmotor does not require any additional cables.

2

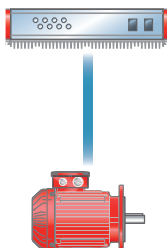
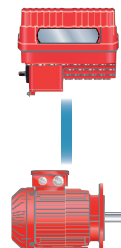
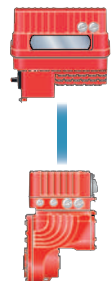
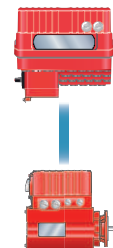


The optional field mounting plate allows the MOVI-SWITCH® 2S control section to be mounted close to the motor.



2.2 Component selection

The table below helps you to select the right decentralized components:

Controller	MOVIPRO®	MOVIFIT® FC, MOVIFIT® SC	MOVIFIT® FDC		MOVIFIT® FDC		Field distrib- utor, MOVIFIT® MC
							
Drive	Gearmotor	Gearmotor	MOVIGEAR®		DRC..		MOVIMOT® gearmotor
Application			SNI	DSC	SNI	DSC	
Horizontal conveyor line	☐	☒	☒	☐	☒	☐	☒
Corner transfer unit / rotary table	☐	☒	☒	☐	☒	☐	☒
Hoist	☒	☐	—	—	☒	☒	☐
Scissor lift table	☒	☒	—	—	☒	☒	☐
Synchronized material feed	☒	☐	☐	☒	☐	☒	☐
Screw conveyor	—	☐	☐	☐	☐	☐	☒
Rotary drum with positioning via encoder	☒	☐	☒	☒	☒	☒	—
Agitator	—	☐	☒	☒	☒	☒	☐
Requirements							
Positioning with encoder	☒	☐	☒	☒	☒	☒	—
Functional safety	☒	☒	☒	☒	☒	☒	— / ☐
Energy efficiency	☐	☐	☒ 1)	☒ 1)	☒ 1)	☒ 1)	☐
Wet area	—	☒	☒	☒	☐	☐	☐
Local application modules	☒	☒	☒	☒	☒	☒	—
Further information	(→  24)	(→  103)	"MOVIGEAR® B" catalog		"DRC.. Gearmotors" catalog		(→  222) (→  103)

☐ Components suitable

☒ Components recommendable

1) IE4

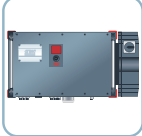
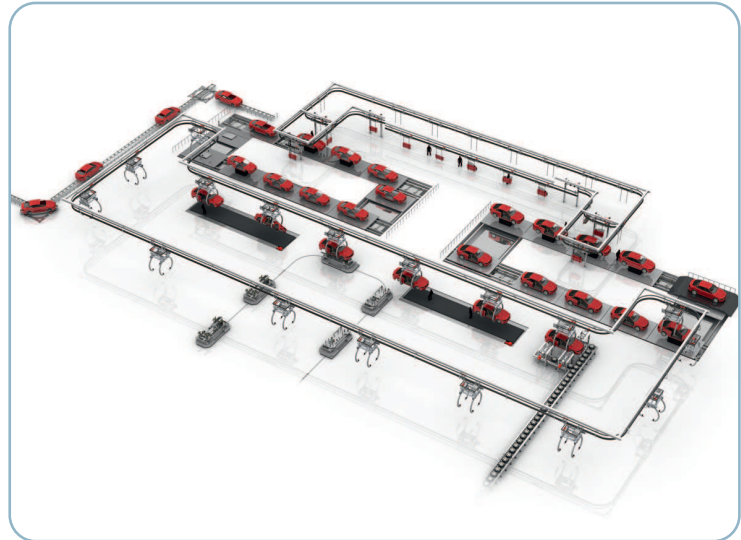
2.3 Flexible use of decentralized components

2.3.1 Automotive industry

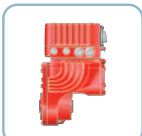
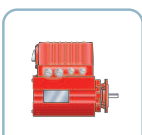
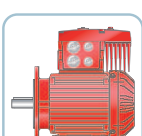
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The flexibility of decentralized components from SEW-EURODRIVE helps you to make the most of your car manufacturing plant.

Positioning control
Lifting application
Transfer systems

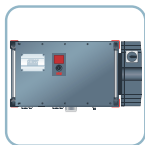
Horizontal materials handling technology
Lifting applications without encoder

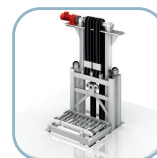
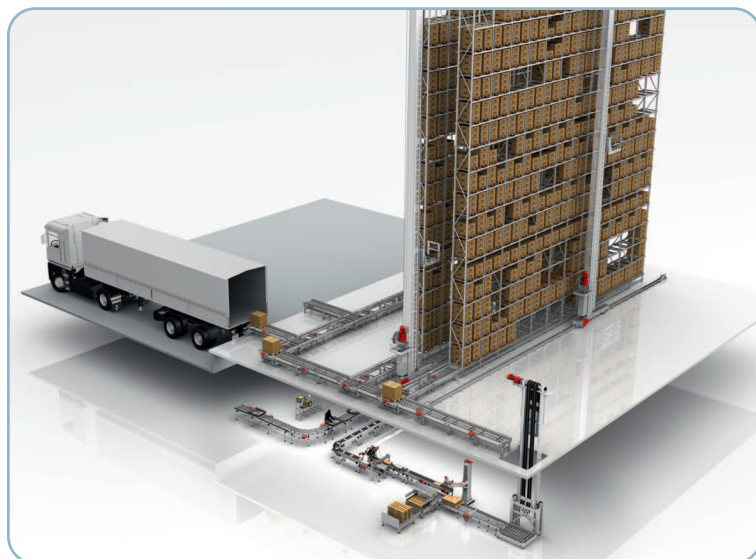
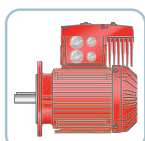
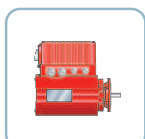
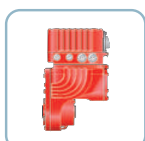

2.3.2 Intralogistics

Benefit from the perfect interplay between decentralized components from SEW-EURODRIVE that ensures smooth intralogistics processes.

Positioning control
Lifting application
Transfer systems



Horizontal materials handling technology
Lifting applications without encoder

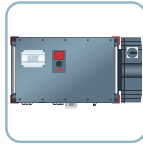


2.3.3 Food industry

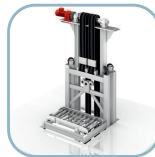
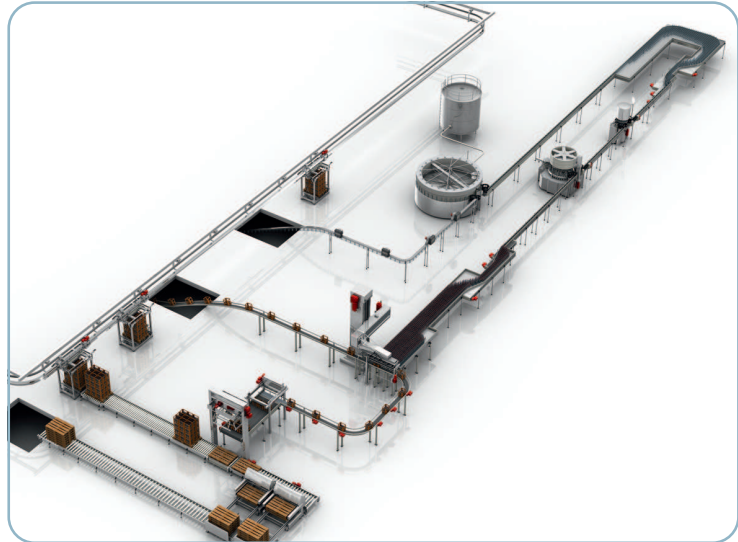
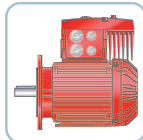
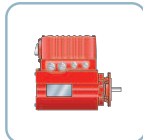
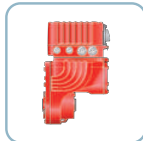
Decentralized components from SEW-EURODRIVE are also the right choice for the food and beverage industry.

2

Positioning control
Lifting application
Transfer systems



Pallet conveyor
Bottle transport
Crate transport



3 MOVIPRO® SDC/ADC

3.1 Unit description

Plants must be flexible, modularized, and standardized to ensure success in today's international competition. This is necessary to respond quickly and efficiently to the ever changing market requirements. One of the challenges is to reduce the complexity of a plant while increasing its functionality. The decentralized MOVIPRO® SDC/ADC drive, positioning, and application controllers offer all the necessary functions and simplify the realization of a plant thanks to decentralized installation.

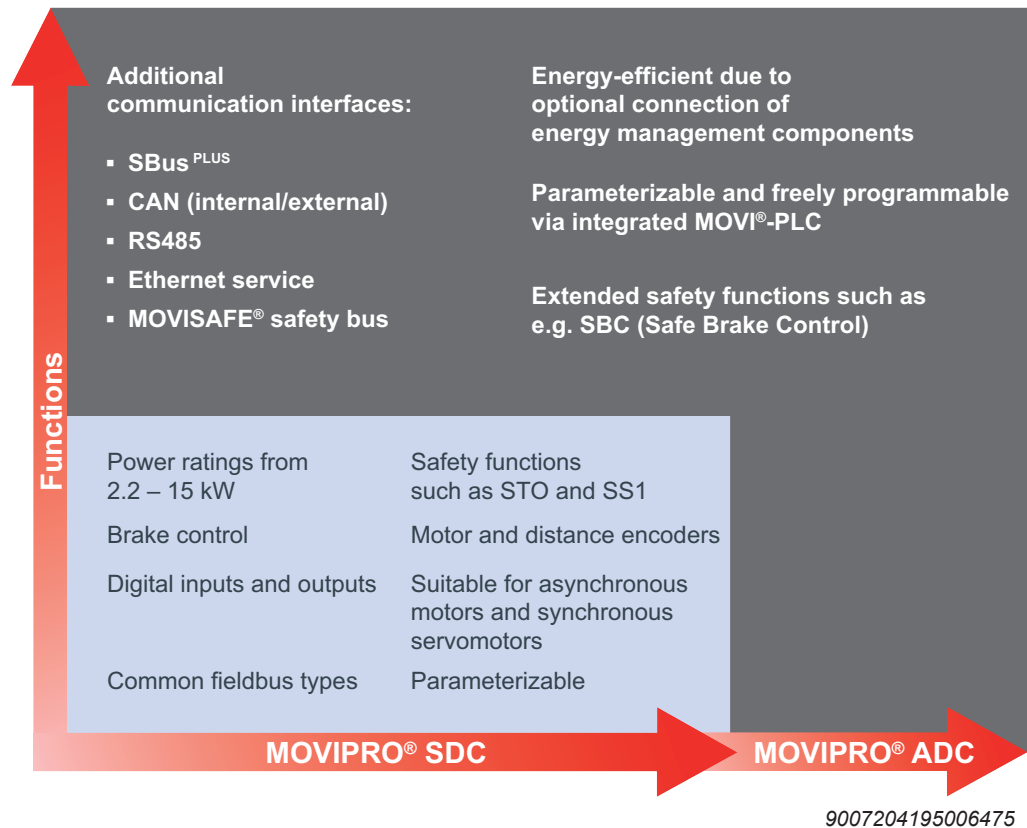


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3.2 Overview of functions of MOVIPRO® SDC/ADC

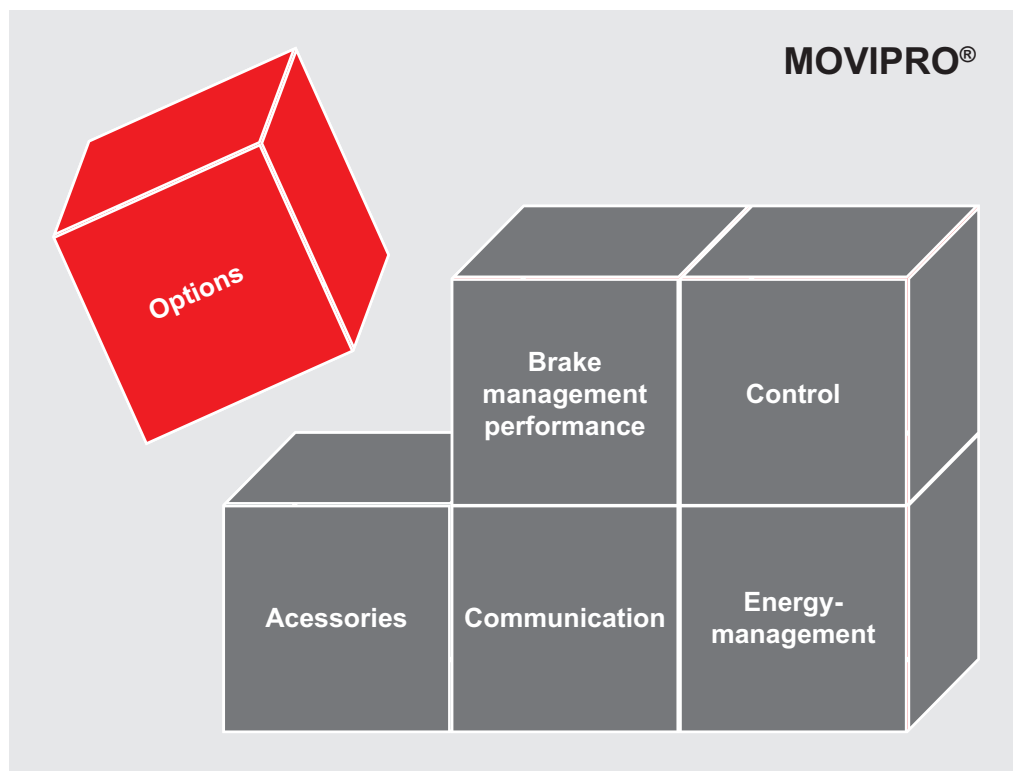
MOVIPRO® SDC offers various basic functions, which makes it an ideal solution for simple applications. MOVIPRO® ADC also includes these basic functions, but offers special functions for more complex applications in addition.

The following figure shows a rough overview of the functions and options of MOVIPRO® SDC and MOVIPRO® ADC.



3.3 Product philosophy

The tried and tested SEW-EURODRIVE modular system is also used for the MOVIPRO®. The modular system for MOVIPRO® consists of several scalable function modules that can be combined.



9007199779352587

For every application, MOVIPRO® offers an optimized and compact drive solution that meets all requirements placed on industrial drive technology.

3.4 General unit properties of MOVIPRO® SDC/ADC

MOVIPRO® has the following functional characteristics:

- Compact system: All important drive functions integrated in one unit
- Robust aluminum housing
- Easy installation due to pluggable connections
- Power: 2.2 kW, 4.0 kW, 7.5 kW, 11.0 kW and 15.0 kW
- Drive inverter on the MOVIDRIVE® platform
- Connection options for motor and distance encoder
- Asynchronous or synchronous motors can be controlled
- Integrated brake control: DC 24 V, AC 230 V, AC 400 V and AC 460 V
- Connection option for external braking resistor
- SD memory card for quick unit replacement
- Interface box with maintenance switch and energy distribution option for line topologies (power bus)
- Positioning tasks with application modules

- 12 digital inputs and 4 digital inputs/outputs
- Communication via the following fieldbus types possible:
 - PROFINET I/O
 - EtherNet/IP™
 - Modbus/TCP
 - PROFIBUS DP-V1
 - DeviceNet™
- STO, SS1 safety functions according to EN 61800-5-2
- Performance level d according to EN ISO 13849-1
- PROFIsafe-Device

3.5 Additional unit properties of MOVIPRO® ADC

MOVIPRO® ADC has the following additional functional characteristics:

- Available as parameterizable or programmable unit
- Communication packages for controlling auxiliary axes and sensors via the following interfaces:
 - SBus^{PLUS} interface
 - CAN interface (electrically isolated or with DC 24 V)
 - CAN interface (system bus)
 - RS485 interface (electrically isolated or with DC 24 V)
 - Ethernet engineering interface
 - MOVISAFE® safety bus interface
- Safe brake control (SBC according to IEC 61800-5-2)
- Energy management interface for connecting MOVI-DPS energy or power interface EKK
- Units with a power rating of 11.0 kW and higher are available with R15 regenerative power supply unit

3.6 Functional safety

3.6.1 Approved safety class

The units of the MOVIPRO® SDC/ADC series meet the requirements of Performance Level d according to EN ISO 13849-1.

3.6.2 Basic functionality

The following safety functions can be realized with MOVIPRO® as standard:

- **STO** (safe torque off according to EN 61800-5-2:2007) by disconnecting the safety-related DC 24 V supply.

If the STO function is activated, the frequency inverter no longer supplies power to the motor for generating torque. This safety function corresponds to a controlled stop according to EN 60204-1:2006, stop category 0.

The safety-related DC 24 V supply voltage must be disconnected by an external safety controller or safety relay.

- **SS1(c)** (safe stop 1, function variant c according to EN 61800-5-2:2007) by means of suitable external control (e.g. safety relay with delayed disconnection).

The following sequence is mandatory:

- Deceleration of the drive using an appropriate brake ramp specified via set-points
- Disconnection of the safety-related DC 24 V power supply (= triggers the STO function) after a specified safety-related time delay.

This safety function corresponds to a controlled stop according to EN 60204-1:2006, stop category 1.

3.6.3 Safety-related brake module

The safety function SBC (safe brake control) can also be realized with MOVIPRO® by an optional, safety-related brake module.

- **SBC** (Safe Brake Control according to EN 61800-5-2:2007)

The SBC function safely de-energizes the connected brake by disconnecting the safety-related control voltage. The control voltage must be disconnected by a suitable external safety relay or safety controller.

3.6.4 Extended safety functionality with S11 PROFIsafe option

The S11 PROFIsafe option allows you to control the basic safety functions of MOVIPRO® (STO or STO with SBC, depending on the unit configuration) via PROFIsafe.

The safety-related PROFIsafe communication with the higher-level safety controller can be realized via PROFIBUS or PROFINET.

3.7 Process data exchange

The relevant drive parameters and the local inputs and outputs can be transferred to and processed by the higher-level PLC. This means the PLC is capable of controlling drive-related functions.

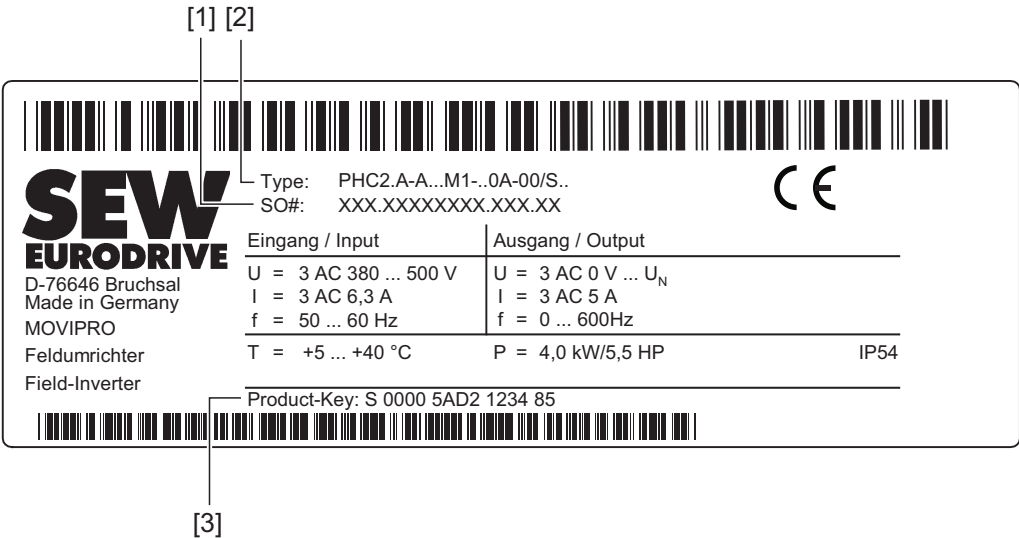
Communication between the PLC and MOVIPRO® is based on process data according to the uniform MOVILINK® unit profile from SEW-EURODRIVE. This means it is compatible with the existing decentralized components from SEW-EURODRIVE.

For further information, refer to the MOVIPRO® SDC and MOVIPRO® ADC manuals available at www.sew-eurodrive.de in the section "Data and documents".

3.8 Nameplates

Each MOVIPRO® unit has 2 nameplates that provide important information:

Main nameplate

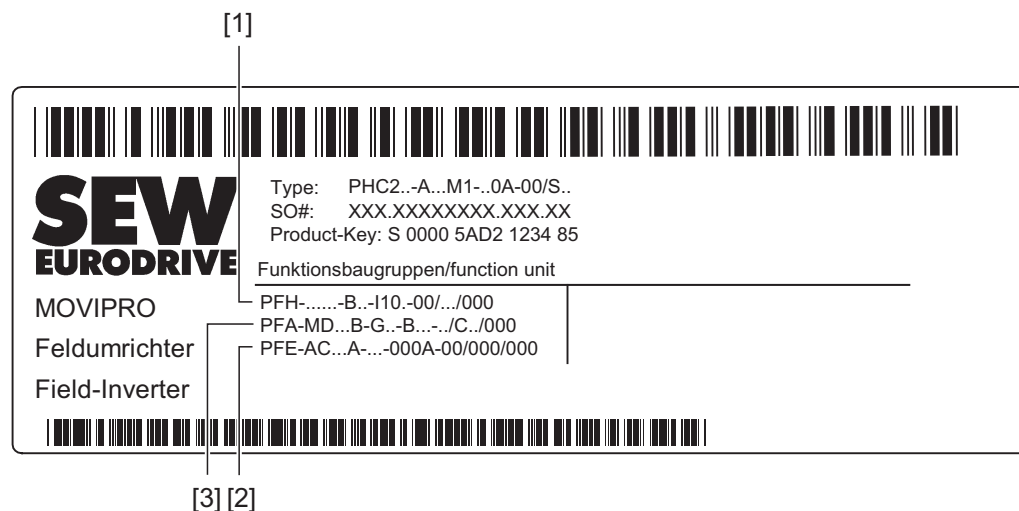


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- [1] Serial number SO#
- [2] Type code "Type"
- [3] Product key

Type code "Type"	The main nameplate lists some technical data, serial number "SO#" [1], the product key [3], and the type code "Type" [2]. The type code contains information about the most important unit features of a MOVIPRO®, such as the power rating or the fieldbus connection.
Serial number "SO#"	The serial number SO# encodes the order-specific data of the MOVIPRO®.
Product key	The product key encodes all production data of the MOVIPRO®. It contains the data of the main nameplate and the function module nameplate. With the product key, it is very easy to re-order an identical MOVIPRO® unit from SEW-EURODRIVE. The product key only encodes the MOVIPRO® basic unit. Accessories such as braking resistors or interface boxes are not encoded in the product key.

Nameplate of function units



15689686283

- [1] Communication and control unit
- [2] Power section
- [3] Energy supply

The function unit nameplate shows the code for the function units that are individually integrated in MOVIPRO®. The function units contain the specific features of a MOVIPRO®, such as encoder or SD memory card type. These features define the MOVIPRO® device type.

3.9 Type designation and function units of MOVIPRO® ADC

3.9.1 Type designation

The type designation of the drive and application controller MOVIPRO® ADC **PHC2.A-A...M1-..1A-00/...** includes the following data:

PHC2.A	MOVIPRO® ADC drive and application controller	
-		
A	Energy supply: 3-phase alternating current	
...	Rated input power:	
	022	2.2 kW
	040	4.0 kW
	075	7.5 kW
	110	11.0 kW
	150	15.0 kW
M1	1 integrated power section	
-		
..	Fieldbus:	
	P1	PROFIBUS DP V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™, Modbus/TCP
1A	Control type: ADC	
-		
00/...	Unit option:	
	00/S11	PROFIsafe option S11

3.9.2 Type designations of the function modules

Power section

The type designation **PFA-MD...B-G..-B...-/C../000** of the power section contains the following data:

PFA-MD	Internal axis on MOVIDRIVE® basis	
...B	Axis type:	
	022B	2.2 kW
	040B	4 kW
	075B	7.5 kW
	110B	11 kW
	150B	15 kW
-		
G..	Encoder interface:	
	G00	without encoder interface
	G10	Motor encoder resolver Without distance encoder
	G20	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Without distance encoder
	G21	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder CANopen
	G22	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder SSI, HIPERFACE®, sin/cos, HTL, TTL, RS422
-		
B.	Brake control:	
	BG	Standard brake control
	BS	Brake control with safety-related brake module
..	Brake voltage:	
	02	DC 24 V
	23	AC 230 V
	40	AC 400 V
	46	AC 460 V
-		
..	Axis connections:	
	11	1 standard motor output with STO interface and 4 axis inputs to 2 × M12
	15	1 standard motor output with STO interface, 2 axis inputs and 1 analog input to 2 × M12
/		

C../000	Cooling:	
	C01/000	Standard without fan subassembly
	C02/000	Standard with fan subassembly

Communication and control unit

The type designation **PFH--1A--B--I1--00/.../000** of the communication and control unit contains the following data:

PFH	Control/communication	
-		
..	Fieldbus:	
	P1	PROFIBUS DP V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™ / Modbus/TCP
1A	Control type: ADC	
H	SD memory card OMH for parameterizable and programmable functions	
.	Technology level	
	0	OMH_T0
	2	OMH_T2
-		
B..	Fieldbus interface:	
	B11	PROFIBUS, bus module 2 × M12
	B12	DeviceNet™, bus module 2 × M12
	B53	Ethernet, 2 × M12
	B63	Ethernet, 2 × Push-Pull RJ45
	B64	Ethernet, 2 × Push-Pull SCRJ
-		
I1	12 digital inputs and 4 digital inputs/outputs	

..	Communication package:	
	00	Without communication package
	01	SBus ^{PLUS} interface CAN interface – external RS485 interface – external
	02	SBus ^{PLUS} interface CAN interface – external S485 interface – external (with DC 24 V)
	03	SBus ^{PLUS} interface CAN interface – external (with DC 24 V) RS485 interface – external (with DC 24 V)
	04	SBus ^{PLUS} interface CAN interface – external (with DC 24 V) RS485 interface – external
	06	Ethernet engineering interface CAN interface – external (with DC 24 V) RS485 interface – external (with DC 24 V)
	10	MOVISAFE® safety bus interface CAN interface – external CAN interface – system bus (with DC 24 V)
	11	MOVISAFE® safety bus interface RS485 interface – external CAN interface – system bus (with DC 24 V)
-		
00/.../000	Option:	
	00/000/0 00	Without option 1
	00/ S11/000	PROFIsafe option S11

Energy supply

The type designation **PFE-AC...A-...-000A-00/...000** of the energy supply includes the following data:

PFE	Energy	
-		
AC...A	3-phase alternating current with the following maximum input power:	
	080	8.0 kW (Size 0, 1)
	160	16.0 kW (Size 2)
-		
...	Supply connection	
	001	Connection cable 2.2 kW, 4.0 kW, 7.5 kW
	002	Connection cable 11.0 kW, 15.0 kW
	101	Interface box 2.2 kW, 4.0 kW, 7.5 kW
	102	Interface box 11.0 kW, 15.0 kW
-		
000A	Without extra-low-voltage supply for external components	
-		
00/...	Energy management:	
	00/000	Without energy management
	00/R15	Regenerative power supply
	00/E42	Connection for external energy management components
000	Without option	

3.10 Type designation and function units of MOVIPRO® SDC

3.10.1 Type designation

The type designation of the drive and positioning control MOVIPRO® SDC **PHC2.A-A...M1-..0A-00/...** includes the following characteristic unit data:

PHC2.A	MOVIPRO® SDC drive and positioning control	
-		
A	Energy supply: 3-phase alternating current	
...	Rated input power:	
	022	2.2 kW
	040	4.0 kW
	075	7.5 kW
	110	11.0 kW
	150	15.0 kW
M1	1 integrated power section	
-		
..	Fieldbus:	
	P1	PROFIBUS DP V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™, Modbus/TCP
0A	Control type: SDC	
-		
00/...	Unit option:	
	00/S11	PROFIsafe option S11

3.10.2 Type designations of the function modules

Power section

The type designation **PFA-MD...B-G..-BG...-/C../000** of the power section contains the following data:

3

PFA-MD	Internal axis on MOVIDRIVE® basis	
...B	Axis type:	
	022B	2.2 kW
	040B	4.0 kW
	075B	7.5 kW
	110B	11.0 kW
	150B	15.0 kW
-		
G..	Encoder interface:	
	G00	without encoder interface
	G10	Motor encoder resolver Without distance encoder
	G20	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Without distance encoder
	G21	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder CANopen
	G22	Motor encoder HIPERFACE®, sin/cos, HTL, TTL, RS422 Distance encoder SSI, HIPERFACE®, sin/cos, HTL, TTL, RS422
-		
BG..	Brake voltage:	
	BG02	DC 24 V
	BG23	AC 230 V
	BG40	AC 400 V
	BG46	AC 460 V
-		
..	Axis connections:	
	11	1 standard motor output with STO interface and 4 axis inputs to 2 × M12
	15	1 standard motor output with STO interface, 2 axis inputs and 1 analog input to 2 × M12
/		
C../000	Cooling:	
	C01/000	Standard without fan subassembly
	C02/000	Standard with fan subassembly

Communication and control unit

The type designation **PFH-..0AC0-B..I100-00/.../000** of the communication and control unit contains the following data:

PFH	Control/communication	
-		
..	Fieldbus:	
	P1	PROFIBUS DP V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™ / Modbus/TCP
0A	Control type: SDC	
C0	Storage medium/technology level: OMC_T0	
-		
B..	Fieldbus interface:	
	B11	PROFIBUS, bus module 2 × M12
	B12	DeviceNet™, bus module 2 × M12
	B53	Ethernet, 2 × M12
	B63	Ethernet, 2 × Push-Pull RJ45
	B64	Ethernet, 2 × Push-Pull SCRJ
-		
I1	12 digital inputs and 4 digital inputs/outputs	
00	Without communication package	
-		
00/.../000	Option:	
	00/000/ 000	Without option 1
	00/ S11/00 0	PROFIsafe option S11

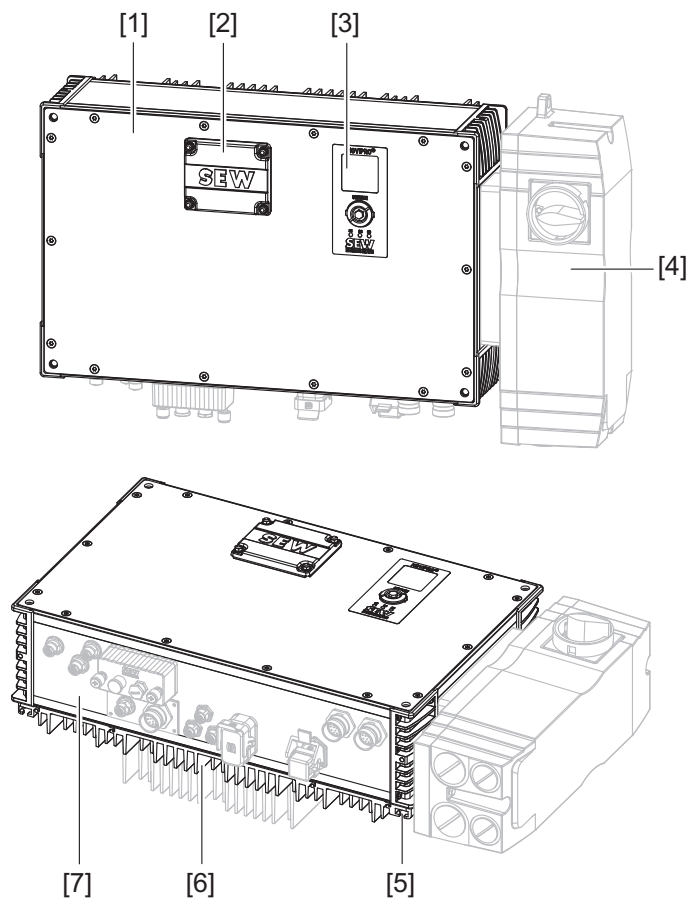
Energy supply

The type designation **PFE-AC...A-...-000A-00/000/000** of the energy supply includes the following data:

PFE	Energy	
-		
AC...A	3-phase alternating current with the following maximum input power:	
	080	8 kW (Size 0, 1)
	160	16 kW (Size 2)
-		
...	Supply connection	
	001	Connection cable 2.2 kW, 4 kW, 7.5 kW
	002	Connection cable 11 kW, 15 kW
	101	Interface box 2.2 kW, 4 kW, 7.5 kW
	102	Interface box 11 kW, 15 kW
-		
000A	Without extra-low-voltage supply for external components	
-		
00/000/000	Without option	

3.11 Unit structure of MOVIPRO® SDC/ADC**3.11.1 2.2 kW, 4.0 kW and 7.5 kW (size 0 and 1)**

The following figures show the unit structure:

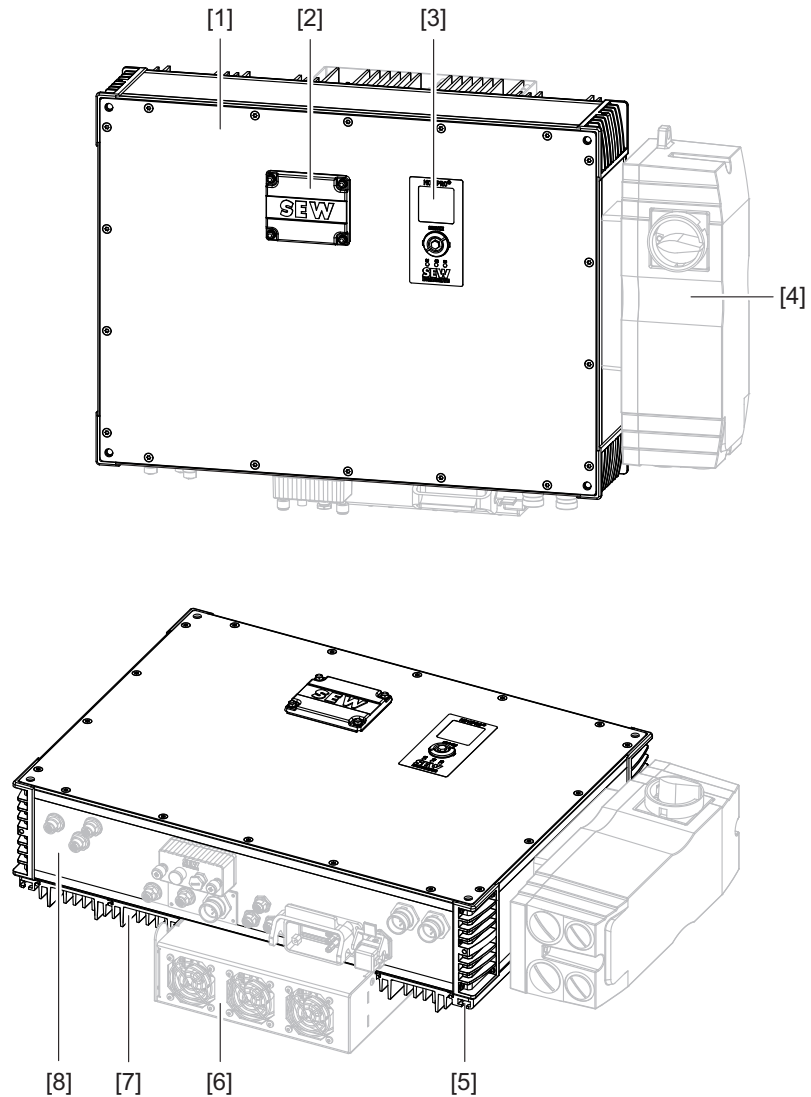


9007201903278475

- [1] Unit cover
- [2] Service cover plate
- [3] Service unit
- [4] Interface box (optional)
- [5] T-slot profile
- [6] Cooling fins
- [7] Connection block (connections depend on the unit design)

3.11.2 11.0 kW and 15.0 kW (Size 2)

The following figures show the unit structure:

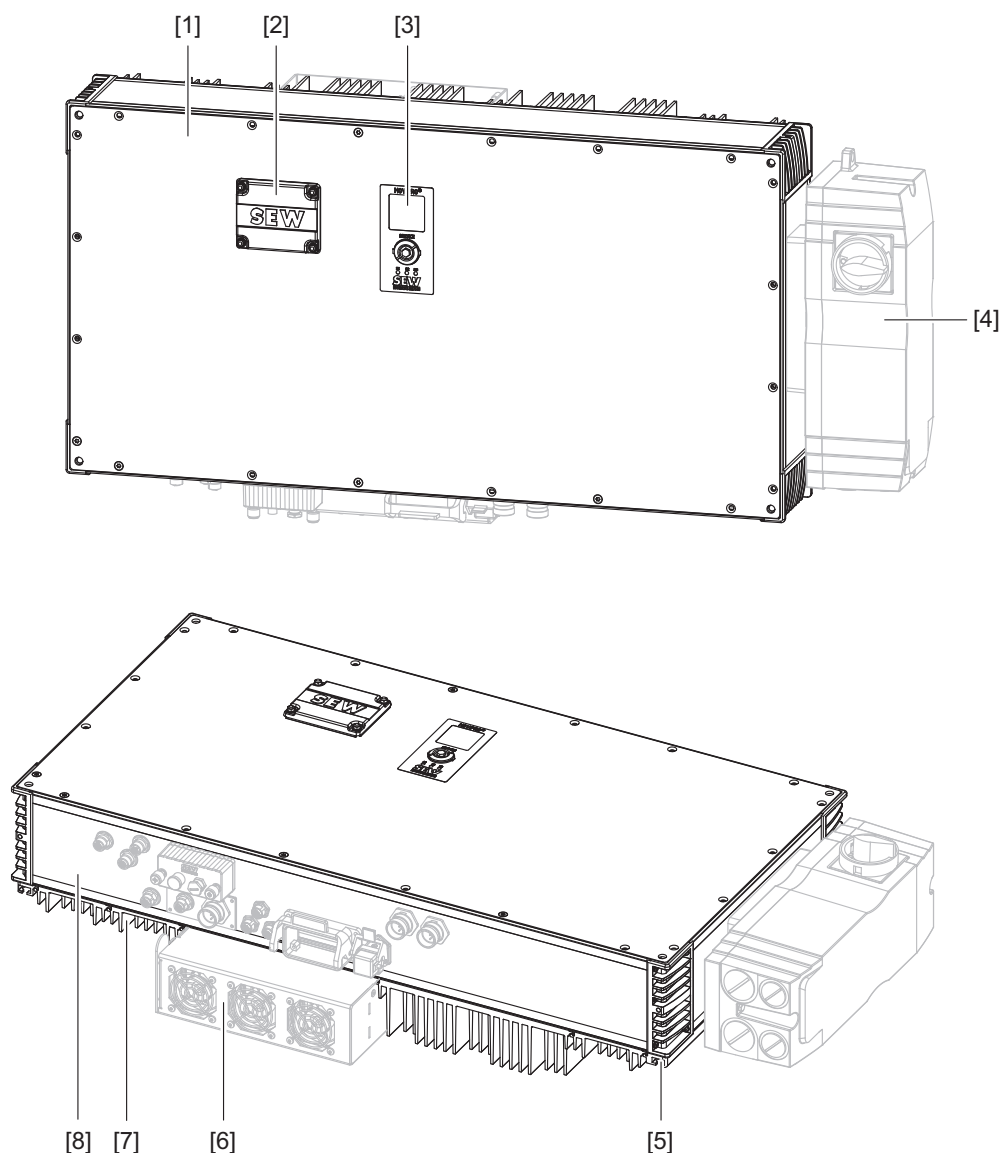


9007201915563659

- [1] Unit cover
- [2] Service cover plate
- [3] Service unit
- [4] Interface box (optional)
- [5] T-slot profile
- [6] Fan subassembly (optional for 11 kW, mandatory for 15 kW)
- [7] Cooling fins
- [8] Connection block (connections depend on the unit design)

Size 2 with R15 regenerative power supply unit (MOVIPRO® ADC only)

The following illustrations show the unit structure with regenerative power supply R15:

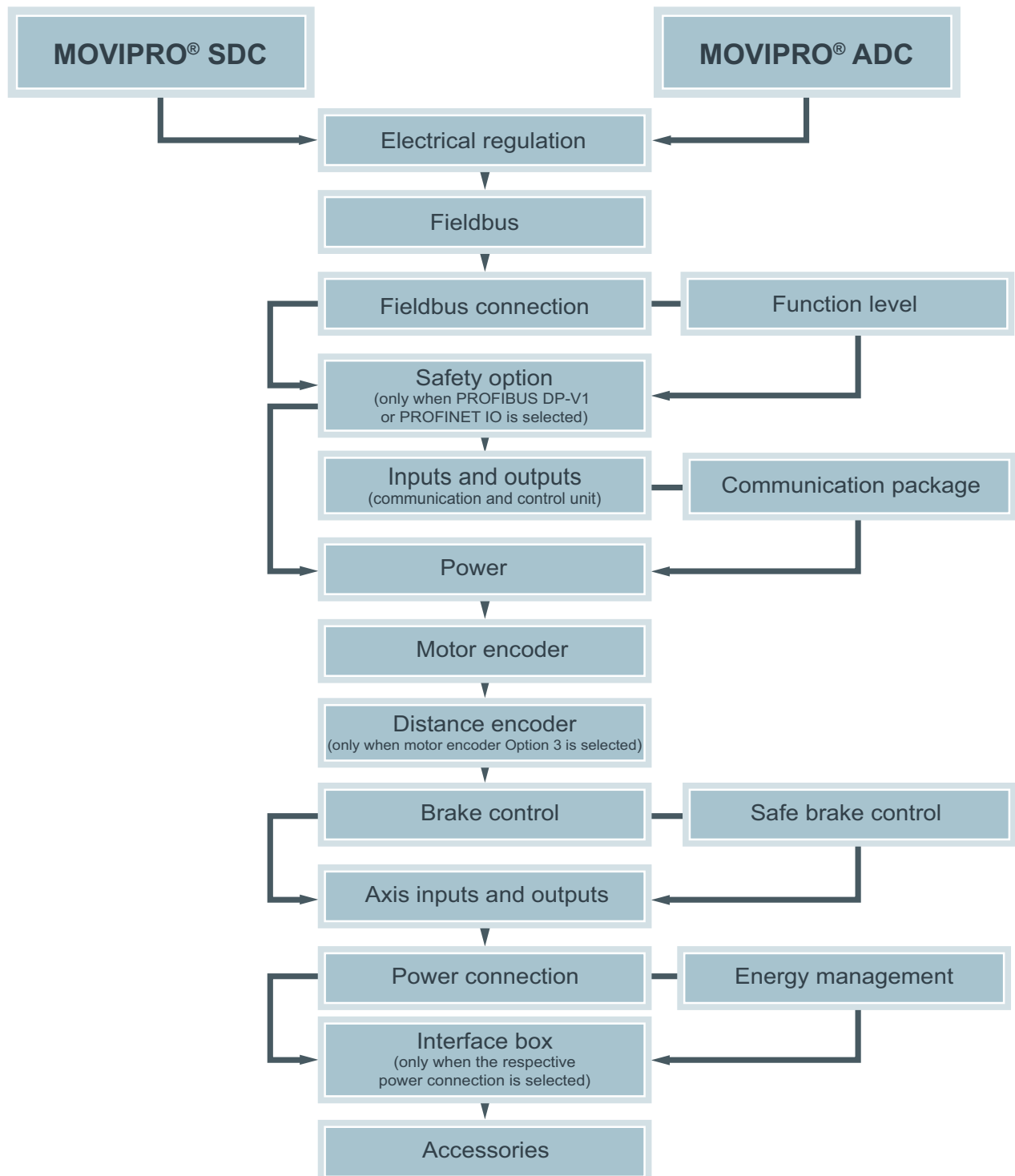


18014402037488011

- [1] Unit cover
- [2] Service cover plate
- [3] Service unit
- [4] Interface box (optional)
- [5] T-slot profile
- [6] Fan subassembly
- [7] Cooling fins
- [8] Connection block (connections depend on the unit design)

3.12 Selecting the right MOVIPRO® for your drive solution

The diagram below shows an overview of the necessary configuration steps to select the right MOVIPRO® for you:



9007204639574667

3.12.1 Selecting the product type

Select a MOVIPRO® SDC or MOVIPRO® ADC that meets your requirements. The following chapters will give you detailed information about the products.

3.12.2 Electrical regulation

Depending on the country where the unit will be installed, you can choose one of the following 2 electric regulations for MOVIPRO®:

- IEC
- UL (specifically for the North American continent)

3.12.3 Fieldbus

You can choose from different fieldbus types for MOVIPRO®:

- PROFIBUS DP-V1
- EtherNet/IP™
- Modbus/TCP
- PROFINET IO
- DeviceNet™

3.12.4 Fieldbus connections

MOVIPRO® offers the following connection options depending on the fieldbus type:

Fieldbus	Connection types
PROFIBUS DP-V1	DIP module PROFIBUS with 2 × M12 connectors
EtherNet/IP™, Modbus/TCP	2 × M12 connections, D-coded, Ethernet, copper
	2 × push-pull RJ45 connections, Ethernet, copper
PROFINET IO	2 × M12 connections, D-coded, Ethernet, copper
	2 × push-pull RJ45 connections, Ethernet, copper
	2 push-pull SCRJ connections (POF)
DeviceNet™	DIP module DeviceNet™ with 2 × M12 connections

3.12.5 Function level (for MOVIPRO® ADC only)

With the MOVIPRO® ADC, the SD memory cards OMH_T0 or OMH_T2 can be selected, according to the required functions.

In addition, you can decide if you wish to parameterize or even program the MOVIPRO® ADC.

Parameterization

MOVIPRO® ADC can be parameterized using the configuration software Application Configurator. Our Application configurator provides a large number of standardized, configurable software modules.

Programming

A user program for complex automated motion sequences can be programmed for your MOVIPRO® ADC. Therefore, the programming software PLC Editor offers optimal support.

Depending on the range of functions, you can choose from different technology levels for the individual SD memory cards.

Technology level of the OMH_T SD memory card.	Description	
	Application Configurator (CCU)	PLC editor (MOVI-PLC®)
T0	• Speed specification • Bus positioning • Universal module • Cam positioning	MultiMotion light: • Speed control • Positioning
T2	–	MultiMotion: • Speed control • Positioning • Electronic cam • Electronic gear unit

3.12.6 Safety option

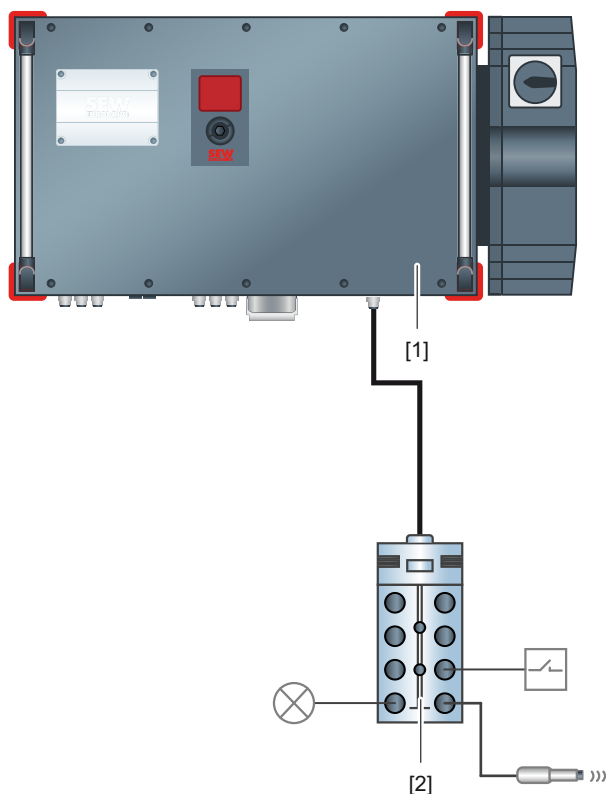
If you have selected PROFIBUS or PROFINET as fieldbus, you can also select the PROFIsafe option S11.

The PROFIsafe option S11 lets you control the STO or STO with SBC safety functions via PROFIsafe, depending on the unit configuration.

3.12.7 Digital inputs/outputs (communication and control unit)

Each MOVIPRO® has 12 digital inputs and 4 digital inputs and outputs as standard.

The following figure shows an example of the connection options:



5393060875

- [1] MOVIPRO®
- [2] Sensor/actuator box with M23 connector and M12 connections, e.g. for:
- Switch
 - Inductive sensors
 - Light barriers
 - Indicator lamps, etc.

3.12.8 Communication packages (for MOVIPRO® ADC only)

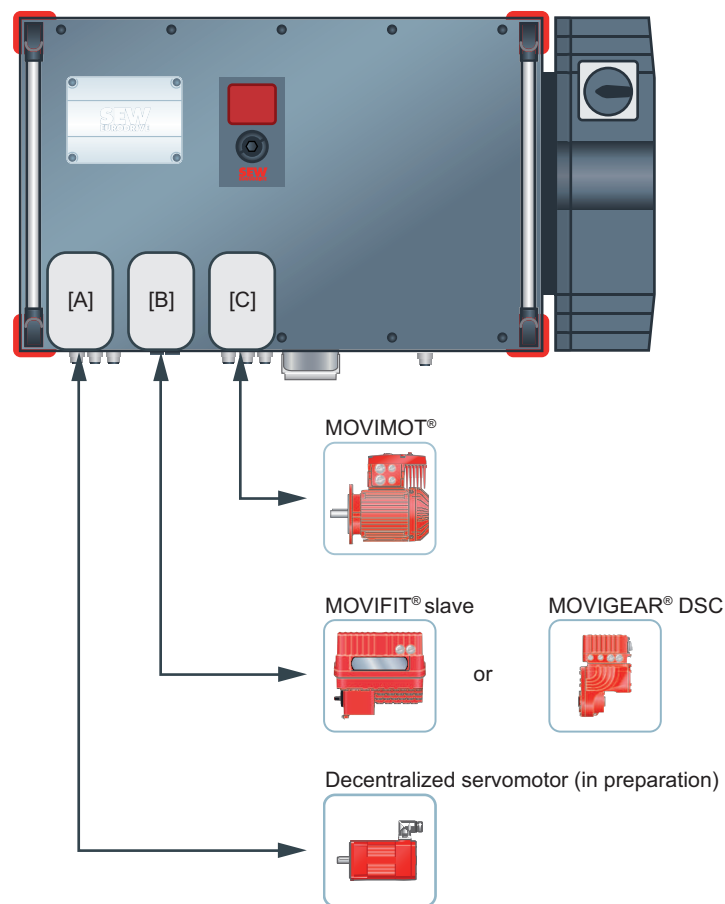
For communication with external auxiliary axes, such as MOVIFIT® or MOVIGEAR®, you can select additional communication packages for MOVIPRO® ADC.

Communication package 1

The communication package contains the following additional interfaces:

Interfaces	
[A]	SBus ^{PLUS} interface
[B]	CAN interface (electrically isolated)
[C]	RS485 interface (electrically isolated)

The following figure shows an example of the connection options:



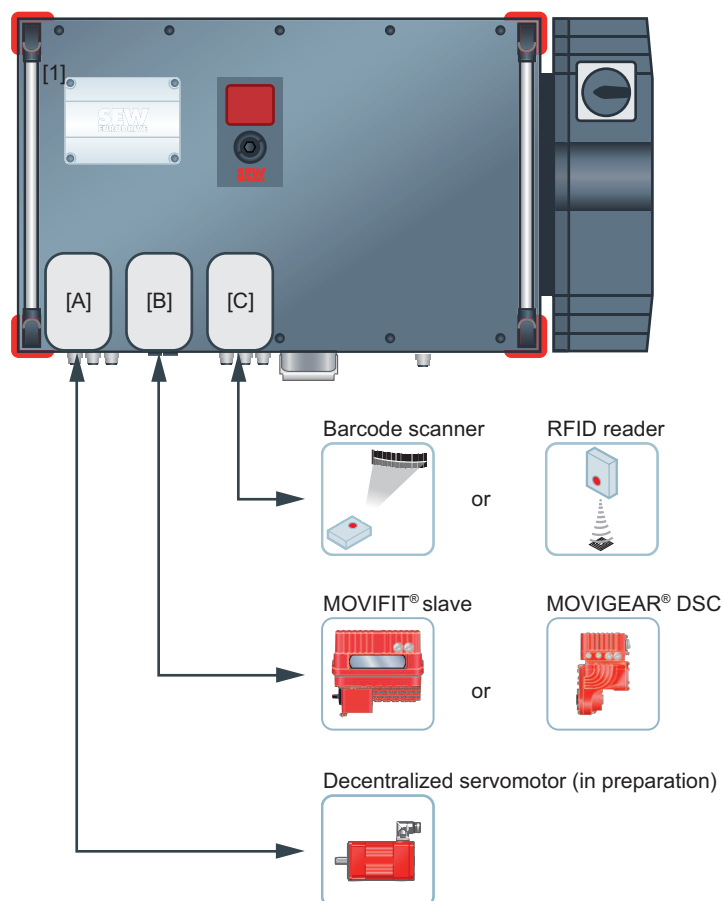
- [A] SBus^{PLUS} interface
- [B] CAN interface (electrically isolated)
- [C] RS485 interface (electrically isolated)

Communication package 2

The communication package contains the following additional interfaces:

Interfaces	
[A]	SBus ^{PLUS} interface
[B]	CAN interface (electrically isolated)
[C]	RS485 interface (with DC 24 V)

The following figure shows an example of the connection options:



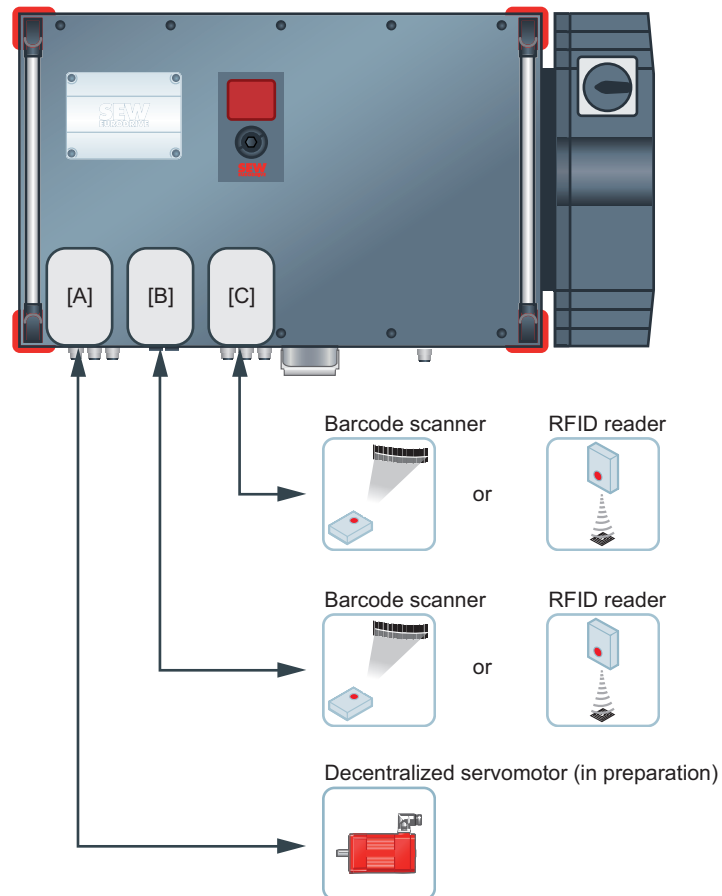
- [A] SBus^{PLUS} interface
 [B] CAN interface (electrically isolated)
 [C] RS485 interface (with DC 24 V)

Communication package 3

The communication package contains the following additional interfaces:

Interfaces	
[A]	SBus ^{PLUS} interface
[B]	CAN interface (with DC 24 V)
[C]	RS485 interface (with DC 24 V)

The following figure shows an example of the connection options:



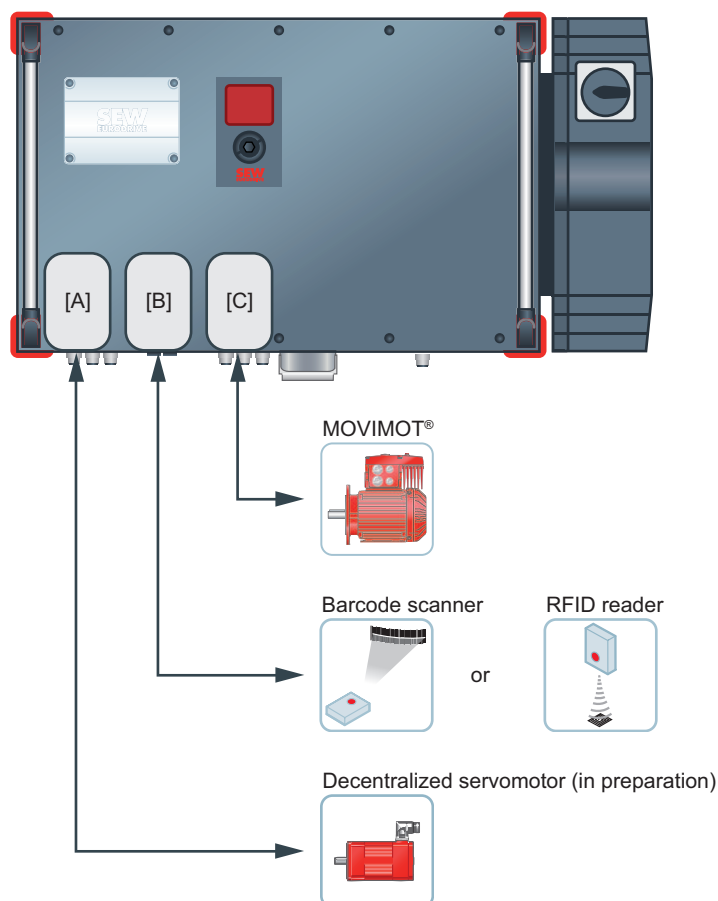
- [A] SBus^{PLUS} interface
 [B] CAN interface (with DC 24 V)
 [C] RS485 interface (with DC 24 V)

Communication package 4

The communication package contains the following additional interfaces:

Interfaces	
[A]	SBus ^{PLUS} interface
[B]	CAN interface (with DC 24 V)
[C]	RS485 interface (electrically isolated)

The following figure shows an example of the connection options:



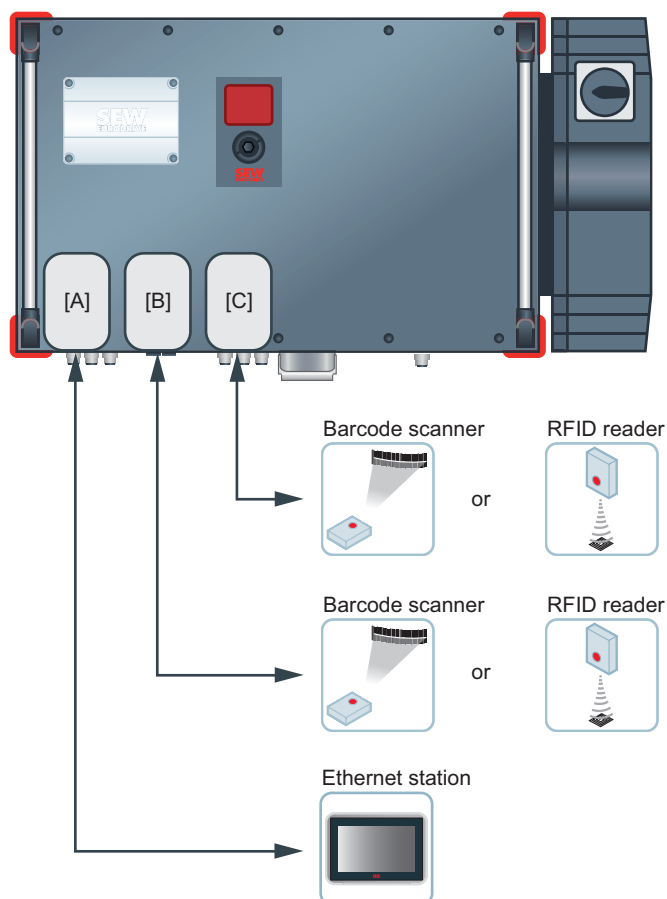
- [A] SBus^{PLUS} interface
 [B] CAN interface (with DC 24 V)
 [C] RS485 interface (electrically isolated)

Communication package 6

The communication package contains the following additional interfaces:

Interfaces	
[A]	Ethernet engineering interface (without DC 24 V)
[B]	CAN interface (with DC 24 V)
[C]	RS485 interface (with DC 24 V)

The following figure shows an example of the connection options:



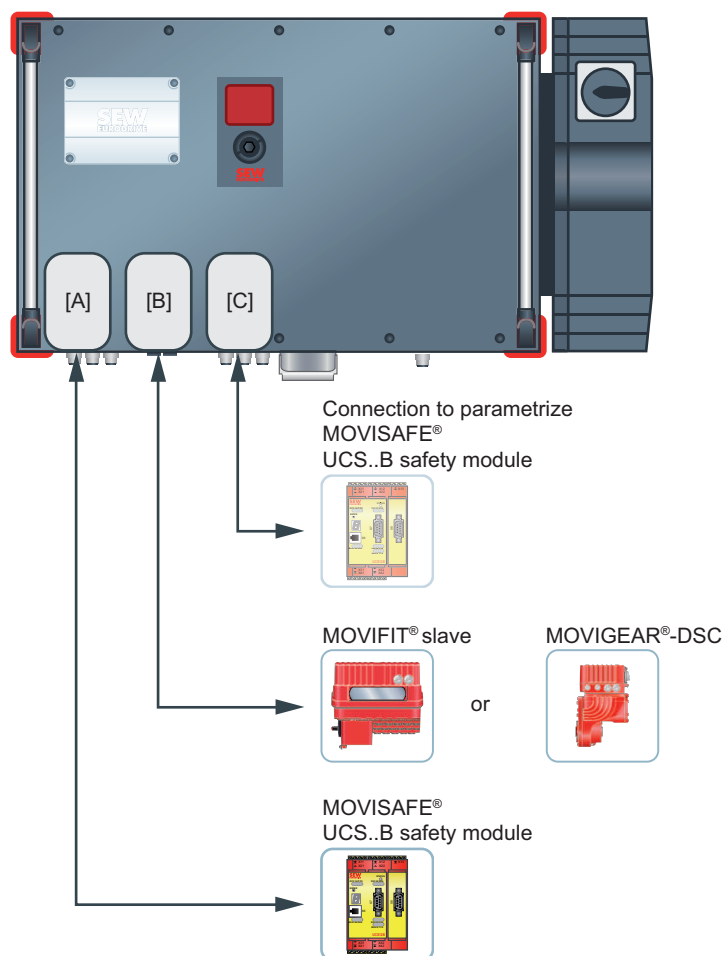
- [A] Ethernet engineering interface (without DC 24 V)
- [B] CAN interface (with DC 24 V)
- [C] RS485 interface (with DC 24 V)

Communication package 10

The communication package contains the following additional interfaces:

Interfaces	
[A]	MOVISAFE® safety bus interface
[B]	CAN interface – (electrically isolated)
[C]	CAN interface – system bus (with DC 24 V)

The following figure shows an example of the connection options:



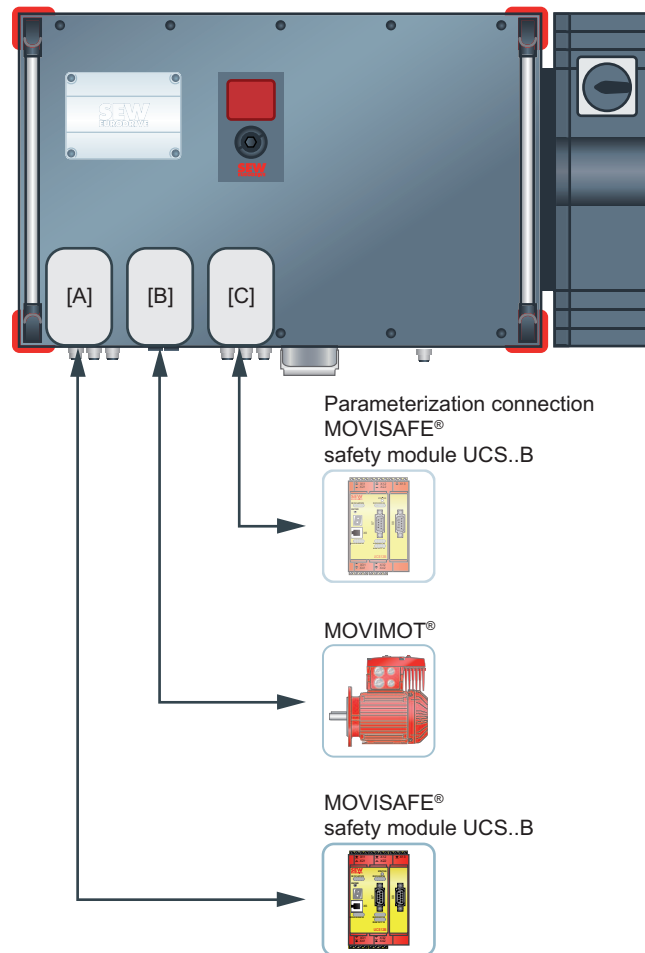
- [A] MOVISAFE® safety bus interface
 [B] CAN interface – (electrically isolated)
 [C] CAN interface – system bus (with DC 24 V)

Communication package 11

The communication package contains the following additional interfaces:

Interfaces	
[A]	MOVISAFE® safety bus interface
[B]	RS485 interface (electrically isolated)
[C]	CAN interface – system bus (with DC 24 V)

The following figure shows an example of the connection options:



- [A] MOVISAFE® safety bus interface
- [B] RS485 interface (electrically isolated)
- [C] CAN interface – system bus (with DC 24 V)

3.12.9 Power rating

Depending on the connected drive, you can choose from different power levels of the MOVIPRO®:

- 2.2 kW
- 4.0 kW
- 7.5 kW
- 11.0 kW
- 15.0 kW

3.12.10 Motor encoder**INFORMATION**

If you want to use a distance encoder, you have to select the motor encoder type "Sin/Cos, TTL, HTL, HIPERFACE®, RS422".

If you want to connect a motor with motor encoder to the MOVIPRO®, you can choose from the following motor encoder types for the encoder evaluation option:

- Resolver
- Sin/Cos, TTL, HTL, HIPERFACE®, RS422

3.12.11 Distance encoder

If you want to evaluate a distance encoder with MOVIPRO®, you can choose from the following distance encoder types for the encoder evaluation option:

- CANopen
- SSI, Sin/Cos, TTL, HTL, HIPERFACE®, RS422

3.12.12 Brake control

The brake control system is responsible for the power supply and control of the SEW-EURODRIVE disk brakes. Only connect approved SEW-EURODRIVE disk brakes with the following brake voltages to the unit.

- DC 24 V
- AC 230 V
- AC 400 V
- AC 460 V

Safety-related brake module (MOVIPRO® ADC only)

The safety-related brake module offers the safety function SBC (Safe Brake Control). SBC is possible for the following brake voltages:

- AC 230 V
- AC 400 V
- AC 460 V

INFORMATION

For detailed information, refer to the "MOVIPRO® ADC – Functional Safety" manual.

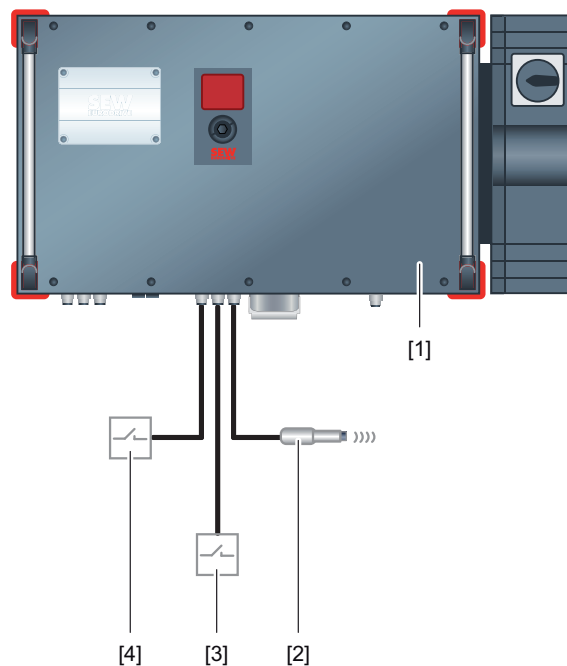
3.12.13 Axis inputs (power section)

The axis inputs can be used to connect sensors and actuators.

Depending on the unit design, the unit has the following axis inputs:

- 4 digital axis inputs
- 2 digital axis inputs and 1 analog axis input

The following figure shows an example of a connection of sensors and actuators to the axis inputs:



15290821899

- [1] MOVIPRO®
 [2] Inductive sensor
 [3]+[4] Switch

3.12.14 Power connection

You can choose, whether you want to connect MOVIPRO® directly via supply plug connector or via interface box.

The interface box offers the following advantages:

- Disconnection of MOVIPRO® via intelligent maintenance switch with switch feed-back
- Variants for UL-compliant installation with integrated motor circuit breaker ("branch protection")
- Connected voltages are looped through for line topology

3.12.15 Energy management (for MOVIPRO® ADC only)

Instead of the braking resistor converting regenerative energy to heat, you can also store or feed back excess energy to the power grid.

For this purpose the MOVIPRO® modular concept offers the following functions:

- Energy management interface (4.0 kW or higher)
- Regenerative power supply R15 (11.0 kW or higher)

Energy management interface (4.0 kW or higher)

The energy management interface allows to connect a MOVI-DPS energy or power interface to the MOVIPRO® ADC.

Advantages

- Decentralized energy storage
- Providing energy
- Energetically optimizing of applications
- Reduction of overall operation costs
- Reduction of supply system infrastructure
- Increase of process reliability

Operating modes

- Energy mode
 - Operation without permanent power supply
 - Storing of energy in the MOVI-DPS storage bundle
 - Use of additionally required energy from the MOVI-DPS storage bundle
- Power mode
 - Reducing of load peaks
 - Saving energy
 - Storing of regenerative energy in the MOVI-DPS storage bundle

Applications

- Energy mode:
 - Heavy and light load automated guided vehicle systems (AGVS)
 - Pallet transfer shuttle
 - Satellite for storage/retrieval system
- Power mode
 - Lifting station for electrified monorail vehicles
 - Vertical conveyor

Regenerative power supply R15 (11.0 kW or higher)

A regenerative power supply unit R15 can be configured for MOVIPRO® ADC units with a power rating of 11.0 kW and higher. The MOVIPRO® ADC already contains the required line chokes and line filters.

Typical applications for regenerative power supply units are, for example:

- Hoists
- Storage and retrieval systems

3.13 Accessories

3.13.1 Interface box

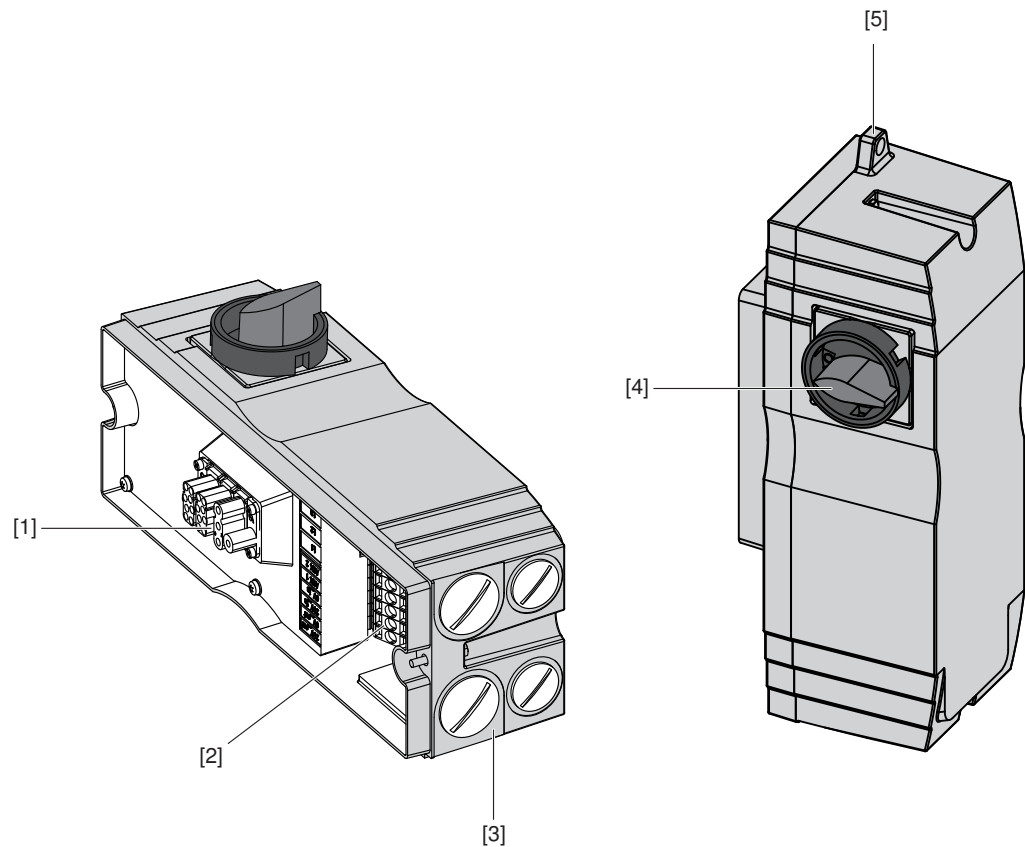
Scope of functions

The interface box allows for the following functions:

- Connection to the AC 400 V supply system
- Connection to the DC 24 V backup voltage
- DC 24 V supply of the connected unit via the integrated power supply of the unit.
- Connected voltages are looped through
- Disconnect the unit from the supply system by using the maintenance switch of the interface box

Structure

The following figure provides an overview of the most important parts of the interface box:



2048160523

- [1] MOVIPRO® connection (Han® 10 B, female)
- [2] Power input terminal strip X1
- [3] Front panel connectors
- [4] Maintenance switch
- [5] Suspension device (for storing the interface box during a MOVIPRO® unit replacement, for example)

Type designation

The type designation of the MOVIPRO® PZM2xA-A...-...-00 interface box comprises the following characteristic data:

PZM2xA	MOVIPRO® interface box	
-		
A...	Maximum switching capacity:	
	022	2.2 kW
	040	4.0 kW
	075	7.5 kW
	150	15.0 kW
-		
..-00	Connection of MOVIPRO®:	
	D02-00	Disconnection switch up to 25 A
	D03-00	Disconnection switch up to 40 A
	M13-00	line and unit protection up to 5 A
	M14-00	line and unit protection up to 9 A
	M16-00	line and unit protection up to 15 A

Power interface assignment

The following overview illustrates the assignment of the individual interface boxes to the respective MOVIPRO® units:

Interface box	Part number	MOVIPRO®				
		up to 2.2 kW	up to 4.0 kW	up to 7.5 kW	up to 11.0 kW	up to 15.0 kW
PZM2xA-A075-D02-00	18250149	•	•	•		
PZM2xA-A150-D03-00	18250157	•	•	•	•	•
PZM2xA-A022-M13-00	18250238	•				
PZM2xA-A040-M14-00	18250165		•			
PZM2xA-A075-M16-00	18250173			•		

Power interfaces – technical data

Basic unit

The following table lists the technical data for the PZM2xA-A...-...-00 power interfaces:

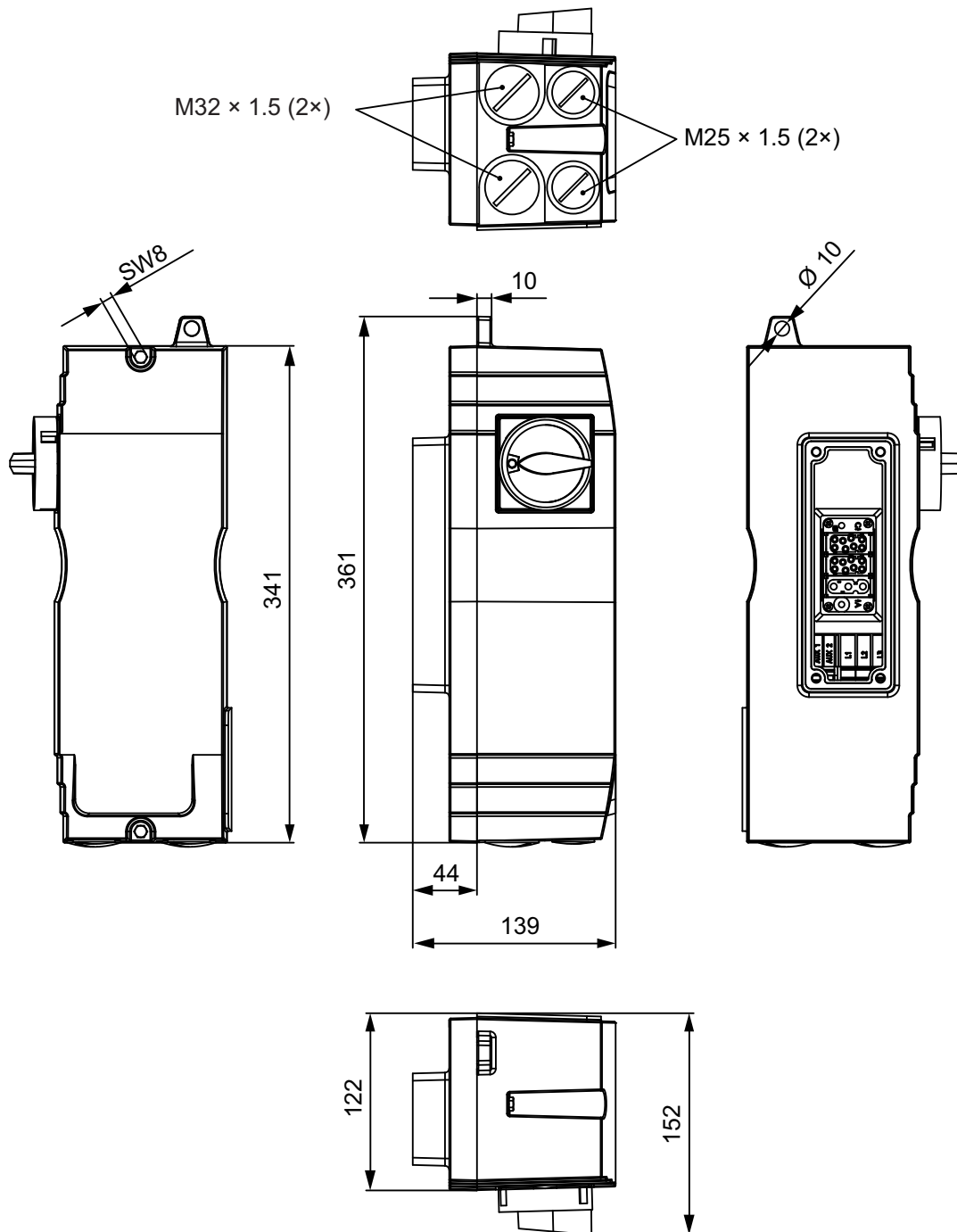
Interface box					
Description	PZM2xA-A022-M13-00	PZM2xA-A040-M14-00	PZM2xA-A075-M16-00	PZM2xA-A075-D02-00	PZM2xA-A150-D03-00
	2.2 kW	4.0 kW	7.5 kW	7.5 kW	15.0 kW
	With line and unit protection			with disconnection switch	
Ambient temperature	+5 – +40 °C (non-condensing, no moisture condensation)				
Derating Ambient temp. ϑ_A	P_N reduction: 3% I_N per K to max. 60 °C				
Climate class	EN 60721-3-3; class 3K3				
Storage temp. ϑ_L	-25 – +70 °C				
Degree of protection	IP20, IP54 (in assembled state)				
Mass	2.5 kg				
Dimensions W×H×D	139 mm × 116 mm × 341 mm				
Unit output to MOVIPRO®					
Max. output current	5 A	9 A	15 A	25 A	40 A
Integrated unit protection	5 A	9 A	15 A	–	–
Max. switching capacity (IEC, AC 3)	2.2 kW	4.0 kW	7.5 kW	7.5 kW	15.0 kW
Max. switching capacity (UL, DOL rating)	–	–	–	7.5 HP	15.0 HP
Unit input					
Line voltage V_{line}	3 AC 380 V – 500 V				
Line frequency f_{line}	50 – 60 Hz ± 5%				
Terminal cross section power supply	2.5 mm ² – 10 mm ² (flexible with conductor end sleeve)				
24 V terminal cross section	1.5 mm ² – 6 mm ² (flexible with conductor end sleeve)				
Maximum permitted back-up fuse (gL characteristics)	60 A			35 A ¹⁾	50 A ²⁾

1) For UL-compliant installation, also observe the maximum permitted fuse for the connected MOVIPRO®. Always adhere to the smaller value.

2) For UL-compliant installation, also observe the maximum permitted fuse for the connected MOVIPRO®. Always adhere to the smaller value.

Dimension drawing

The dimension drawing shows the mechanical dimensions of the interface box in mm:



9007201307199371

3.13.2 External braking resistors

The external braking resistors are described in chapter "External braking resistors for MOVIPRO®" (→ 352).

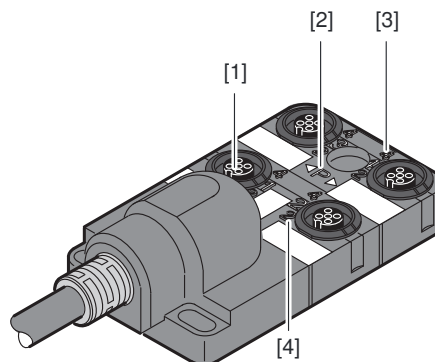
3.13.3 Sensor/actuator box

The sensor/actuator box allows to connect up to 4 or up to 8 sensors/actuators to the MOVIPRO®, depending on the design. It occupies only one connection for digital inputs/outputs of the MOVIPRO® unit. To use all digital inputs and outputs 2 sensor/actuator boxes must be connected to the MOVIPRO®.

The sensor/actuator box provides one connection cable with M23 plug connector and M12 slots for the sensors or actuators. The green LED "P" indicates the use of the DC 24 V supply voltage. Each M12 slot is equipped with LEDs for displaying the status of the inputs/outputs.

The sensor/actuator box is available with different connection cable lengths.

Design with 4 slots



14785117835

- [1] M12 slot
- [2] Operating display LED
- [3] Yellow status display signal 1
- [4] White status display signal 2

	Part number
Sensor/actuator box 1.0 m (4 connections)	18255477
Sensor/actuator box 3.0 m (4 connections)	18255485

Technical Data

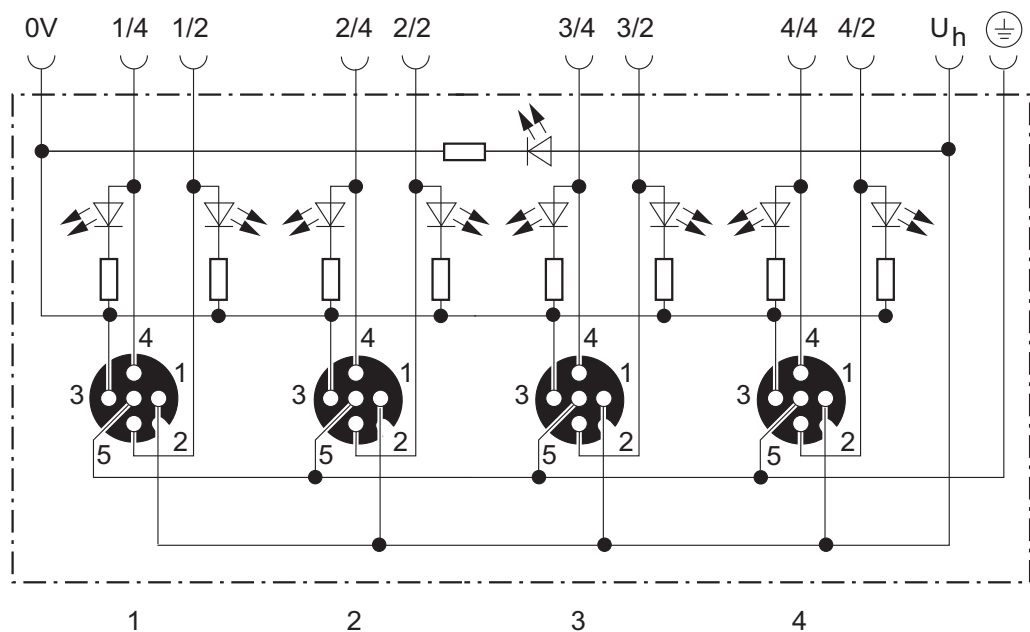
Basic unit		
Nominal voltage	V_N	DC 24 V
Maximum operating voltage	V_{max}	DC 30 V

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Basic unit		
Current carrying capacity per slot		4 A
in total		8 A
Operating voltage display		Green LED
Status display		Yellow LED (signal 1) White LED (signal 2)
Operating current display elements		≤ 5 mA
Degree of protection		IP65 (with screwed plug connectors)
Connection cable		
Ambient temperature for fixed routing		-30 – +80 °C
for cable carrier		-5 – +70 °C
Cable type		Main cable suitable for cable carriers

3

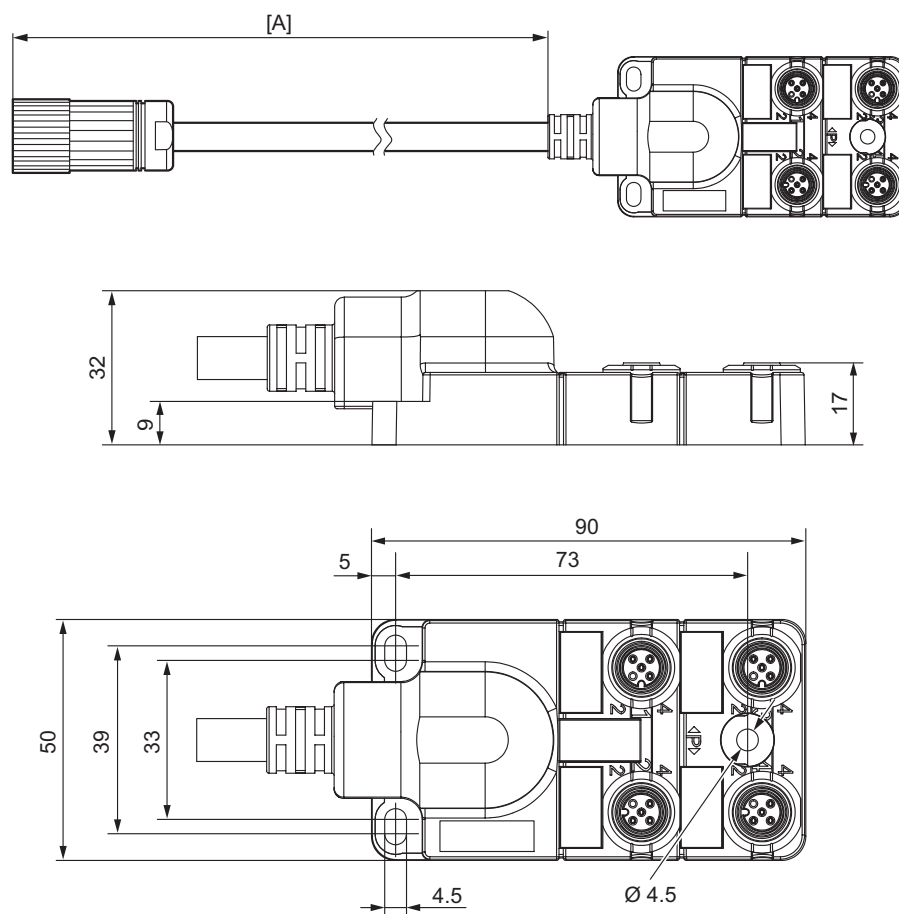
Wiring



14790252683

Dimension drawing

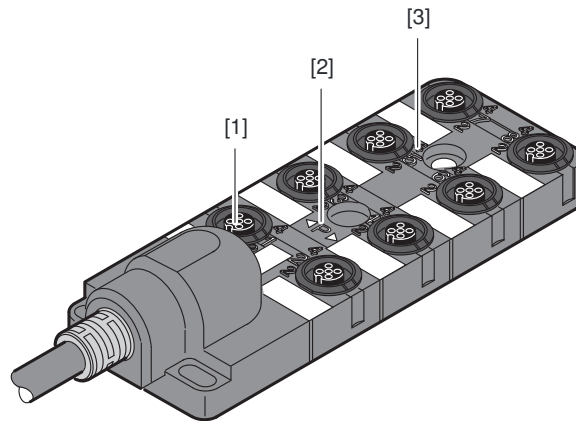
The dimension drawing shows the mechanical dimensions of the sensor/actuator box in mm: ♦



14791723915

[A] = 1 m (sensor/actuator box 18255477)
 = 3 m (sensor/actuator box 18255485)

Design with 8 slots



54043196599307403

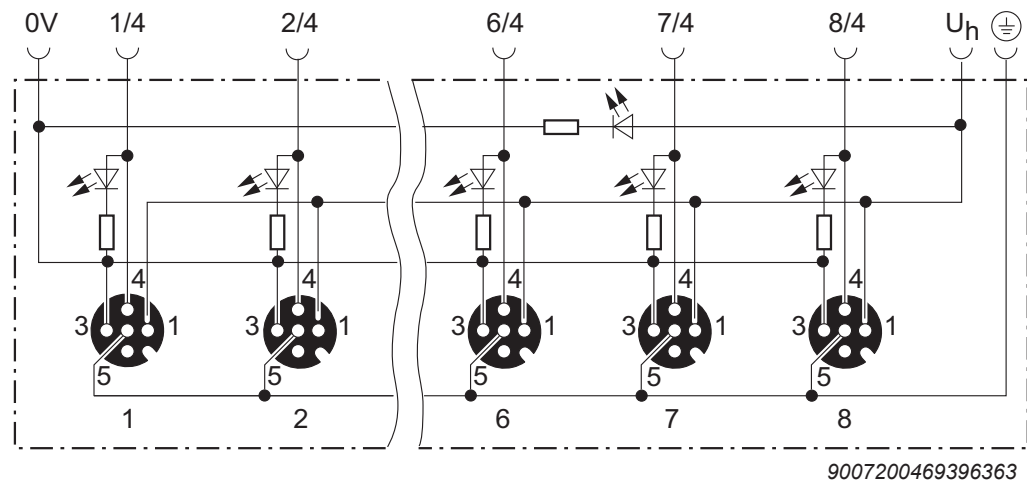
- [1] M12 slot
- [2] Operating display LED
- [3] Display status of inputs/outputs

Sensor/actuator boxes	Part number
Sensor/actuator box 1.0 m (8 connections)	13309269
Sensor/actuator box 2.0 m (8 connections)	13309277
Sensor/actuator box 3.0 m (8 connections)	13309285
Sensor/actuator box 5.0 m (8 connections)	13309293
Sensor/actuator box 10.0 m (8 connections)	13309307

Technical Data

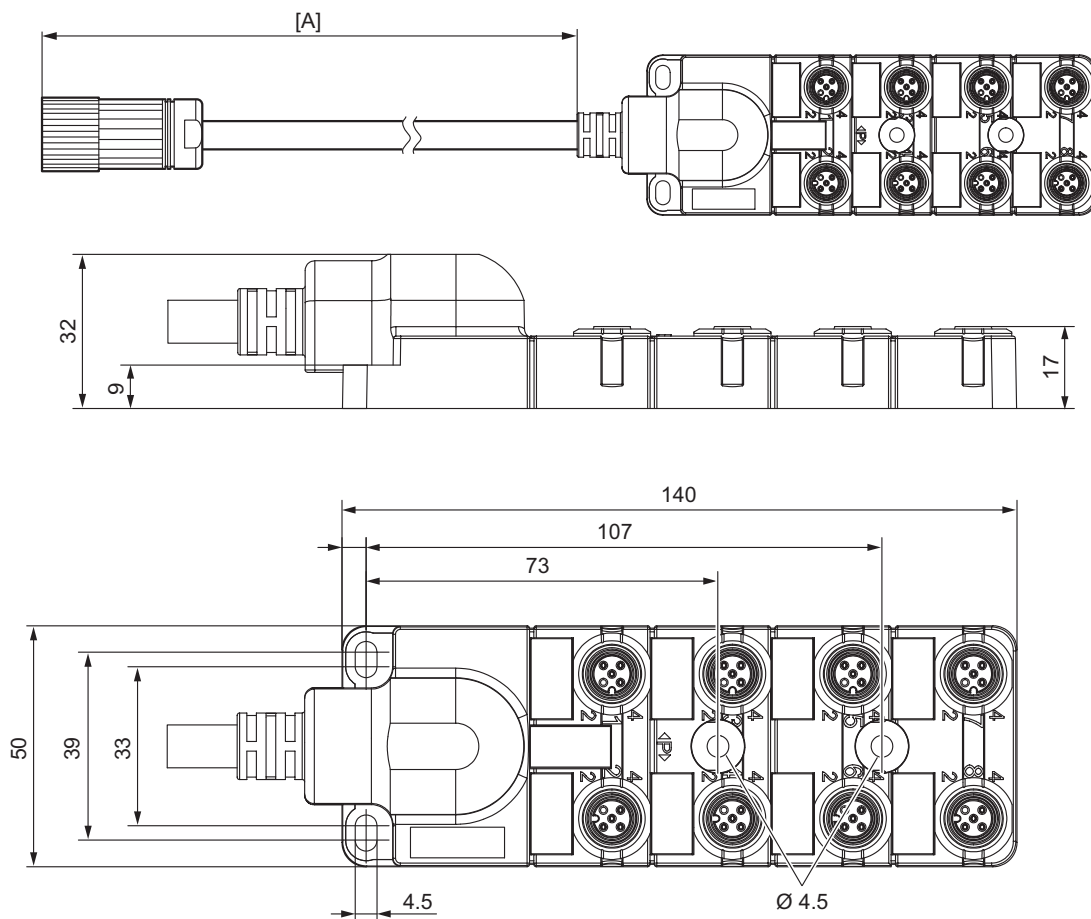
Basic unit		
Nominal voltage	V_N	DC 24 V
Maximum operating voltage	V_{max}	DC 30 V
Current carrying capacity per slot		4 A
in total		8 A
Operating voltage display		Green LED
Status display		Yellow LED (signal 1)
Operating current display elements		≤ 5 mA
Degree of protection		IP65 (with screwed plug connectors)
Connection cable		
Ambient temperature for fixed routing		-30 – +80 °C
for cable carrier		-5 – +70 °C
Cable type		Main cable suitable for cable carriers

Wiring



Dimension drawing

The dimension drawing shows the mechanical dimensions of the sensor/actuator box in mm:



18014399580341515

- [A] = 1 m (sensor/actuator box 13309269)
 = 2 m (sensor/actuator box 13309277)
 = 3 m (sensor/actuator box 13309285)
 = 5 m (sensor/actuator box 13309293)
 = 10 m (sensor/actuator box 13309307)

3.13.4 Jumper plug



▲ WARNING

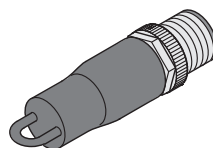
Safe disconnection of the unit is not possible when the jumper plug is used.

Severe or fatal injuries.

- Use the jumper plug only if the unit is not used to perform any safety functions according to DIN EN ISO 13849-1.

The jumper plug can be connected to the X5502 terminal of MOVIPRO®. The jumper plug deactivates the safety functions of the MOVIPRO®. You can use this function, for example, when you want to move a drive in manual mode for test purposes at startup.

The following figure shows the jumper plug, part number 1 174 709 9:

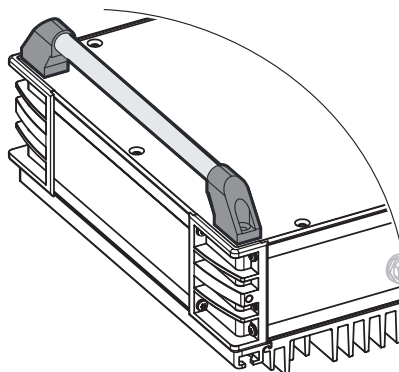


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3.13.5 Mounting accessories

Handles

You can equip the MOVIPRO® with handles for easier handling:



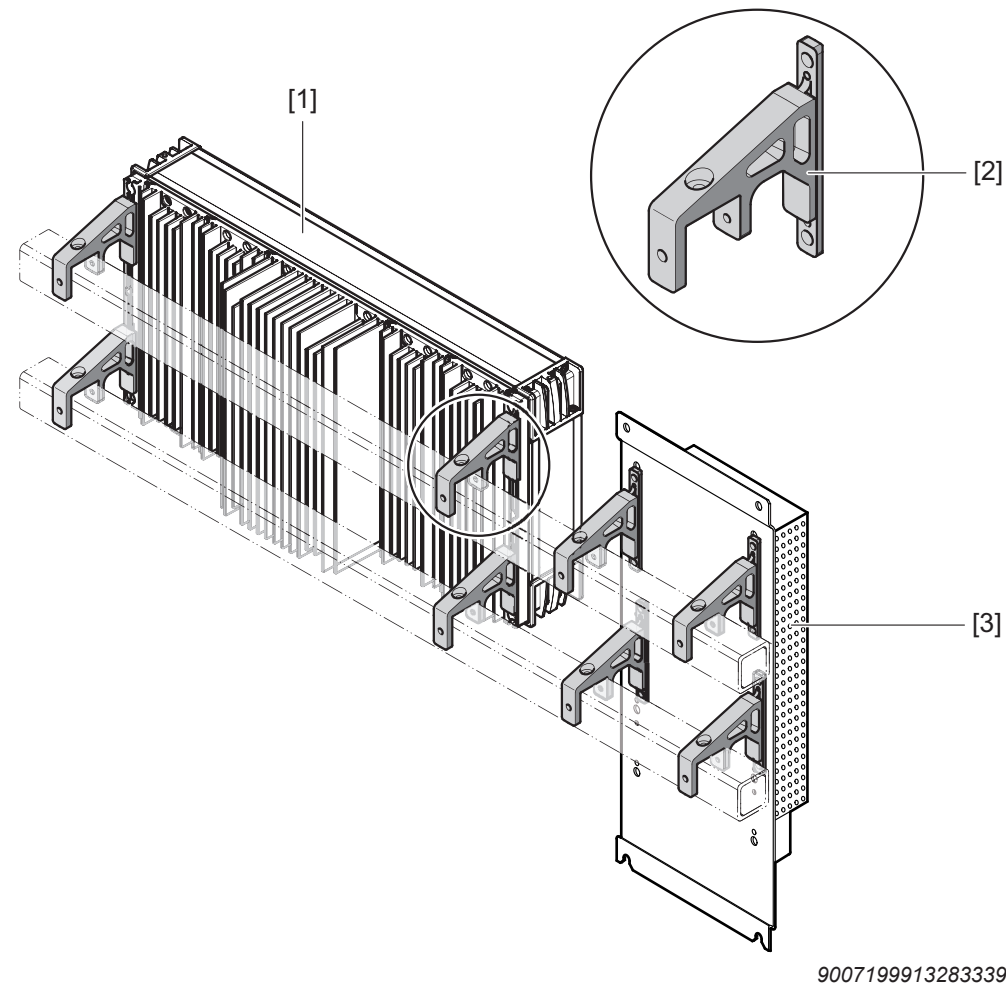
2049840395

The handles are available in two lengths depending on the size of MOVIPRO®:

Handles	Part number	MOVIPRO® housing height
Handle option 270 (2 pieces with 4 retaining screws)	18222781	300 mm
Handle option 390 (2 pieces with 4 retaining screws)	18222803	420 mm

Mounting brackets

You can use mounting brackets to mount the MOVIPRO® and braking resistors safely and easily:



- [1] MOVIPRO®
- [2] Mounting brackets
- [3] Braking resistor

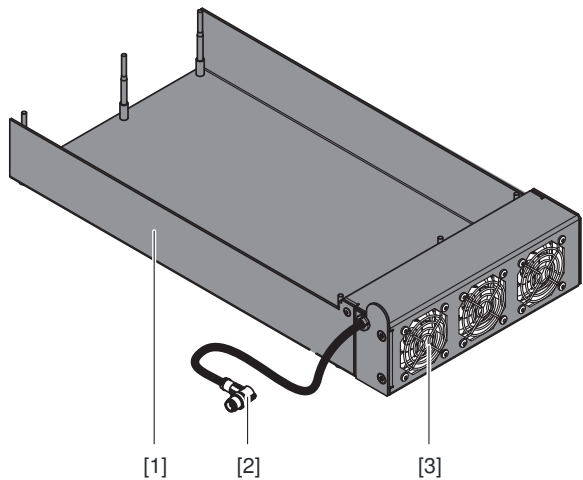
	Mounting brackets	Part number
MOVIPRO®	Mounting bracket kit, large (4 pieces)	12708305
Braking resistors: BW050-008-01 BW033-012-01 BW017-024-02	Mounting bracket kit, BW (4 pieces)	18229689

3.13.6 Fan

The fan subassembly is connected to the MOVIPRO® externally. The fans are controlled automatically depending on the temperature. The fans are encapsulated, and their degree of protection is IP54.

The fan subassembly is mandatory for MOVIPRO® units with a power rating of 15.0 kW and higher; it is included automatically in the configuration here. For units with 11.0 kW, you can select the fan subassembly as an option.

The following figure shows the fan subassembly:



45035996953718155

- [1] Air baffle
- [2] Connection cable
- [3] Axial fan

	Part number
Fan subassembly	12709700

3.14 Connection cables

INFORMATION



For more detailed information regarding the cable types, refer to the "Technical data" chapter.

Connection cables are not included in the delivery.

Pre-fabricated cables for connecting SEW-EURODRIVE components can be ordered. For each connection, the available prefabricated cables are listed. Specify the part number and length of the required cable in your order.

The number and design of the required connection cables depend on the unit variant and the components to be connected. This is why you do not need all listed cables.

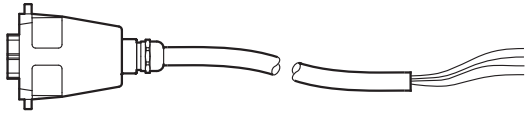
3.14.1 Cable types

The table below shows the depiction and what they mean:

Depiction	Meaning
	Set length
	Variable length
	Suitable for cable carriers
	Not suitable for cable carriers

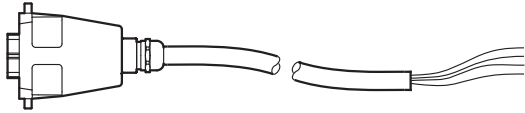
3.14.2 Connection cable for AC 400 V/DC 24 V supply

Up to 7.5 kW (IEC/UL)

Cable	Length/installation type	Component
Part number: 18131433 Cable design: 4G2.5  Han® Q 4/2 ↔ Open with conductor end sleeves	Variable length 	—

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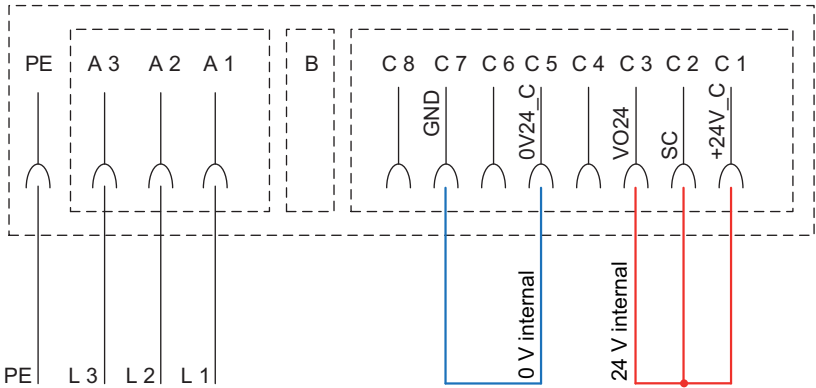
11 kW up to 15 kW (IEC/UL)

Cable	Length/installation type	Component
Part number: 18131468 Cable design: 4G6.0  Han® Q 4/2 ↔ Open with conductor end sleeves	Variable length 	—
Part number: 18174183 Cable design: 4G6.0  Han® Q 4/2 ↔ Open with conductor end sleeves	Variable length 	—

Wiring diagram

The figure shows the wiring diagram of the connection cables with the following part numbers:

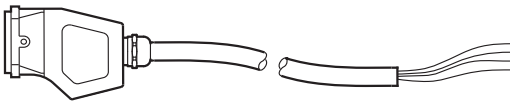
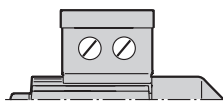
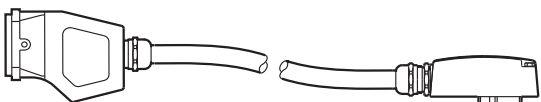
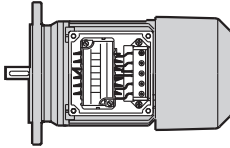
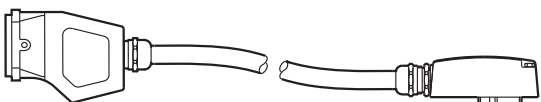
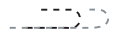
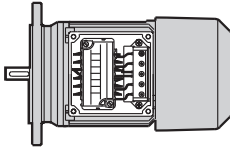
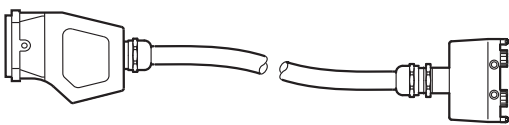
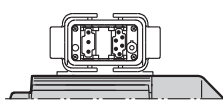
- 18131433
- 18311468
- 18174183

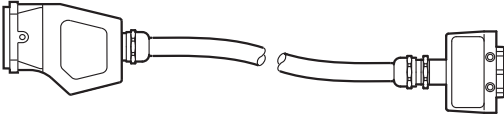
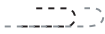
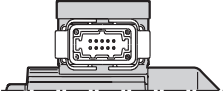
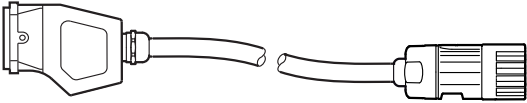
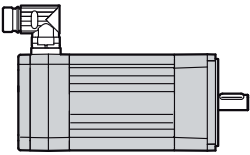


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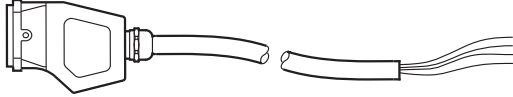
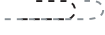
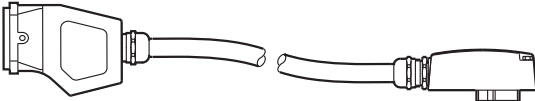
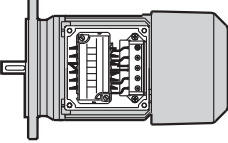
3.14.3 Connection cable for asynchronous and synchronous servomotors

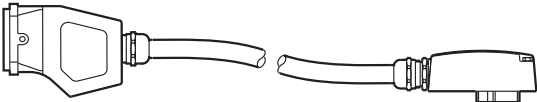
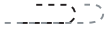
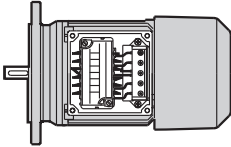
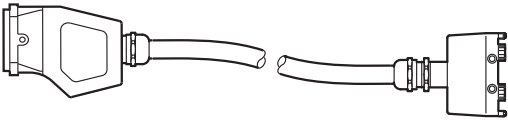
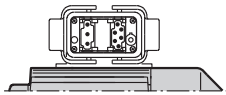
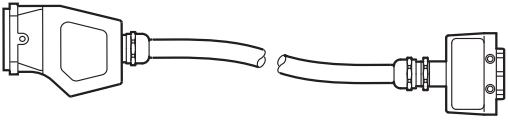
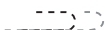
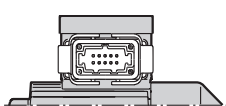
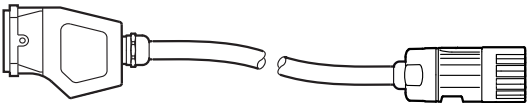
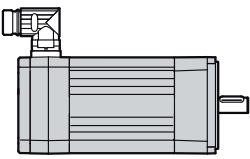
Up to 2.2 kW (IEC)

Cable	Length/installation type	Type	Component
Part number: 18125794  Han® Q 8/0 ↔ open (terminal box connection M4)	Variable length 	D/1.5	DRS71 – 90L DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 80 
Part number: 18127703 人  Han® Q 8/0 ↔ IS 人	Variable length 	D/1.5	DRS71 – 90人 DRE80 – 100人 DRP90 – 100人 DRN80 – 100人 DRL71 – 80人 
Part number: 18127681 △  Han® Q 8/0 ↔ IS △	Variable length 	D/1.5	DRS71 – 90△ DRE80 – 100△ DRP90 – 100△ DRN80 – 100△ DRL71 – 80△ 
Part number: 18127711  Han® Q 8/0 ↔ ABB8	Variable length 	D/1.5	DRS71 – 90 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 80 

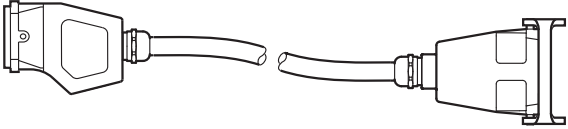
Cable	Length/installation type	Type	Component
Part number: 18127738  Han® Q 8/0 ↔ ASB8	Variable length 	D/1.5	DRS71 – 90 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 80 
Part number: 18125859  Han® Q 8/0 ↔ SB11	Variable length 	E/1.5	CMP63 – 80 

Up to 2.2 KW (IEC / UL)

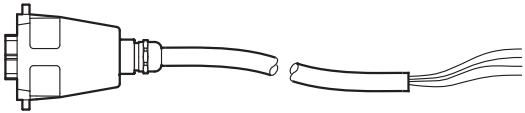
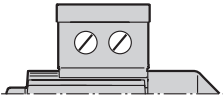
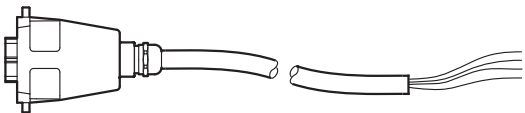
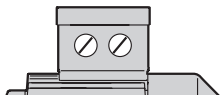
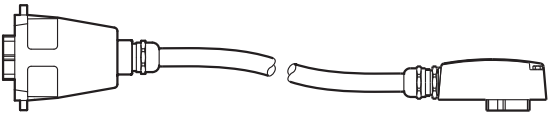
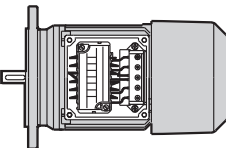
Cable	Length/installation type	Type	Component
Part number: 18143776  Han® Q 8/0 ↔ open (terminal box connection M4)	Variable length 	D/2.5	DRS71 – 90 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 80 
Part number: 18145949 人  Han® Q 8/0 ↔ IS 人	Variable length 	D/2.5	DRS71 – 90人 DRE80 – 100人 DRP90 – 100人 DRN80 – 100人 DRL71 – 80人 

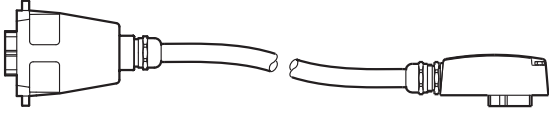
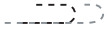
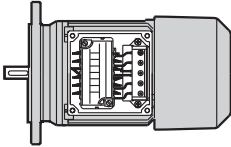
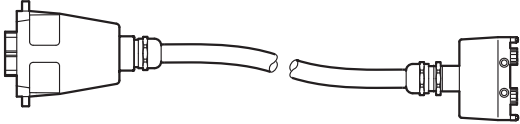
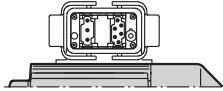
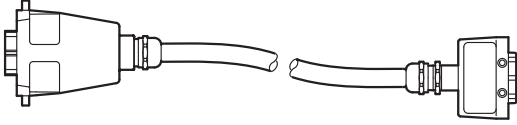
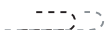
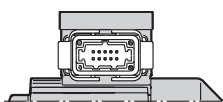
Cable	Length/installation type	Type	Component
Part number: 18144284 △  Han® Q 8/0 ↔ IS △	Variable length 	D/2.5	DRS71 – 90△ DRE80 – 100△ DRP90△ DRN80 – 100△ DRL71 – 80△ 
Part number: 18174442  Han® Q 8/0 ↔ ABB8	Variable length 	D/2.5	DRS71 – 90 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 80 
Part number: 18174434  Han® Q 8/0 ↔ ASB8	Variable length 	D/2.5	DRS71 – 90 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 80 
Part number: 18174450  Han® Q 8/0 ↔ SB11	Variable length 	E/2.5	CMP63 – 80 

Adapter cable up to 2.2 kW

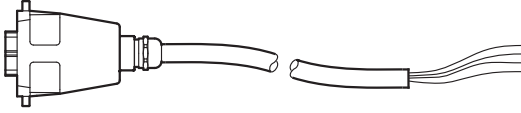
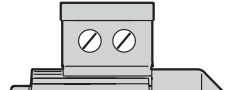
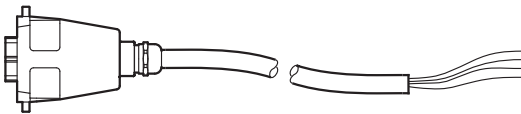
Cable	Length/installation type	Type	Component
Part number: 18161243  Han® Q 8/0 ↔ Han® 6 B	Variable length 	D/2.5	All connection cables with Han® 6B Note the motor assignments to the device (2.2 kW).

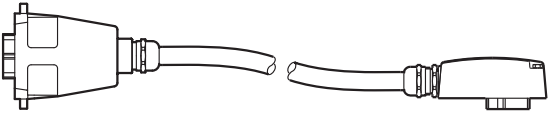
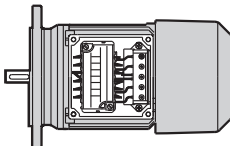
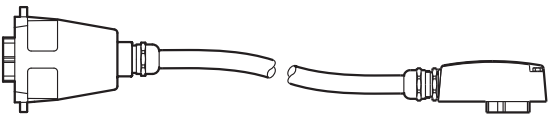
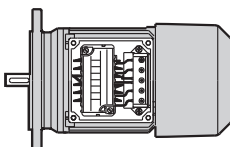
4,0 kW (IEC)

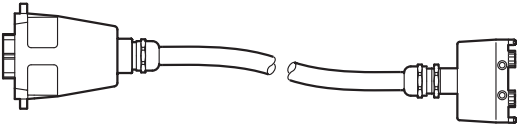
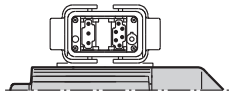
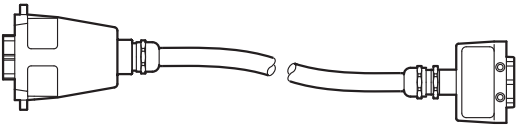
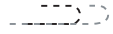
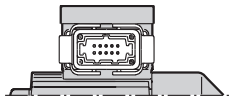
Cable	Length/installation type	Type	Component
Part number: 18118135  Han® 6 B ↔ Open (terminal box connection M4)	Variable length 	D/1.5	DRS71 – 100 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 100 
Part number: 18118143  Han® 6 B ↔ Open (terminal box connection M5)	Variable length 	D/1.5	DRS112 DRE112 – 132 DRP112 – 132 DRN112 DRL112 – 132 
Part number: 18118178 人  Han® 6 B ↔ IS 人	Variable length 	D/1.5	DRS71 – 112 人 DRE80 – 132 人 DRP90 – 132 人 DRN80 – 132 人 DRL71 – 132 人 

Cable	Length/installation type	Type	Component
Part number: 18118151   Han® 6 B ↔ IS 	Variable length 	D/1.5	DRS71 – 132  DRE80 – 132  DRP90 – 132  DRN80 – 132  DRL71 – 132  
Part number: 18118186  Han® 6 B ↔ ABB8	Variable length 	D/1.5	DRS71 – 112 DRE80 – 132 DRP90 – 132 DRN80 – 112 DRL71 – 132 
Part number: 18118194  Han® 6 B ↔ ASB8	Variable length 	D/1.5	DRS71 – 112 DRE80 – 132 DRP90 – 132 DRN80 – 112 DRL71 – 132 

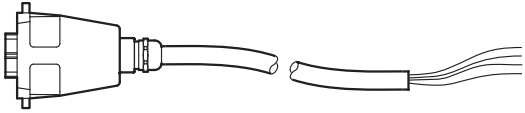
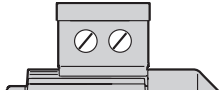
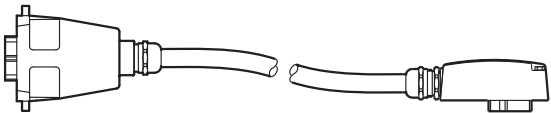
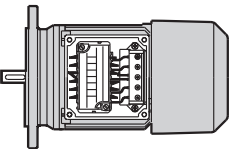
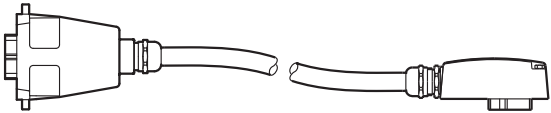
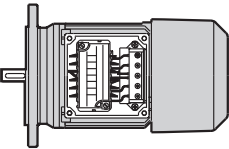
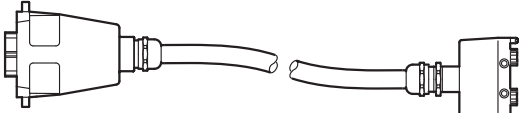
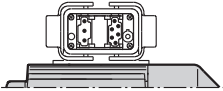
4.0 kW (IEC/UL) – 7.5 kW (IEC)

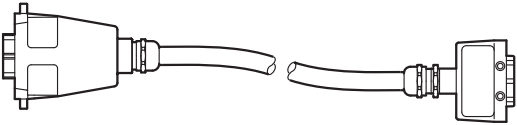
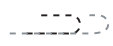
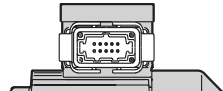
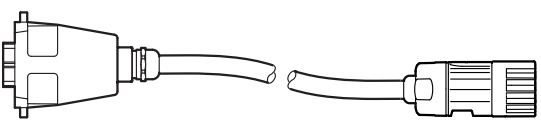
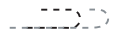
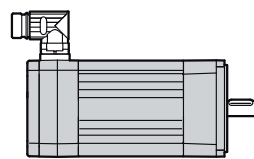
Cable	Length/installation type	Type	Component
Part number: 18108334  Han® 6 B ↔ Open (terminal box connection M4)	Variable length 	D/2.5	4.0 kW (IEC/UL): DRS71 – 100 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 100 7.5 kW (IEC): DRS71 – 100 DRE80 – 100 DRP90 – 100 DRN80 – 100 DRL71 – 90 
Part number: 18108342  Han® 6 B ↔ Open (terminal box connection M5)	Variable length 	D/2.5	4.0 kW (IEC/UL): DRS112 DRE112 – 132 DRP112 – 132 DRN112 DRL71 – 100 7.5 kW (IEC/UL): DRS71 – 132 DRE80 – 132 DRP90 – 132 DRN80 – 132 DRL71 – 90 

Cable	Length/installation type	Type	Component
Part number: 18108326 人  Han® 6 B ↔ IS 人	Variable length 	D/2.5	4.0 kW (IEC/UL): DRS71 – 112 人 DRE80 – 132 人 DRP90 – 132 人 DRN80 – 112 人 DRL71 – 100 人 7.5 kW (IEC): DRS71 – 132 人 DRE80 – 160 人 DRP90 – 160 人 DRN80 – 132 人 DRL71 – 90 人 
Part number: 18108318 △  Han® 6 B ↔ IS △	Variable length 	D/2.5	4.0 kW (IEC/UL): DRS71 – 112 △ DRE80 – 132 △ DRP90 – 132 △ DRN80 – 112 △ DRL71 – 100 △ 7.5 kW (IEC): DRS71 – 132 △ DRE80 – 160 △ DRP90 – 160 △ DRN80 – 132 △ DRL71 – 90 △ 

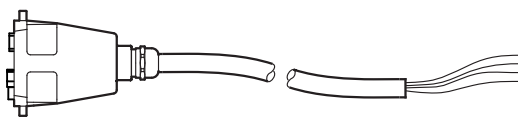
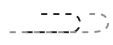
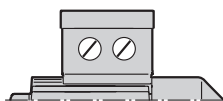
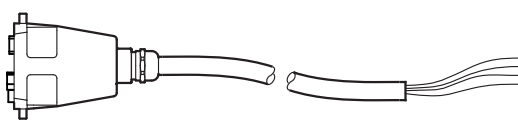
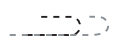
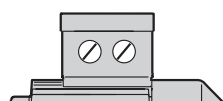
Cable	Length/installation type	Type	Component
Part number: 18108245  Han® 6 B ↔ ABB8	Variable length 	D/2.5	4.0 kW (IEC/UL): DRS71 – 112 DRE80 – 132 DRP90 – 132 DRN80 – 112 DRL71 – 100 7.5 kW (IEC): DRS71 – 132 DRE80 – 160 DRP90 – 160 DRN80 – 132 DRL71 – 90 
Part number: 18108202  Han® 6 B ↔ ASB8	Variable length 	D/2.5	4.0 kW (IEC/UL): DRS71 – 112 DRE80 – 132 DRP90 – 132 DRN80 – 112 DRL71 – 100 7.5 kW (IEC): DRS71 – 132 DRE80 – 160 DRP90 – 160 DRN80 – 132 DRL71 – 90 

7.5 kW (IEC/UL)

Cable	Length/installation type	Type	Component
Part number: 18120601  Han® 6 B ↔ Open (terminal box connection M5)	Variable length 	D/4.0	DRS112 – 132 DRE112 – 132 DRP112 – 132 DRN112 – 132 DRL112 – 132 
Part number: 18121284 ∟  Han® 6 B ↔ IS ∟	Variable length 	D/4.0	DRS71 – 132 ∟ DRE80 – 160 ∟ DRP90 – 160 ∟ DRN80 – 132 ∟ DRL71 – 90 ∟ 
Part number: 18121276 △  Han® 6 B ↔ IS △	Variable length 	D/4.0	DRS71 – 132 △ DRE80 – 160 △ DRP90 – 160 △ DRN80 – 132 △ DRL71 – 90 △ 
Part number: 18120628  Han® 6 B ↔ ABB8	Variable length 	D/4.0	DRS71 – 132 DRE80 – 160 DRP90 – 160M DRN80 – 132 DRL71 – 90 

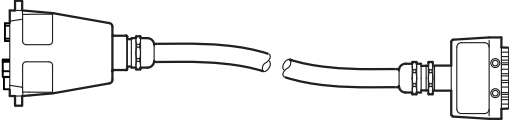
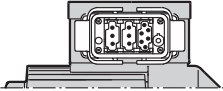
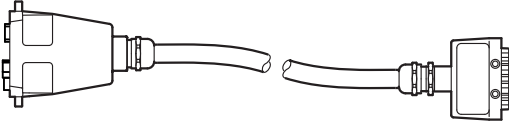
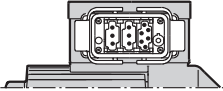
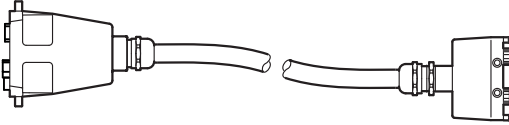
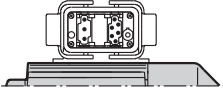
Cable	Length/installation type	Type	Component
Part number: 18120636  Han® 6 B ↔ ASB8	Variable length 	D/4.0	DRS71 – 132 DRE80 – 160 DRP90 – 160 DRN80 – 132 DRL71 – 90 
Part number: 18122035  Han® 6 B ↔ SB14	Variable length 	E/4.0	CMP63 – 100 

11.0 kW (IEC/UL)

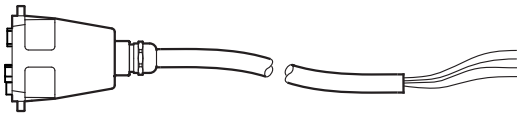
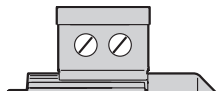
Cable	Length/installation type	Type	Component
Part number: 18110452  Han® 10 B ↔ Open (terminal box connection M5)	Variable length 	D/6.0	DRS112 – 132 DRE112 – 132 DRP112 – 132 DRN112 – 132 DRL112 – 132 
Part number: 18110479  Han® 10 B ↔ Open (terminal box connection M6)	Variable length 	D/6.0	DRS160 DRE160 DRP160 DRN160 DRL160 

3 MOVIPRO® SDC/ADC

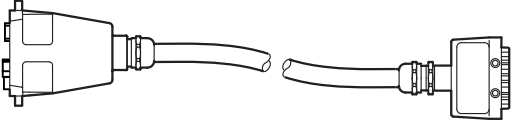
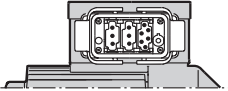
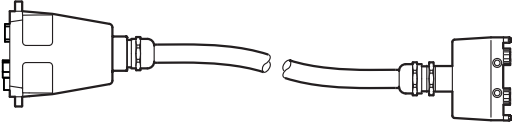
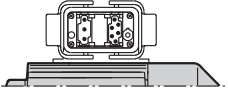
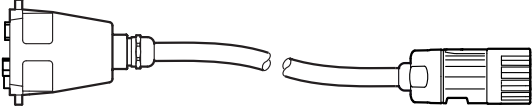
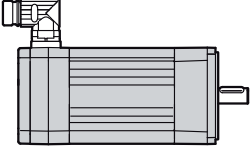
Connection cables

Cable	Length/installation type	Type	Component
Part number: 18123562   Han® 10 B ↔ ADB2 	Variable length 	D/6.0	DRS160  DRE180  DRP180  DRN160  DRL160  
Part number: 18123570   Han® 10 B ↔ ADB2 	Variable length 	D/6.0	DRS160  DRE180  DRP180  DRN160  DRL160  
Part number: 18110436  Han® 10 B ↔ ABB8	Variable length 	D/6.0	DRS160 DRE180 DRP180 DRN160 DRL160 

11.0 kW (IEC/UL) up to 15.0 kW (IEC/UL)

Cable	Length/installation type	Type	Component
Part number: 18121985  Han® 10 B ↔ Open (terminal box connection M6)	Variable length 	D/10.0	DRS180 DRE180 DRP180 DRN160 DRL180 

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Cable	Length/installation type	Type	Component
Part number: 18123589   Han® 10 B ↔ ADB2 	Variable length 	D/10.0	DRS180  DRE180  DRP180  DRN160  DRL180  
Part number: 18118208  Han® 10 B ↔ ABB8	Variable length 	D/10.0	DRS180 DRE180 DRP180 DRN160 DRL180 
Part number: 18110533  Han® 10 B ↔ SBB6	Variable length 	E/6.0	CMP80 – 100 

Phase reversal cable

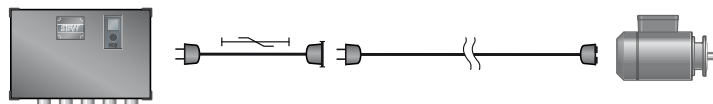
The phase reversal cables are available with a length of 1 m. You need these cables if you are already using a motor cable and only want to reverse the phases. The additional phase reversal cable is connected to MOVIPRO® and the motor cable.

INFORMATION

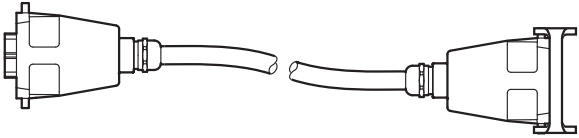


If you are using an encoder, note that you also need an encoder signal reversal cable in addition to the phase reversal cable. For more information about encoder signal reversal cables, refer to the description of the encoder connection cable.

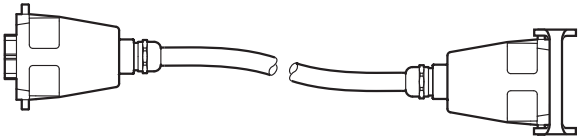
Function:



4.0 kW (IEC/UL) – 7.5 kW (IEC)

Cable	Length/installation type	Type	Wiring diagram
Part number: 18113737  Han® 6 B ↔ Han® 6 B	Fixed length 	D/2.5	U1 – V1 V1 – U1 W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

4.0 kW (IEC/UL) – 7.5 kW (IEC/UL)

Cable	Length/installation type	Type	Wiring diagram
Part number: 18122000  Han® 6 B ↔ Han® 6 B	Fixed length 	D/6.0	U1 – V1 V1 – U1 W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

11.0 kW (IEC/UL)

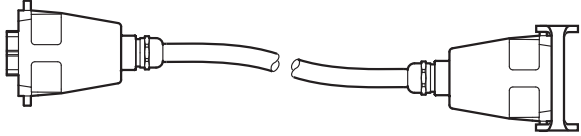
Cable	Length/installation type	Type	Wiring diagram
Part number: 18119638  Han® 10 B ↔ Han® 10 B	Fixed length 	D/6.0	U1 – V1 V1 – U1 W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

15.0 kW (IEC/UL)

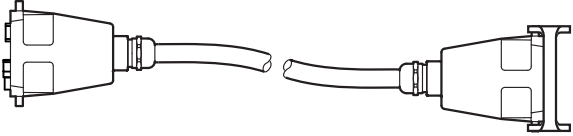
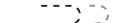
Cable	Length/installation type	Type	Wiring diagram
Part number: 18113745  Han® 10 B ↔ Han® 10 B	Fixed length 	D/10.0	U1 – V1 V1 – U1 W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

Extension cable

4.0 kW (IEC/UL) – 7.5 kW (IEC/UL)

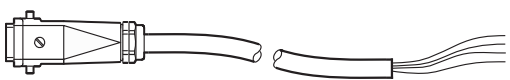
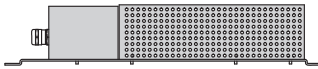
Cable	Length/installation type	Type	Component
Part number: 18157475  Han® 6 B ↔ Han® 6 B	Variable length 	D/6.0	Connection cables: 18108202 18108245 18108318 18108326 18108334 18108342 18110525 18118135 18118143 18118151 18118178 18118186 18118194 18120601 18120628 18120636 18121276 18121284 18122027 18122035

11.0 kW (IEC/UL) – 15.0 kW (IEC)

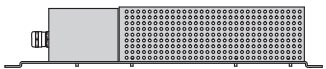
Cable	Length/installation type	Type	Component
Part number: 18164226  Han® 10 B ↔ Han® 10 B	Variable length 	D/6.0	Connection cables: 18110436 18110533 18110452 18110479 18118208 18121985 18122051 18123562 18123570 18123589

3.14.4 Connection cables for braking resistors

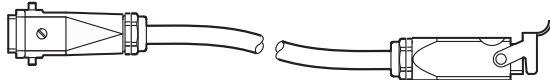
The following table shows the connection cables available for braking resistors:

Cable	Length/installation type	Component
Part number: 18166563 (replacement for 11722916) Cable design: (3G2.5) Core cross section: 2.5 mm ²  Han®Q 5/0 ↔ Open with conductor end sleeves	Variable length 	External braking resistor  Terminal cross section 6 mm ²
Part number: 18166571 (replacement for 18121969) Cable design: (3G2.5) Core cross section: 2.5 mm ²  Han®Q 2/0 ↔ Open with conductor end sleeves	Variable length 	External braking resistor  Terminal cross section: 6 mm ²

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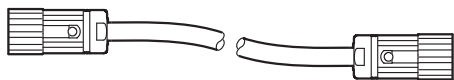
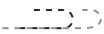
Cable	Length/installation type	Component
Part number: 18166598 (replacement for 18121977) Cable design: (3G6.0) Core cross section: 6 mm ²  Han® Q 2/0 ↔ Open with conductor end sleeves	Variable length 	External braking resistor  Terminal cross section: 6 mm ²

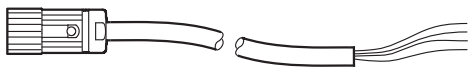
Extension cable

Cable	Length/installation type	Component
Part number: 18121349 Cable design: (3G2.5) Core cross section: 2.5 mm ²  Han® Q 5/0 ↔ Han® Q 5/0	Variable length 	Connection cable 18166563

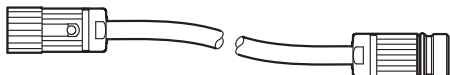
3.14.5 Connection cables for encoders

Motor encoder (resolver)

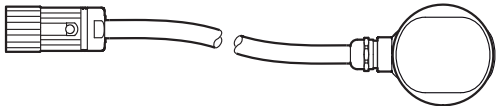
Cable	Length/installation type	Component
Part number: 11724927 Cable design: (4X2X0.25)  M23, 12-pole, 20°-coded ↔ M23, 12-pole, 0°-coded	Variable length 	Resolver RH1M, RH1L

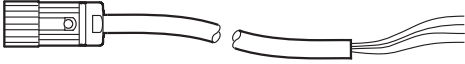
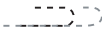
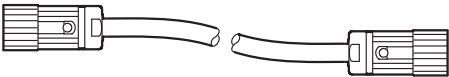
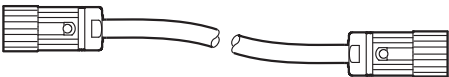
Cable	Length/installation type	Component
Part number: 11726431 Cable design: (4X2X0.25)  M23, 12-pole, 20°-coded ↔ Open with conductor end sleeves	Variable length 	Resolver RH1M, RH1L

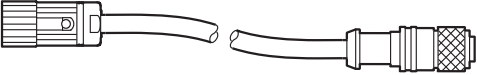
Extension cable

Cable	Length/installation type	Component
Part number: 18156851 Cable design: (6X2X0.25)  M23, 12-pole, 20°-coded ↔ M23, 12-pole, 20°-coded	Variable length 	Connection cables: 11724927 11726431 18110991 18121438 18121446 18121454 18121926 18121934 18121942 18121950

Motor encoder (HIPERFACE®, sin/cos, TTL, HTL, RS422)

Cable	Length/installation type	Component
Part number: 18110991 (without temperature sensor) Cable design: (6X2X0.25)  M23, 12-pole, 20°-coded ↔ encoder cover	Variable length 	• A.7W • E.7C • E.7R • E.7S

Cable	Length/installation type	Component
Part number: 18121438 (without temperature sensor) Cable design: (6X2X0.25)  M23, 12-pin, 20°-coded ↔ Open with conductor end sleeves	Variable length 	• A.7W • AG7Y • AS7Y • E.7C • E.7R • E.7S • EH1. • EI7. • EV1. • ES1. • ES2.
Part number: 18121446 (with temperature sensor) Cable design: (6X2X0.25)  M23, 12-pin, 20°-coded ↔ Open with conductor end sleeves	Variable length 	• AK1H • EK1H • ES1H • AS1H
Part number: 18121454 (with temperature sensor) Cable design: (6X2X0.25)  M23, 12-pin, 20°-coded ↔ M23, 12-pin, 0°-coded	Variable length 	• AK0H • AK1H • AS1H • EK0H • EK1H • ES1H
Part number: 18121926 (without temperature sensor) Cable design: (6X2X0.25)  M23, 12-pin, 20°-coded ↔ M23, 12-pin, 0°-coded	Variable length 	• AS3H • AS4H • AV1H • AV6H

Cable	Length/installation type	Component
Part number: 18121950 (without temperature sensor) Cable design: (4X2X0.25)  M23, 12-pin, 20°-coded ↔ M12, 8-pin	Variable length 	EI7.

Encoder signal reversal cable for motor encoders (sin/cos, TTL, HTL, RS422)

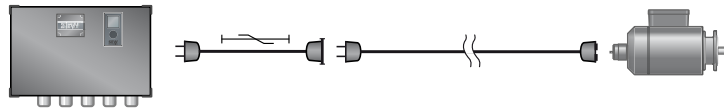
INFORMATION

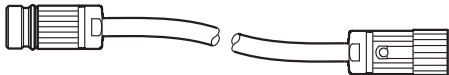


An additional encoder signal reversal cable is only necessary if you are using a phase reversal cable.

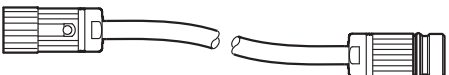
The encoder signal reversal cable is available with flexible length. You need this cable if you are already using a phase reversal cable for a motor with motor encoder. The encoder signal reversal cable is connected to MOVIPRO® and the motor encoder cable.

Function:



Cable	Length/installation type	Component
Part number: 18114806 (not suitable for HIPERFACE® encoders) Cable design: (6X2X0.25)  M23, 12-pole, 20°-coded ↔ M23, 12-pole, 20°-coded	Variable length 	• E..T • E..C • E..S • E..R

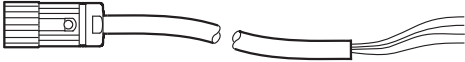
Extension cable

Cable	Length/installation type	Component
Part number: 18156851 Cable design: (6X2X0.25)  M23, 12-pole, 20°-coded ↔ M23, 12-pole, 20°-coded	Variable length 	Connection cables: 11724927 11726431 18110991 18121438 18121446 18121454 18121926 18121934 18121942 18121950

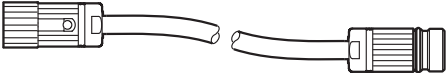
Distance encoder (CANopen)

Cable	Length/installation type	Component
Length 1 m: Part number: 13237748 Length 1.5 m: Part number: 13286293 Length 2 m: Part number: 13287756 Length 2.5 m: Part number: 13286307 Length 3 m: Part number: 13286315 Length 4 m: Part number: 13286323 Length 5 m: Part number: 13286331 Length 10 m: Part number: 13286358 Length 15 m: Part number: 13286366 Cable design: ((1X2X0.2)+(1X2X0.32)+1X0.32)  M12, male, A-coded ↔ M12, female, A-coded	Fixed length 	Sick DME4000, TR CE58M, TR LE200, WCS3(B)-LS410
Length 1 m: Part number: 13281348 Length 1.5 m: Part number: 13281356 Length 2 m: Part number: 13281364 Length 2.5 m: Part number: 13281372 Length 3 m: Part number: 13281380 Length 4 m: Part number: 13281399 Length 5 m: Part number: 13281402 Length 10 m: Part number: 13281410 Length 15 m: Part number: 13281429 Cable design: ((1X2X0.2)+(1X2X0.32)+1X0.32)  M12, male, A-coded ↔ Open	Fixed length 	Sick DME4000, TR CE58M, TR LE200, WCS3(B)-LS410

Multi-distance encoder (HIPERFACE®, SSI, Sin/Cos, TTL, HTL, RS422)

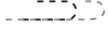
Cable	Length/installation type	Component
Part number: 18121934 Cable design: (6X2X0.25)  M23, 12-pin, 20°-coded ↔ Open with conductor end sleeves	Variable length 	HIPERFACE®/SSI encoder (12 V)
Part number: 18121942 Cable design: (6X2X0.25)  M23, 12-pin, 20°-coded ↔ Open with conductor end sleeves	Variable length 	HIPERFACE®/SSI encoder (24 V)

Extension cable

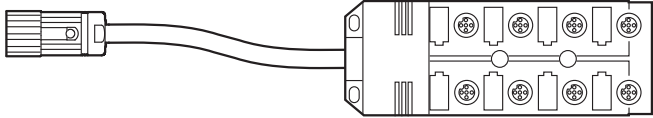
Cable	Length/installation type	Component
Part number: 18156851 Cable design: (6X2X0.25)  M23, 12-pole, 20°-coded ↔ M23, 12-pole, 20°-coded	Variable length 	Connection cables: 11724927 11726431 18110991 18121438 18121446 18121454 18121926 18121934 18121942 18121950

3.14.6 Connection cables for the CAN interface

The following table shows the cables for connecting external components to the CAN interface:

Cable	Length/installation type	Component
Standard lengths: 1 m: Part number: 13237748 2 m: Part number: 13237756 3 m: Part number: 13286315 4 m: Part number: 13286323 5 m: Part number: 13286331 10 m: Part number: 13286358 15 m: Part number: 13286366 Custom lengths: 1.5 m: Part number: 13286293 2.5 m: Part number: 13286307 Cable design: ((1X2X0.2)+(1X2X0.32)+1X0.32)  M12, male, A-coded ↔ M12, female, A-coded	Fixed length 	—
Standard lengths: 2 m: Part number: 13281364 5 m: Part number: 13281402 Custom lengths: 1 m: Part number: 13281348 1.5 m: Part number: 13281356 2.5 m: Part number: 13281372 3 m: Part number: 13281380 4 m: Part number: 13281399 10 m: Part number: 13281410 15 m: Part number: 13281429 Cable design: ((1X2X0.2)+(1X2X0.32)+1X0.32)  M12, male, A-coded ↔ Open	Fixed length 	—

3.14.7 Connection cables for digital inputs and outputs

Cable	Length/installation type	Component
Length 1 m: Part number: 18255477 Length 3 m: Part number: 18255485 Cable design: (3X0.75+8X0.34)  M23, 12-pole, male, 0°-coded ↔ sensor/actuator box with 4 slots M12	Fixed length 	—
Length 1 m: Part number 13309269 Length 2 m: Part number 13309277 Length 3 m: Part number 13309285 Length 5 m: Part number 13309293 Length 10 m: Part number 13309307 Cable design: (3X0.75+8X0.34)  M23, 12-pin, male, 0°-coded ↔ sensor/actuator box with 8 slots M12	Fixed length 	—
Part number: 11741457 Cable design: (6X2X0.25)  M23, 12-pin, male, 0°-coded ↔ Open with conductor end sleeves	Variable length 	—

Extension cable

The following extension cable is available for the sensor/actuator box:

Cable	Length/installation type
Part number: 18123465 Cable design: (6X2X0.25)  M23, 12-pole, male, 0°-coded (1:1 assignment) ↔ M23, 12-pole, female, 0°-coded	Variable length 

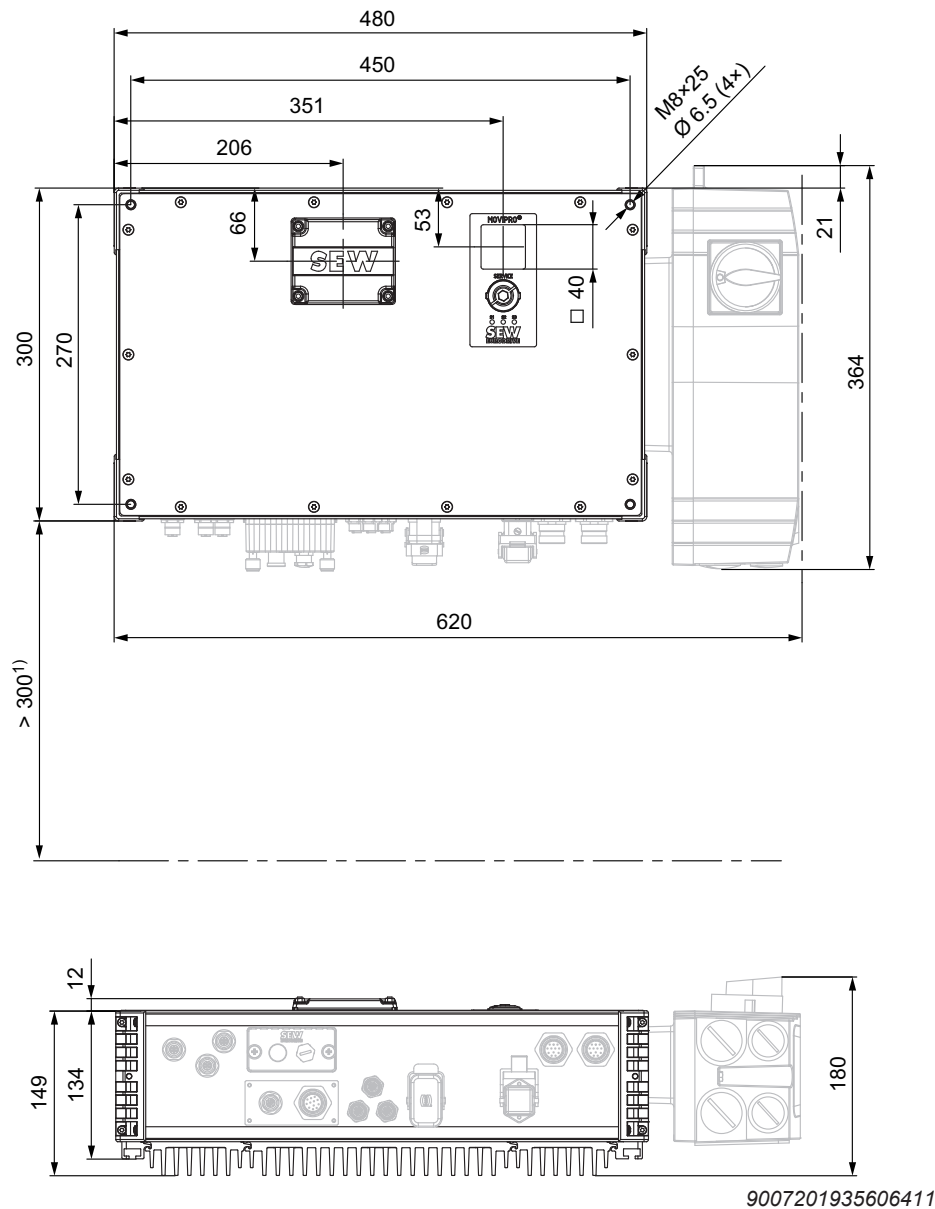
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3.15 Dimension drawings

3.15.1 MOVIPRO® SDC/ADC

2.2 kW (Size 0)

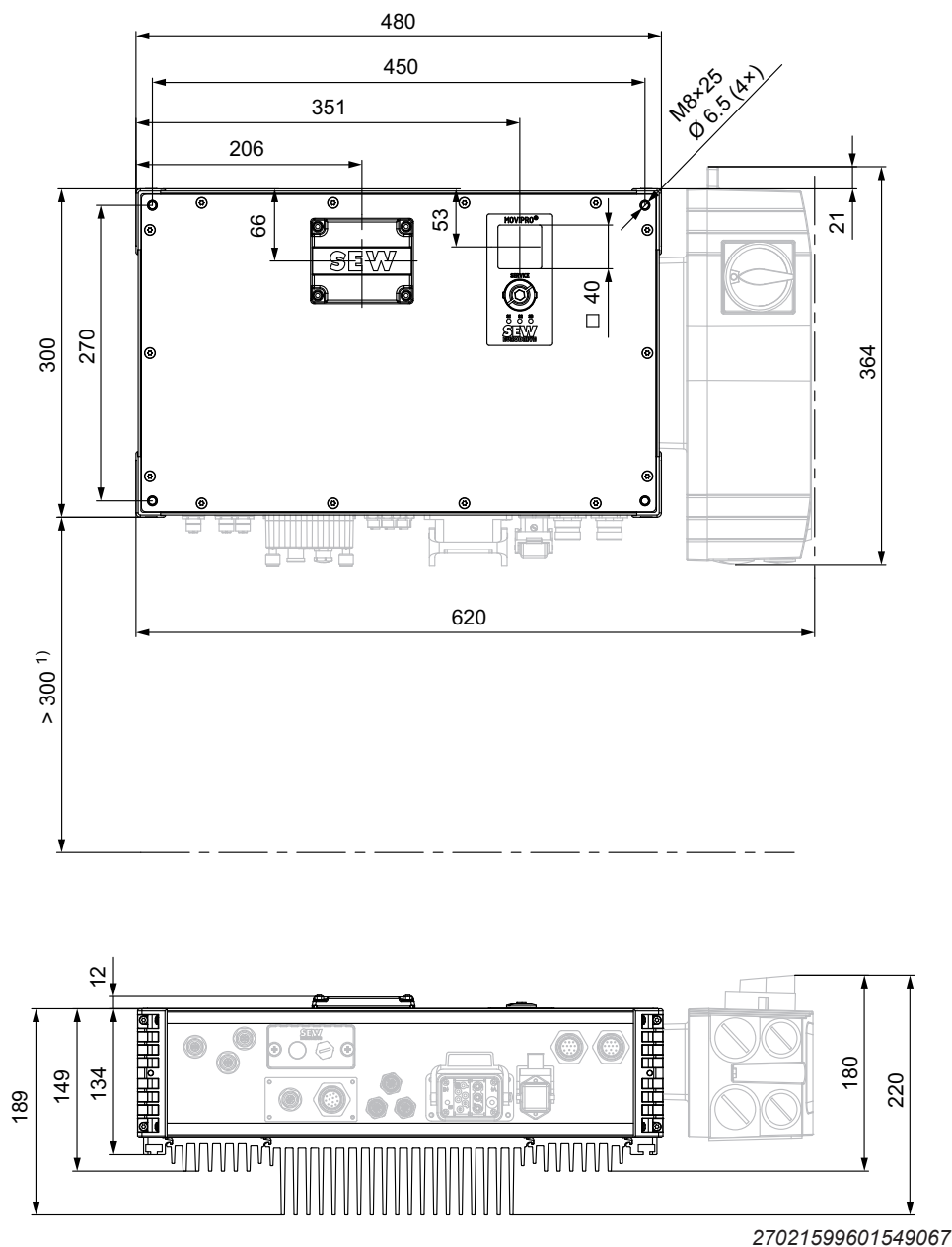
The dimension drawing shows the mechanical dimensions of the MOVIPRO® in mm:



¹⁾ Recommended clearance for connection cables (can vary depending on the cables used)

4.0 kW – 7.5 kW (size 1)

The dimension drawing shows the mechanical dimensions of the MOVIPRO® in mm:



¹⁾ Recommended clearance for connection cables (can vary depending on the cables used)

3

3



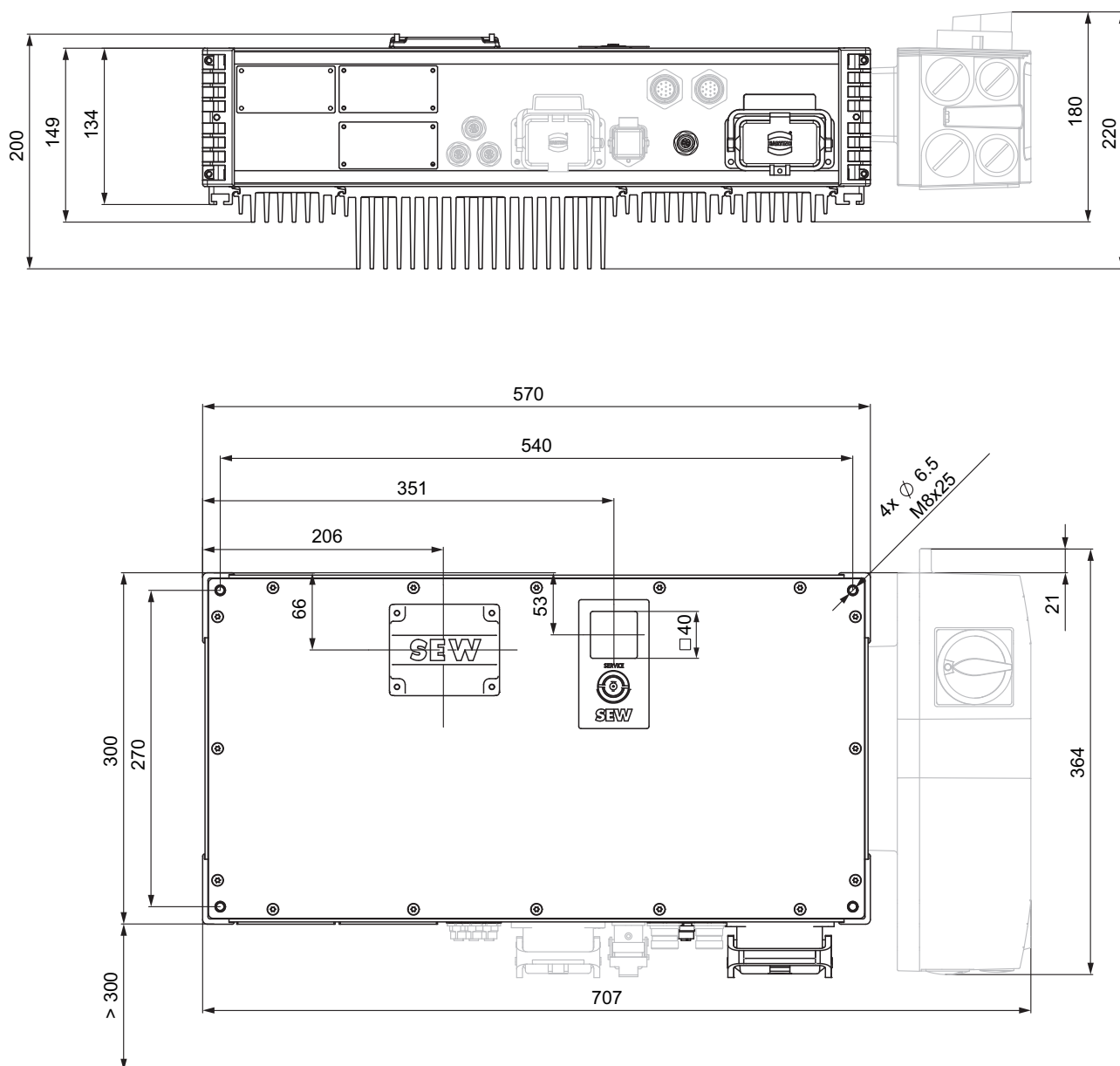
3

3.15.2 MOVIPRO® ADC only

With energy management interface

4.0 kW and 7.5 kW (Size 1)

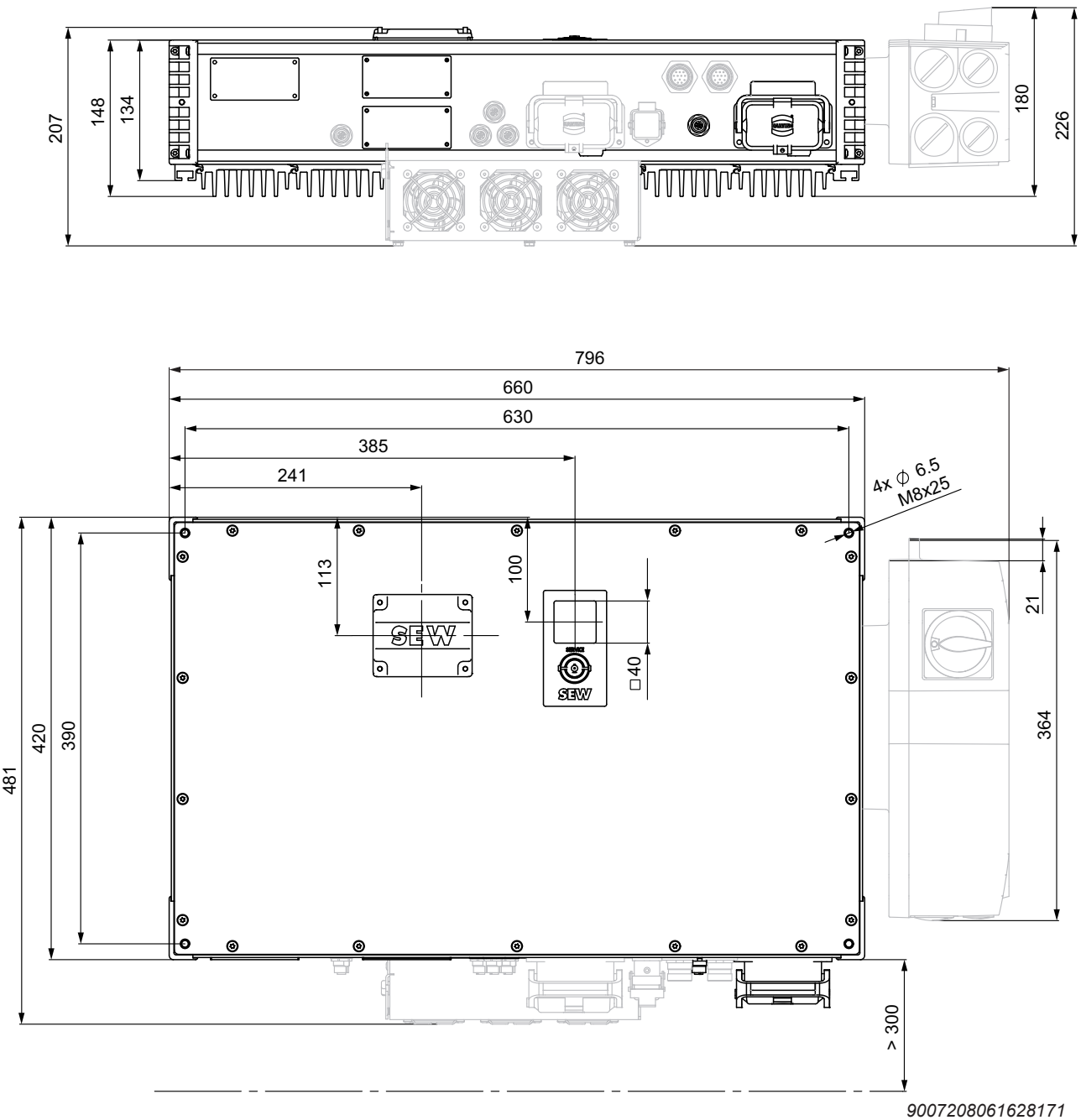
The dimension drawing shows the mechanical dimensions of the MOVIPRO® size 1 in mm:



9007208604670347

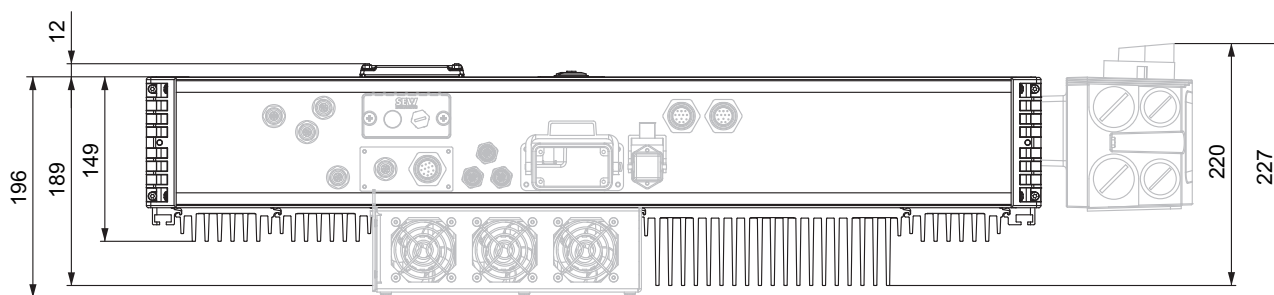
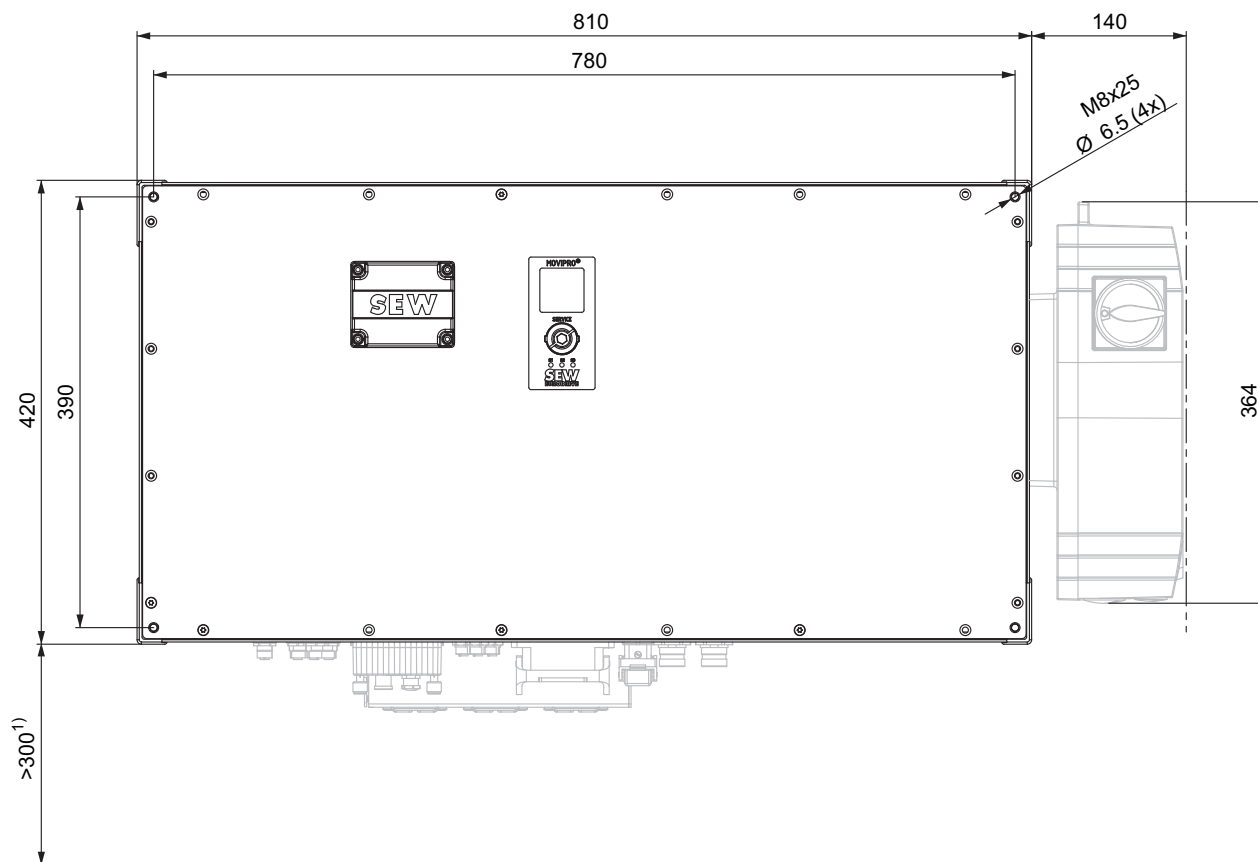
11.0 kW and 15.0 kW (Size 2)

The dimension drawing shows the mechanical dimensions of the MOVIPRO® size 2 in mm:



11.0 kW and 15.0 kW with regenerative power supply unit (Size 2)

The dimension drawing shows the mechanical dimensions of the MOVIPRO® in mm:



18014402039593099

¹⁾ Recommended clearance for connection cables (can vary depending on the cables used)

4 MOVIFIT® MC/SC/FC

4.1 MOVIFIT® MC for controlling MOVIMOT® drives

The following figure shows a MOVIFIT® MC with assigned MOVIMOT® helical gearmotors:



12839703819

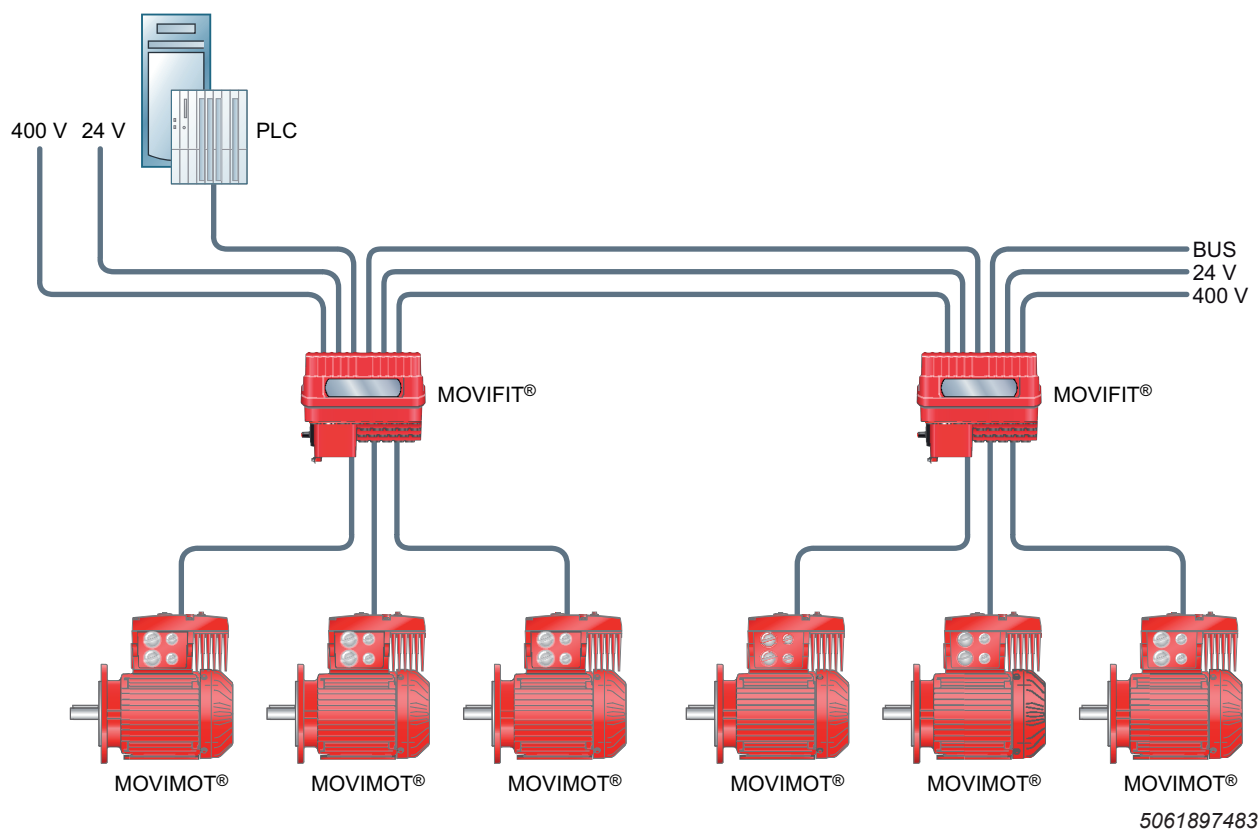
4.1.1 MOVIFIT® MC characteristics

- Up to 3 MOVIMOT® drives can be connected via hybrid cable
- Voltage range 3 x 380 – 500 V
- Integrated power distribution and line protection
- Optional maintenance switch
- Integrated fieldbus interface

PROFIBUS	EtherNet/IP™
PROFINET IO	Modbus/TCP
PROFINET POF	DeviceNet™
- Digital inputs/outputs
- CAN/SBus interface
- "Safe torque off" STO function
- Safety-Option S12 with safety-related inputs and outputs
- Simple and fast parameter setting via DIP switches or fieldbus

4.1.2 MOVIFIT® MC installation topology

The following figure shows the general installation topology of MOVIFIT® MC with 3 MOVIMOT® drives each:



4.2 MOVIFIT® SC with integrated motor starter

The following figure shows a MOVIFIT® SC unit with assigned helical gearmotors:



13828642315

4.2.1 MOVIFIT® SC characteristics

- Electronic (contactless) motor starter
 - When 2 motors are connected (dual-motor starter): 1 direction of rotation
 - When 1 motor is connected (reversing starter): 2 directions of rotation
- Power range
 - When 2 motors are connected: 2 x 0.37 – 1.5 kW
 - When 1 motor is connected: 1 x 0.37 – 3.0 kW
- Increased safety through three-phase switching
- Integrated energy distribution
- Integrated brake management for SEW three-wire brakes
- Optional maintenance switch
- Integrated fieldbus interface

PROFIBUS

EtherNet/IP™

PROFINET IO

Modbus/TCP

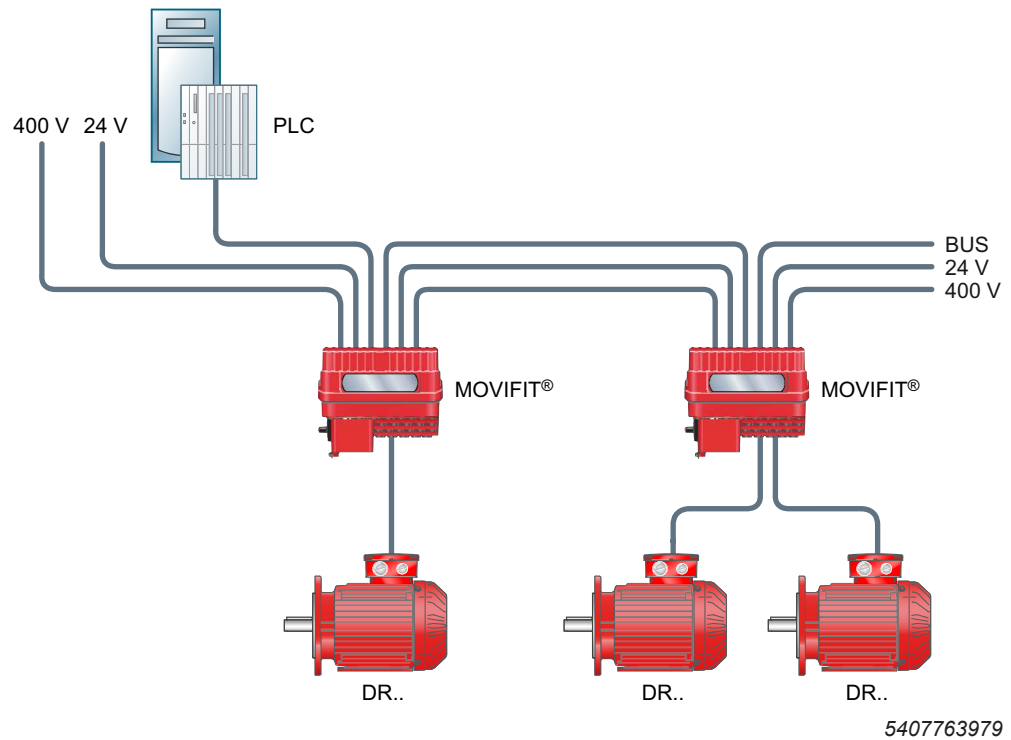
PROFINET POF

DeviceNet™

- Optional design without fieldbus interface as SBus slave
- Digital inputs/outputs
- CAN/SBus interface
- Simple and fast parameterization via DIP switches (Easy mode)
- Extended parameterization via fieldbus or diagnostic interface (Expert mode)

4.2.2 MOVIFIT® SC installation topology

The following figure shows the general installation topology of MOVIFIT® SC with AC motor:



4.3 MOVIFIT® FC with integrated frequency inverter

The following figure shows the MOVIFIT® FC (both sizes) with assigned helical gear-motor:



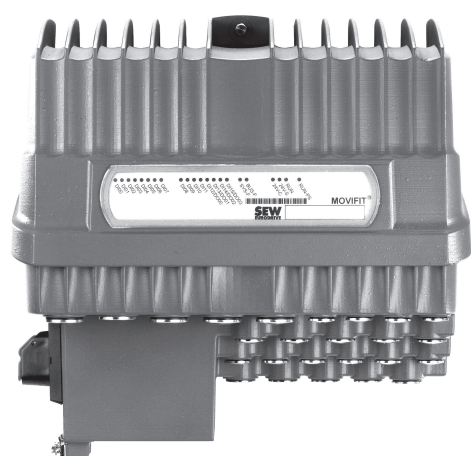
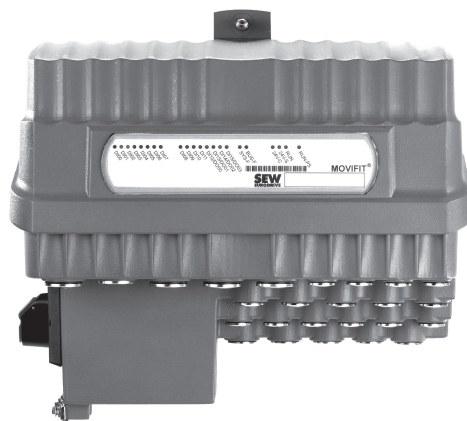
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4.3.1 Sizes

MOVIFIT® FC is available in 2 sizes, see the following figures:

0.37 – 1.5 kW

2.2 – 4 kW



1514058635

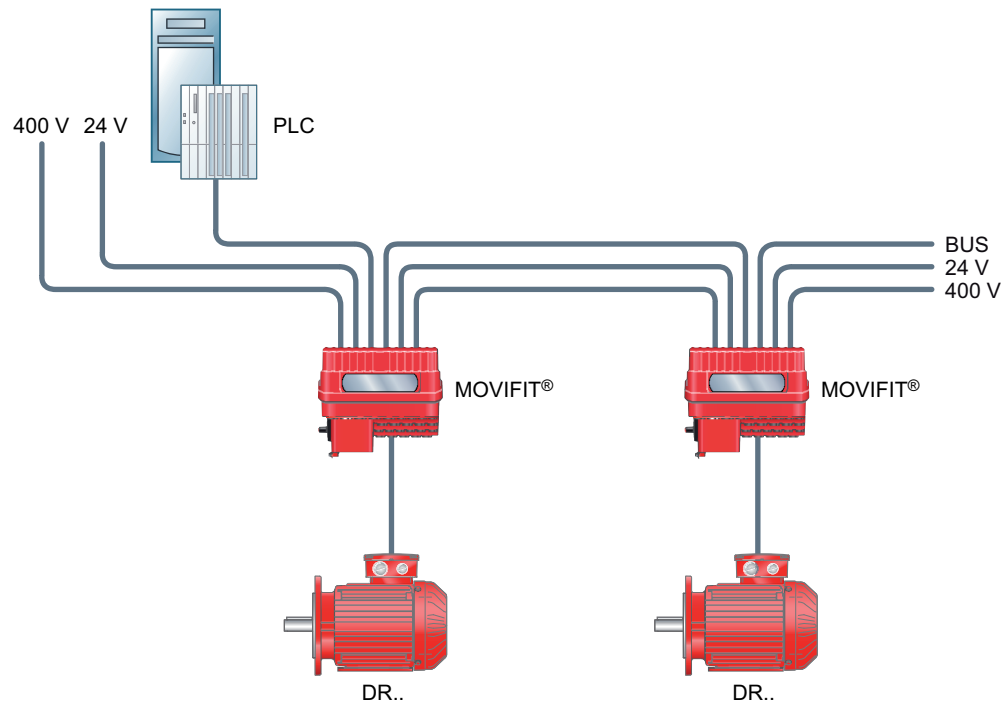
4.3.2 MOVIFIT® FC unit characteristics

- Parameterizable open loop frequency inverter
- Power range from 0.37 to 4 kW (in 2 sizes)
- Integrated energy distribution
- Integrated brake management
- Optional braking resistor
- Optional maintenance switch
- Integrated fieldbus interface

PROFIBUS	EtherNet/IP™
PROFINET IO	Modbus/TCP
PROFINET POF	DeviceNet™
- Optional design without fieldbus interface as SBus slave
- Digital inputs/outputs
- CAN/SBus interface
- "Safe torque off" STO function
- Safety-Option S12 with safety-related inputs and outputs
- Simple and fast parameterization via DIP switches (Easy mode)
- Extended parameterization via fieldbus or diagnostic interface (Expert mode)

4.3.3 MOVIFIT® FC installation topology

The following figure shows the general installation topology of MOVIFIT® FC with AC motor:



5068774155

4.4 Functional safety

4.4.1 MOVIFIT® MC and FC basic functions

Due to the integrated safety concept, suitable MOVIFIT® MC and MOVIFIT® FC units can be safely disconnected via the 24V_P supply voltage.

This includes the function:

- STO = Safe Torque Off according to EN 61800-5-2 with fail-safe protection against restart according to EN 1037.

In addition to that, a suitable external device (e.g. safety controller) can be used to realize stop category 1 according to EN 60204-1.

The safety function of MOVIFIT® MC and FC is suitable for safety-related applications up to PL d according to EN ISO 13849-1.

4.4.2 Extended safety functionality with S12 safety option

- The S12 safety option is an integrated, safety-related electronic assembly that can be operated with or without PROFIsafe connection. It is equipped with safety-related inputs and outputs (F-DI, F-DO). It is available in the following 2 versions.

S12A safety option:

- 4 safety-related inputs
- 1 safety-related 2-channel output for STO
- 2 safety-related 2-channel outputs

S12B safety option:

- 8 safety-related inputs
- 1 safety-related 2-channel output for STO
- No other safety-related outputs

- With both safety option versions, the STO function of the power section of MOVIFIT® FC or MOVIMOT® can be activated with the integrated, safety-related F-DO_STO output.
- The safety concept of this subassembly is based on the fact that there is a safe state for all safety-related process values. For the S12 safety option, this value is "0" for all inputs F-DI and outputs F-DO.
- The system was designed according to IEC 61508 SIL3 and EN ISO 13849-1 Performance Level e.
- The safety-related output F-DO_STO is used to disconnect the 24 V supply to the inverter, which achieves safety-related stopping of the drive. In this context, observe the safety concept of the MOVIFIT® FC/MC, all conditions, and all installation specifications in the S12 safety option manual.
- In combination with the EI7C FS built-in encoder, the S12 safety option can control and safely monitor movement functions. The standard process data of the inverter are limited by the S12 safety option if the safety function is active. If the maximum speed is exceeded, the F-DO_STO output is used to achieve a safety-related stop of the drive. Program adjustments in the control section is therefore not necessary.

INFORMATION

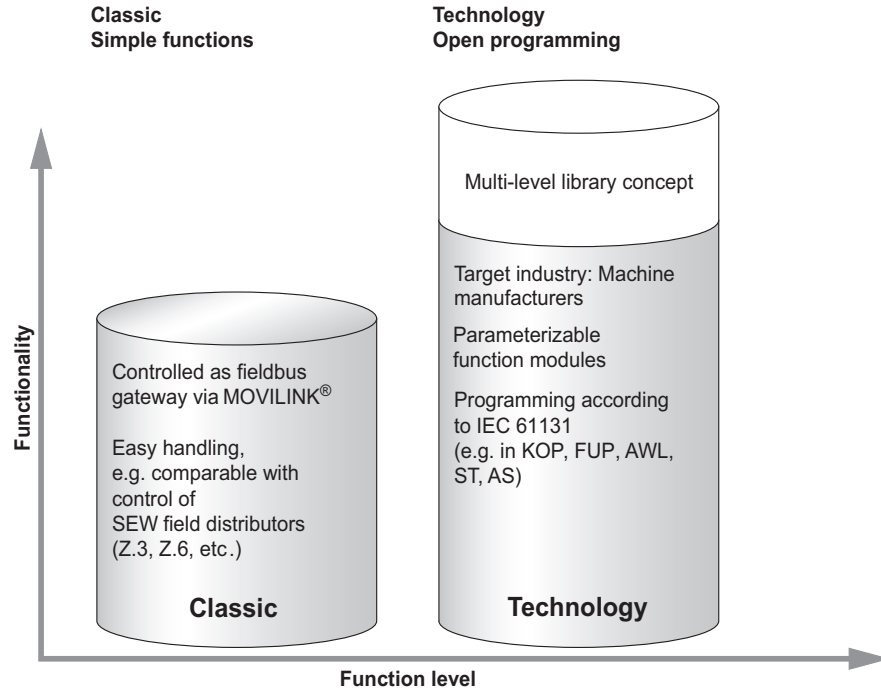


Only components marked with the FS logo for functional safety may be installed in safety applications. For combinations of units without FS logo (consisting of individual EBOX and ABOX), the safety function must be described in the documentation.

4.5 Function level

The function level describes the functions included in the for MOVIFIT® software regarding operation, plant control and diagnostics.

The following figure gives an overview of the MOVIFIT® function levels:



18014399302397067

INFORMATION



For detailed information about the MOVIFIT® function levels, refer to the fieldbus-specific manuals:

- "MOVIFIT® Function Level Classic.." manual
- "MOVIFIT® Function Level Technology.." manual

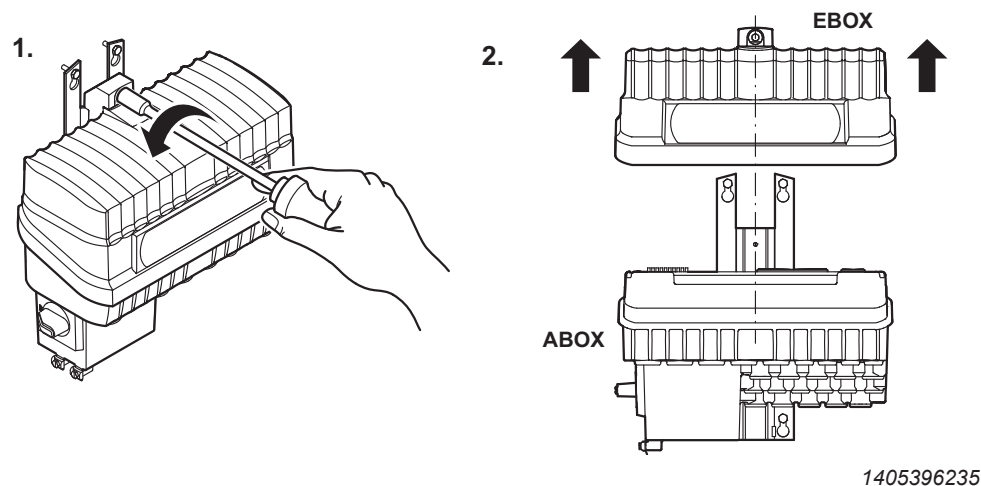
4.6 Type designation and unit concept

4.6.1 Properties

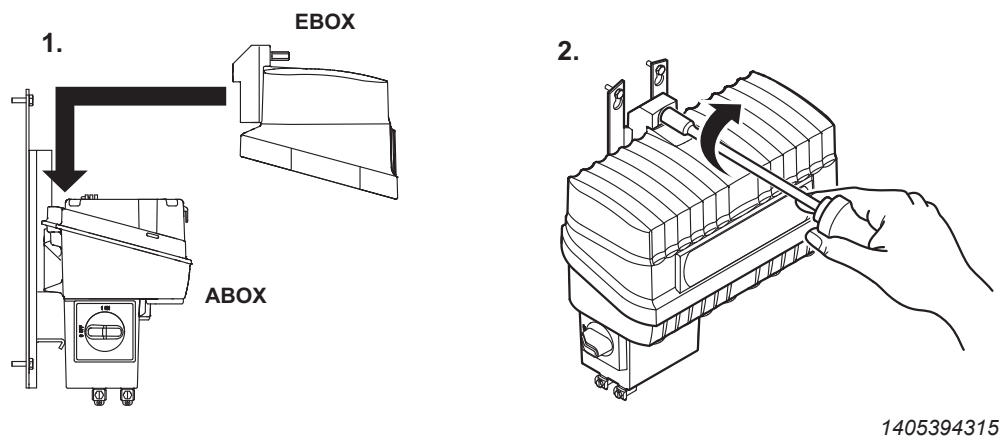
MOVIFIT® units have the following characteristics:

- Aluminum die cast housing
 - High rigidity
 - IP65 design for industrial requirements
 - Hygienic design with increased degree of protection and special surface treatment for the food industry
- Separation of connection unit (ABOX) and electronics (EBOX)
 - No damage/contamination to the EBOX during installation and maintenance
 - The bus address remains the same when the EBOX is replaced
 - Data backup of user parameters in the ABOX is possible
 - Fast replacement of EBOX without wiring: Only one screw is required to connect the EBOX to the ABOX, see following figures.

Remove EBOX



Place EBOX on top of ABOX and screw it on



4.6.2 Sample type designation

Example EBOX

The following table shows an example of the type designation of the MOVIFIT® MT-F11A015-503-P10A -00/S12A EBOX:

	MOVIFIT® MC	MOVIFIT® SC	MOVIFIT® FC
MT	Unit series MT = MOVIFIT®	Unit series MT = MOVIFIT®	Unit series MT = MOVIFIT®
F	Device type M = MOVIFIT® MC (MOVIMOT® control)	Device type S = MOVIFIT® SC (motor starter)	Device type F = MOVIFIT® FC (frequency inverters)
11	Series 11 = Standard (IP65)	Series 11 = Standard (IP65) 12 = Hygienic ^{plus} (IP69K)	Series 11 = Standard (IP65) 12 = Hygienic ^{plus} (IP69K)
A	Version A	Version A	Version A
015	Unit power 000 = MOVIFIT® MC	Unit power 015 = 1.5 kW 030 = 3.0 kW	Unit power 003 = 0.37 kW 005 = 0.55 kW 007 = 0.75 kW 011 = 1.1 kW 015 = 1.5 kW 022 = 2.2 kW 030 = 3.0 kW 040 = 4.0 kW
-			
50	Connection voltage –	Connection voltage 50 = AC 380 – 500 V	Connection voltage 50 = AC 380 – 500 V
3	Connection type –	Connection type 3 = 3-phase	Connection type 3 = 3-phase
-			
P1	Fieldbus P1 = PROFIBUS E2 = PROFINET IO D1 = DeviceNet™ E3 = EtherNet/IP™, Modbus/TCP Z1 = SBus slave	Fieldbus P1 = PROFIBUS E2 = PROFINET IO D1 = DeviceNet™ E3 = EtherNet/IP™, Modbus/TCP Z1 = SBus slave	Fieldbus P1 = PROFIBUS E2 = PROFINET IO D1 = DeviceNet™ E3 = EtherNet/IP™, Modbus/TCP Z1 = SBus slave
0	Function level 0 = Classic 1 = Technology	Function level 0 = Classic 1 = Technology	Function level 0 = Classic 1 = Technology
A	Version A	Version A	Version A

-			
00	EBOX design 00 = Series	EBOX design 00 = Series	EBOX design 10 = DRS.. motor 400 V, 50 Hz 11 = DRE.. motor 400 V, 50 Hz 12 = DRS.. motor 460 V, 60 Hz 13 = DRE.. motor 460 V, 60 Hz 14 = DRS.. DRE.. motor 380 V, 60 Hz 15 = DRS.. DRE.. motor 50 – 60 Hz 16 = DRP.. motor 400 V, 50 Hz 17 = DRP.. motor 460 V, 60 Hz 18 = DRN.. motor 400 V, 50 Hz 19 = DRN.. motor 460 V, 60 Hz 20 = DRN.. motor 50 – 60 Hz
/			
S12A	EBOX option S12A = S12A safety option S12B = S12B safety option	EBOX option Not available	EBOX option S12A = S12A safety option S12B = S12B safety option

Example: ABOX

The following table shows an example of the type designation of the MOVIFIT® MTA11A-503-S021-D01-00/BW1/M11 ABOX:

	MOVIFIT® MC	MOVIFIT® SC	MOVIFIT® FC
MT	Unit series MT = MOVIFIT®	Unit series MT = MOVIFIT®	Unit series MT = MOVIFIT®
A	Device type A = ABOX (connection box)	Device type A = ABOX (connection box)	Device type A = ABOX (connection box)
11	Series 11 = Standard (IP65)	Series 11 = Standard (IP65) 12 = Hygienic ^{plus} (IP69K)	Series 11 = Standard (IP65) 12 = Hygienic ^{plus} (IP69K)
A	Version A	Version A	Version A
-			
50	Connection voltage 50 = AC 380 – 500 V	Connection voltage 50 = AC 380 – 500 V	Connection voltage 50 = AC 380 – 500 V
3	Connection type 3 = 3-phase	Connection type 3 = 3-phase	Connection type 3 = 3-phase
-			
S02	Connection configuration S01 = Standard ABOX S41 = Hybrid ABOX S51 = Hybrid ABOX S61 = Hybrid ABOX I51 = Hybrid ABOX I61 = Hybrid ABOX	Connection configuration S02 = Standard ABOX S42 = Hybrid ABOX S52 = Hybrid ABOX S53 = Hybrid ABOX ¹⁾ S62 = Hybrid ABOX I52 = Hybrid ABOX I55 = Hybrid ABOX I62 = Hybrid ABOX I65 = Hybrid ABOX	Connection configuration S02 = Standard ABOX S42 = Hybrid ABOX S52 = Hybrid ABOX S53 = Hybrid ABOX ¹⁾ S62 = Hybrid ABOX I55 = Hybrid ABOX I62 = Hybrid ABOX ²⁾ I65 = Hybrid ABOX
1	Fieldbus 1 = PROFIBUS 2 = DeviceNet™ 3 = ETHERNET	Fieldbus 1 = PROFIBUS 2 = DeviceNet™ 3 = ETHERNET	Fieldbus 1 = PROFIBUS 2 = DeviceNet™ 3 = ETHERNET
-			
D01	Maintenance switch M01 = Switch disconnecter and line protection up to 12 A ³⁾ M14 = Switch disconnecter and line protection up to 9 A ⁴⁾ M15 = Switch disconnecter and line protection up to 12 A ⁴⁾	Maintenance switch D01 = Switch disconnecter M12 = Switch disconnecter and line protection up to 9 A ⁵⁾	Maintenance switch D01 = Switch disconnecter M11 = Switch disconnecter and line protection up to 4 A ⁴⁾ M12 = Switch disconnecter and line protection up to 9 A ⁴⁾
-			

00	ABOX design 00 = Series	ABOX design 00 = Series	ABOX design 00 = Series 30 = dual-motor operation 33 = Dual-motor group drive
/			
BW1	–	–	ABOX option 1 BW1/BW2 = Integrated braking resistor
/			
M11	ABOX option 00S = Plug connector STO M11 = Stainless steel mounting rail (standard length) M1S = Stainless steel mounting rail (standard length) and plug connector STO M2A = Stainless steel mounting rail (short) M2S = Stainless steel mounting rail (short) and plug connector STO	ABOX option M11 = Stainless steel mounting rail (standard length) M2A = Stainless steel mounting rail (short) L10 = PROFINET interface SCRJ/POF (POF option L10) ¹⁾	ABOX option 2 00S = Plug connector STO M11 = Stainless steel mounting rail (standard length) M1S = Stainless steel mounting rail (standard length) and plug connector STO M2A = Stainless steel mounting rail (short) M2S = Stainless steel mounting rail (short) and plug connector STO L10 = PROFINET interface SCRJ/POF (POF option L10) ¹⁾ L1S = PROFINET interface SCRJ/POF (POF option L10) ¹⁾ and plug connector STO

1) The L10 POF option and S53 connection configuration are only available in combination.

2) Only for designs in dual-motor operation and dual-motor group drive.

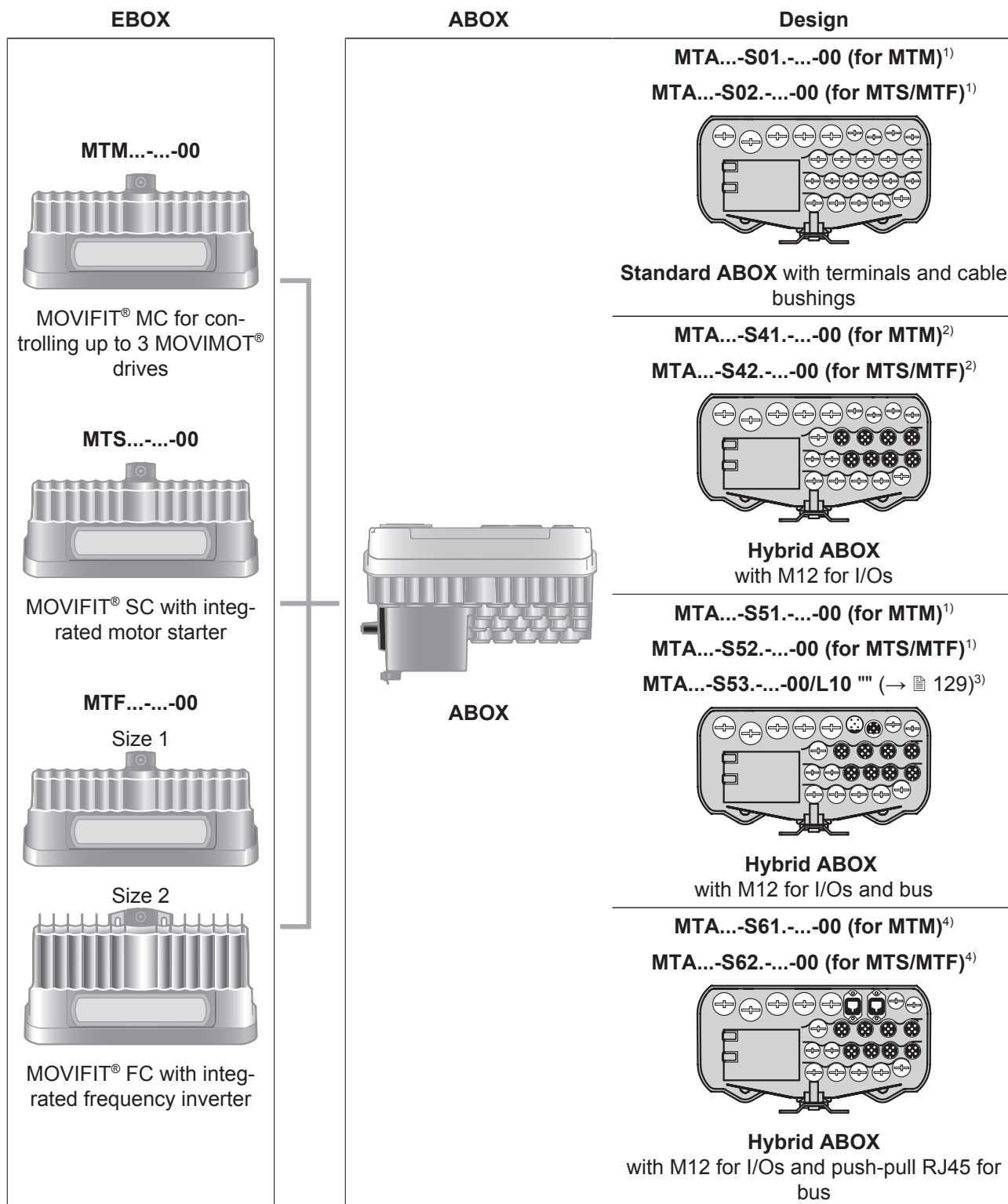
3) In connection with UL, the maintenance switch is only a switch disconnector.

4) Only available in connection with UL.

5) For units with UL, the maintenance switch M12 is mandatory.

4.6.3 Combination options with MOVIFIT® MC, SC and FC

The following figures show the MOVIFIT® MC, SC and FC variants:

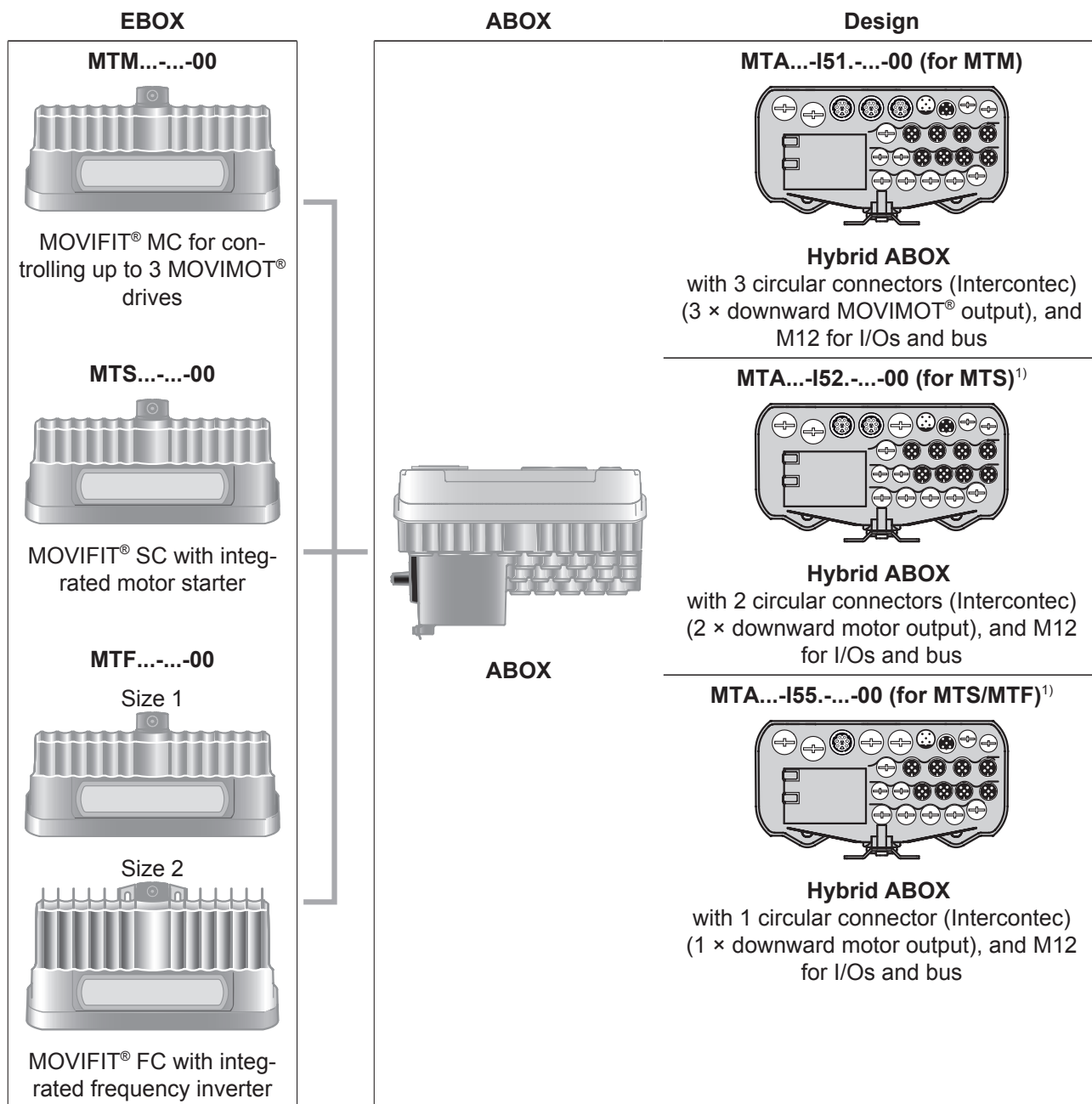


1) with DeviceNet™: Micro-style connector for DeviceNet™ connection

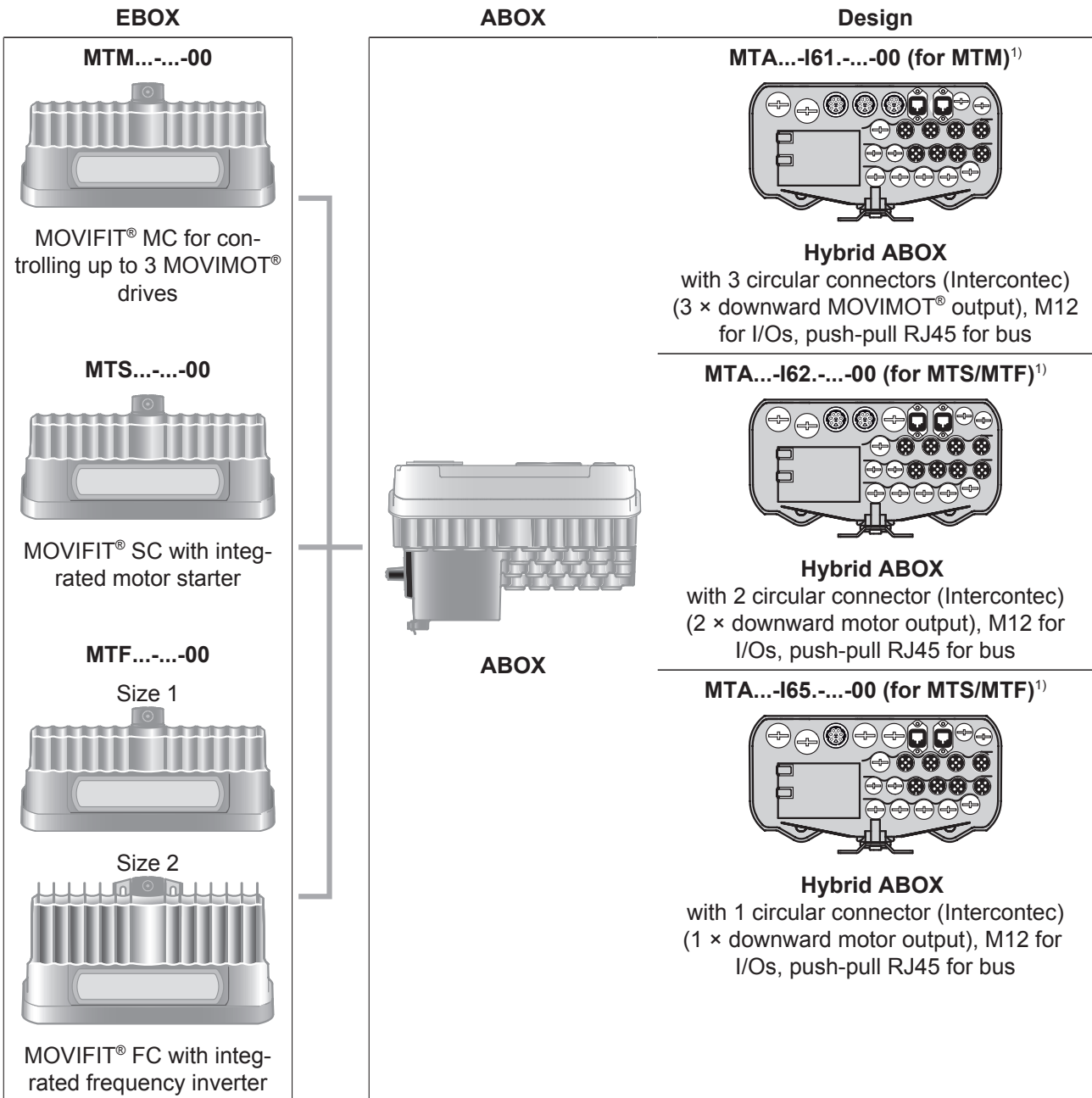
2) Not available in connection with DeviceNet™

3) Only in connection with MTS/MTF and the PROFINET interface L10 SCRJ / POF. The MTA...-53. ABOX has an additional M12 plug connector to supply the PROFINET interface L10 SCRJ/POF with 24 V.

4) Not available in connection with DeviceNet™ and PROFIBUS



1) In connection with DeviceNet™: Micro-style connector for DeviceNet™ connection



1) Not available in connection with DeviceNet™ and PROFIBUS

4.7 Hygienic^{plus} design

The following figure shows the Hygienic^{plus} design of MOVIFIT®:



9007200097472651

4.7.1 Properties

The Hygienic^{plus} design has the following characteristics:

- IP66 in accordance with EN 60529 and IP69K in accordance with DIN 40050-9 (MOVIFIT® housing closed and all cable bushings sealed according to the relevant degree of protection)
- Easy-to-clean housing (self-draining design)
- Surface with non-stick properties
- High impact resistance of the surface against mechanical damage
- Compatibility with cleaning agents having the following properties:
 - Alkaline
 - Acidic
 - Disinfectant
- Resistant to temperature fluctuations
- Resistant to condensation caused by coated connection boards



In SEW-EURODRIVE publications, all illustrations of MOVIFIT® in Hygienic^{plus} design are depicted as dark (= surface coating).



INFORMATION

Further information can be found in the following publications:

- "MOVIFIT® SC" and "MOVIFIT® FC" operating instructions

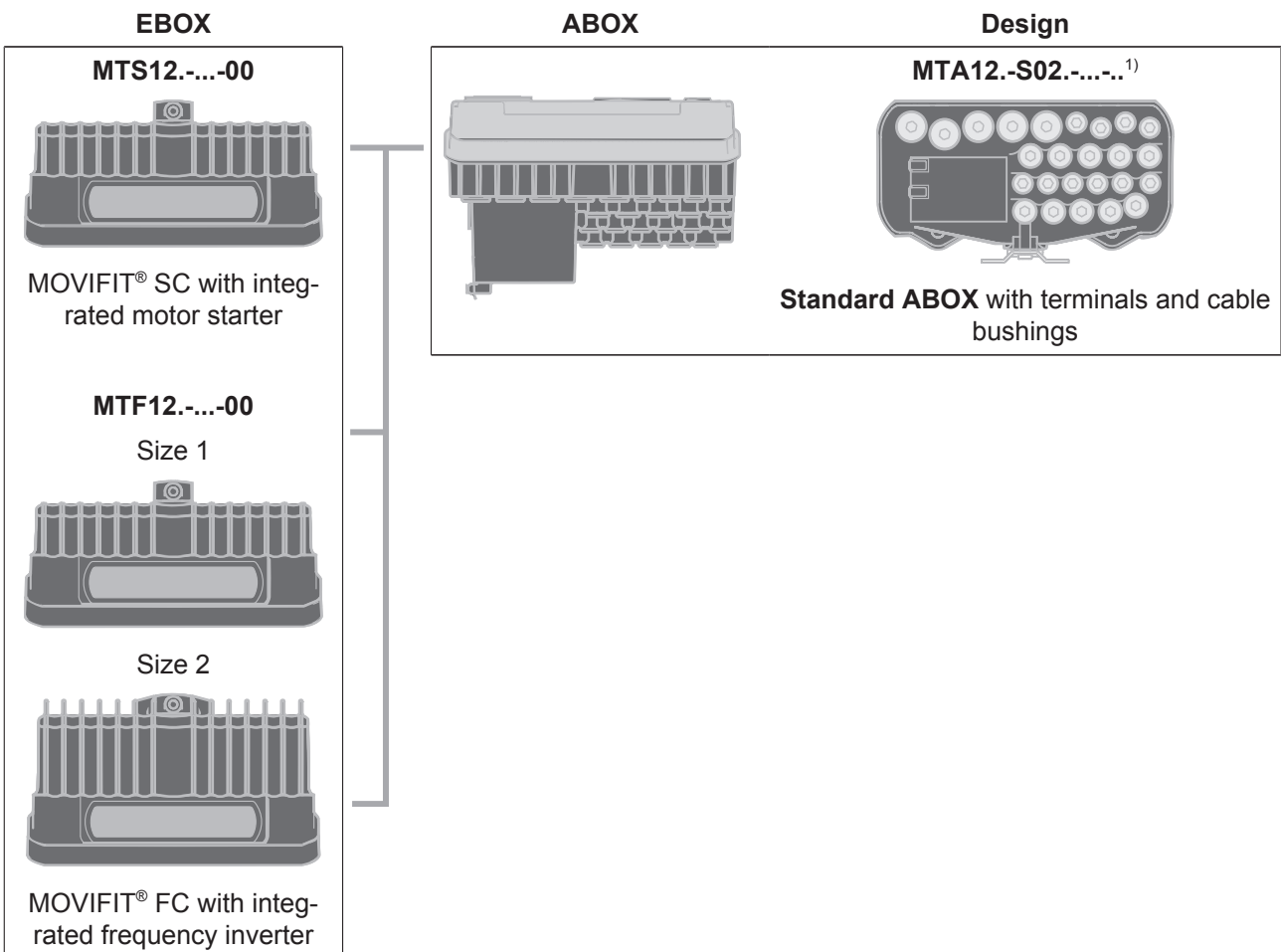
4.7.2 Combination options with MOVIFIT® SC and FC Hygienic^{plus}

INFORMATION



The Hygienic^{plus} design is only available in connection with the following unit variants:

- Only in connection with MOVIFIT® SC or MOVIFIT® FC
- Only in connection with the standard ABOX with terminals and cable bushings



1) In connection with DeviceNet™: Micro-style connector for DeviceNet™ connection

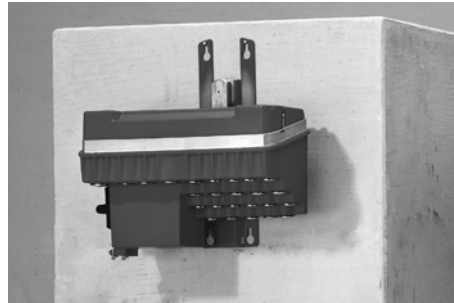
4.8 Flexible connection technology

4.8.1 Overview

The flexible connection technology of MOVIFIT® allows for perfect adaptation to different installation philosophies. In addition to the standard design, which must be wired during installation, SEW-EURODRIVE also offers prewired solutions with industry-standard plug connectors.

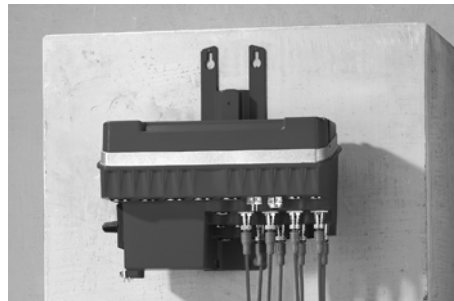
- **Standard ABOX**

- With terminals and cable bushings



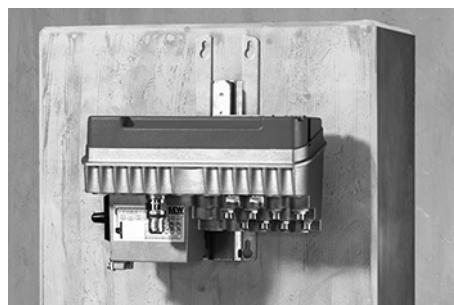
- **Hybrid ABOX**

- With M12 for I/Os
- With M12 for I/Os and bus
- With M12 for I/Os and push-pull RJ45 for bus



- **Hybrid ABOX with motor plug connectors**

- With M12 for I/Os and bus and 1 – 3 motor plug connectors
- With M12 for I/Os and push-pull RJ45 for bus and 1 – 3 motor plug connectors

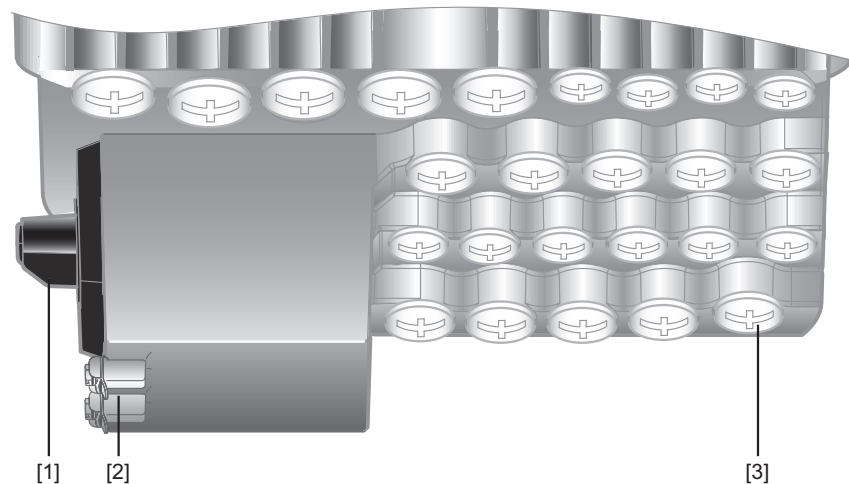


4.9 Available ABOXes

4.9.1 Standard ABOX "MTA...-S01-...-00", "MTA...-S02-...-00"

Description

The following figure depicts the Standard ABOX with terminals and cable bushings:



9007200067288715

- [1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
- [2] PE connection
- [3] Diagnostics socket (RJ10) underneath the screw plug

In connection with a DeviceNet™ interface, the Standard ABOX is always supplied with micro-style connector.

Ethernet adapter, optional

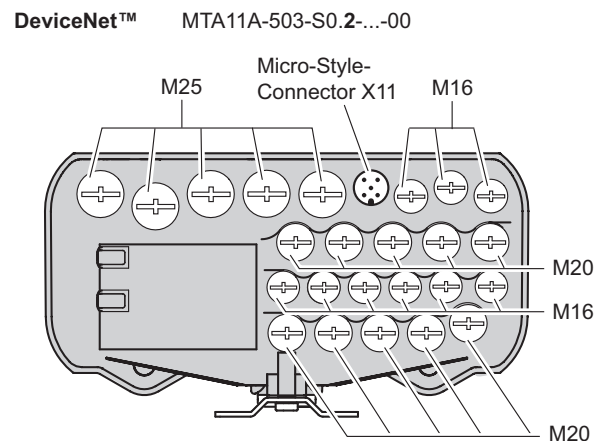
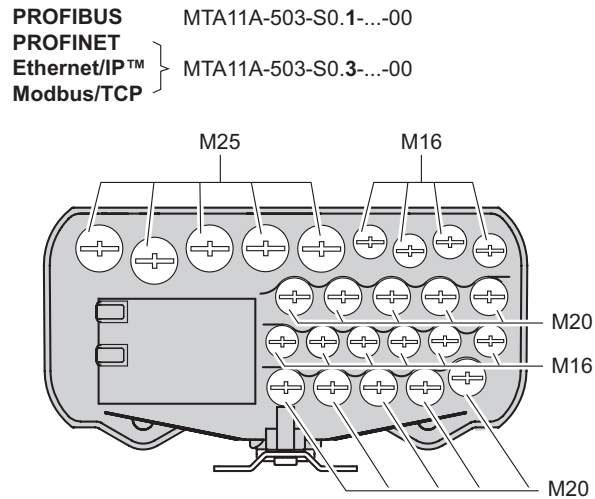
Type	Figure	Con- tents	Part number
RJ45-M12 Ethernet ad- apter RJ45 (internal) M12 (external) 2 required for each unit.		1 piece	13281682

Variants

The Standard ABOX is available in the following variants:

- MTA11A-503-**S01**.-...-00: Standard ABOX for MOVIFIT® MC (MTM)
- MTA11A-503-**S02**.-...-00: Standard ABOX for MOVIFIT® SC (MTS) and FC (MTF)

The following figure shows the cable glands and plug connectors of the Standard ABOX depending on the fieldbus interface:



18014400027313675

4.9.2 Hybrid ABOX "MTA...-S41-...-00", "MTA...-S42-...-00"



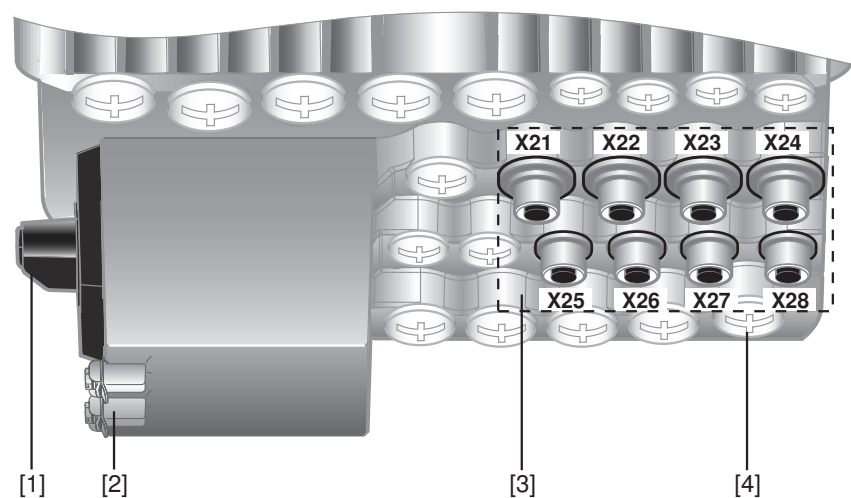
INFORMATION

- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

4

Description

The following figure shows the hybrid ABOX with M12 plug connectors for connecting digital I/Os:



9007200170028939

- [1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
 [2] PE connection
 [3] M12 plug connector for I/Os
 [4] Diagnostics socket (RJ10) underneath the screw plug

Ethernet adapter, optional

Type	Figure	Con- tents	Part number
RJ45-M12 Ethernet ad- apter RJ45 (internal) M12 (external) 2 required for each unit.		1 piece	13281682

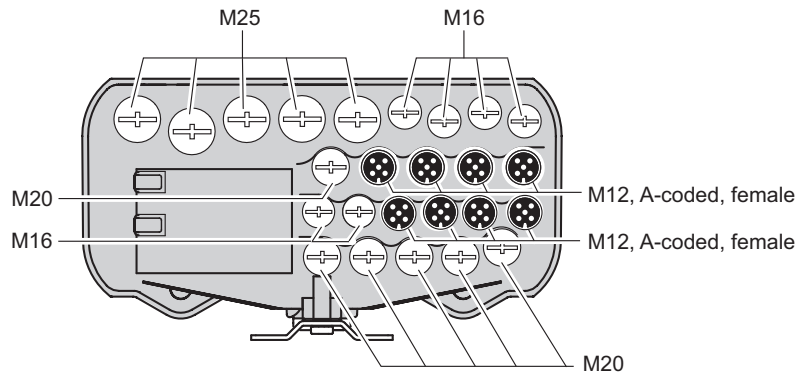
Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-**S41**-.---00: Hybrid ABOX for MOVIFIT® MC (MTM)
- MTA11A-503-**S42**-.---00: Hybrid ABOX for MOVIFIT® SC (MTS) and FC (MTF)

The following figure shows the screw fittings and plug connectors of the hybrid ABOX:

PROFIBUS MTA11A-503-S4.1-...-00
 PROFINET } MTA11A-503-S4.3-...-00
 EtherNet/IP™
 Modbus/TCP



9007204194244235

4.9.3 Hybrid ABOX "MTA...-S51.-...-00", "MTA...-S52.-...-00"



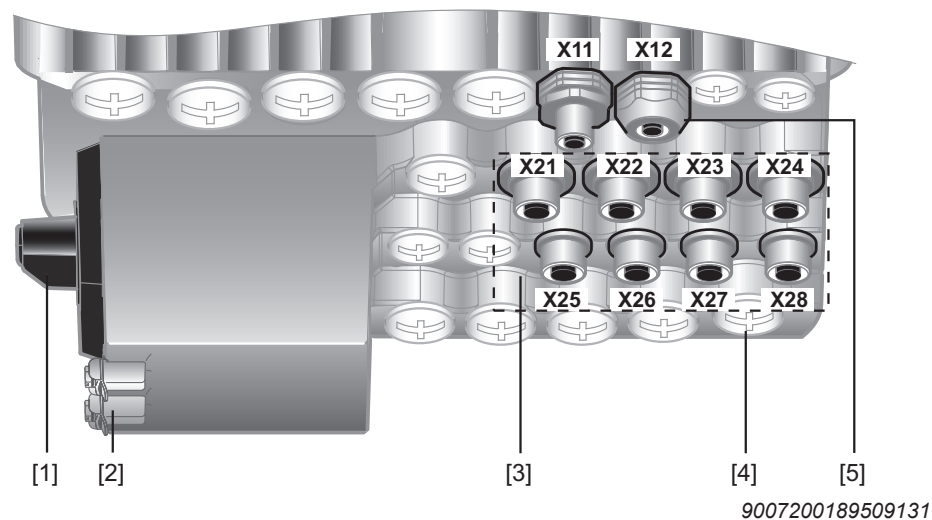
INFORMATION

- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

4

Description

The following figure depicts the hybrid ABOX with M12 plug connectors for connecting I/Os and bus:



9007200189509131

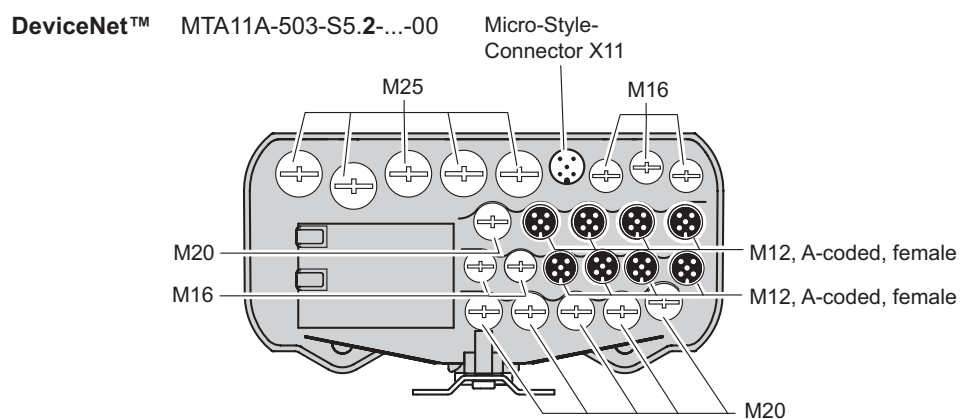
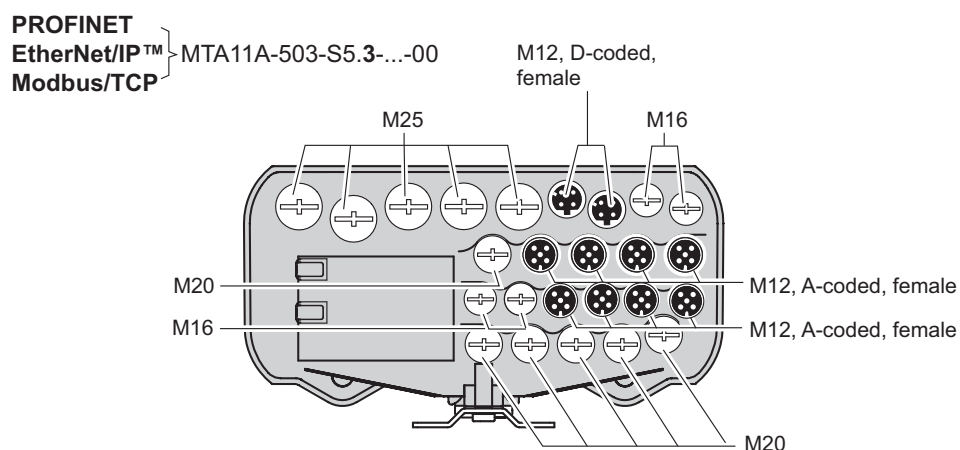
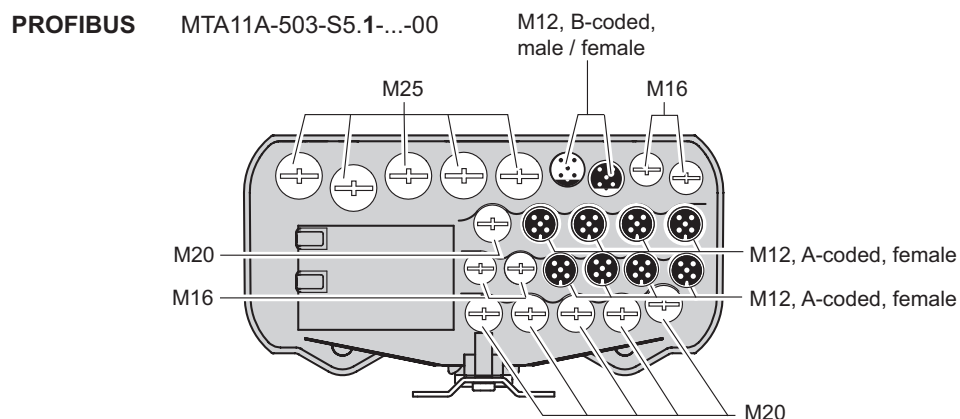
- [1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
- [2] PE connection
- [3] M12 plug connector for I/Os
- [4] Diagnostics socket (RJ10) underneath the screw plug
- [5] M12 plug connector for fieldbus connection

Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-**S51**....-00: Hybrid ABOX for MOVIFIT® MC (MTM)
- MTA11A-503-**S52**....-00: Hybrid ABOX for MOVIFIT® SC (MTS) and FC (MTF)

The following figure shows the cable glands and plug connectors of the Hybrid ABOX depending on the fieldbus interface:



18014400029371787

4.9.4 Hybrid ABOX "MTA...-S53-...-00/L10"

INFORMATION

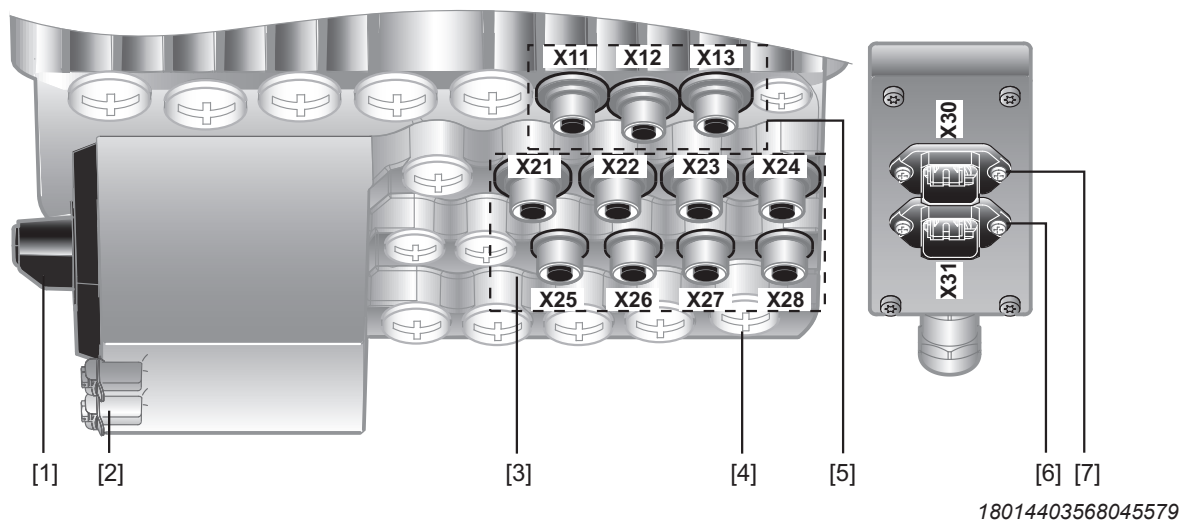


- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.
- All electrical connections of the POF option L10 are installed at the factory.

4

Description

The following figure shows the hybrid ABOX with M12 plug connectors for connecting I/Os and bus and the POF option L10 with push-pull SCRJ plug connector for PROFINET POF:



- [1] Maintenance switch (optional)
- [2] PE connection
- [3] M12 plug connector for I/Os
- [4] Diagnostics socket (RJ10) under the screw plug
- [5] M12 plug connector for PROFINET connection and DC 24 V output (plugged at the factory)
- [6] Push-pull SCRJ plug connector for PROFINET POF port 2
- [7] Push-pull SCRJ plug connector for PROFINET POF port 1

POF = Polymere Optical Fiber

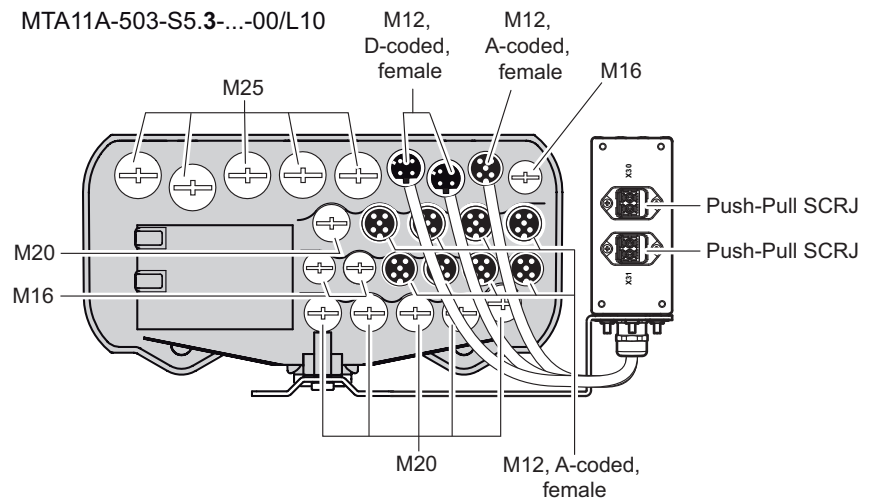
Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-**S53**...-00/L10: Hybrid ABOX for MOVIFIT® SC (MTS) / FC (MTF) with POF option L10

The following figure shows the cable glands and plug connectors of the hybrid ABOX with POF option L10:

PROFINET MTA11A-503-S5.3-...-00/L10



9007204538884491

4.9.5 Hybrid ABOX "MTA...-S61.-...-00", "MTA...-S62.-...-00"

INFORMATION

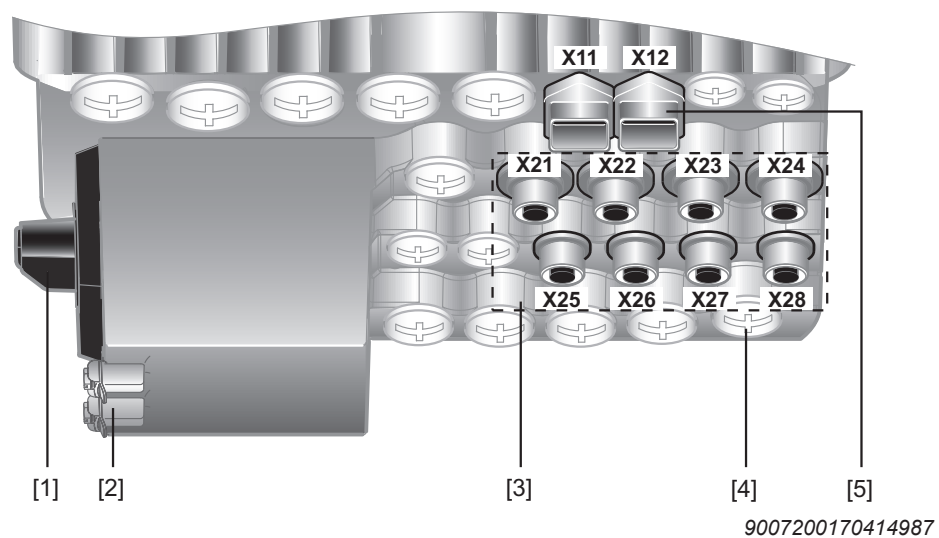


- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

4

Description

The following figure shows the hybrid ABOX with M12 plug connectors for connecting I/Os and push-pull RJ45 plug connector for Ethernet connection:



- [1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
 [2] PE connection
 [3] M12 plug connector for I/Os
 [4] Diagnostics socket (RJ10) underneath the screw plug
 [5] Push-pull RJ45 plug connector for Ethernet connection

INFORMATION



Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector according to IEC 1076-3-117. Commercially available RJ45 patch cables without push-pull connector housings do not lock into the connectors. They may damage the socket and are therefore not suited.

Optional closing plug

Type	Figure	Contents	Part number
Ethernet closing plug for Push pull RJ45 socket		10 pieces	18223702
		30 pieces	18223710

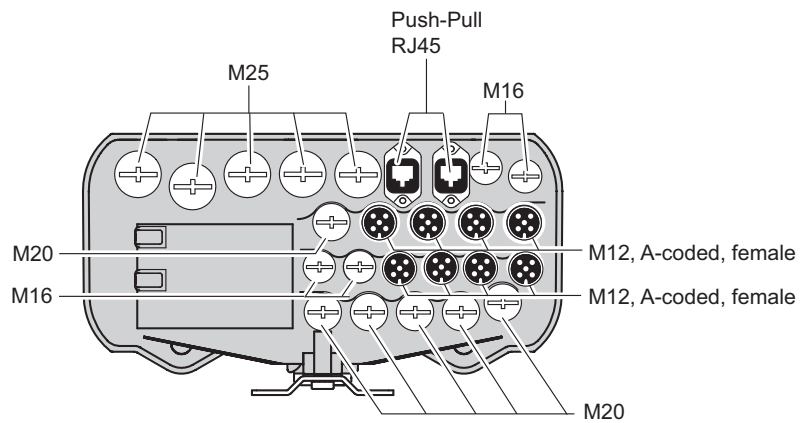
Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-**S61**.-...-00: Hybrid ABOX for MOVIFIT® MC (MTM)
- MTA11A-503-**S62**.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS) and FC (MTF)

The following figure shows the screw fittings and plug connectors of the hybrid ABOX:

PROFINET
EtherNet/IP™
Modbus/TCP } MTA11A-503-S6.3-...-00



9007204194604299

4.9.6 Hybrid ABOX "MTA...-I51.-...-00"

INFORMATION



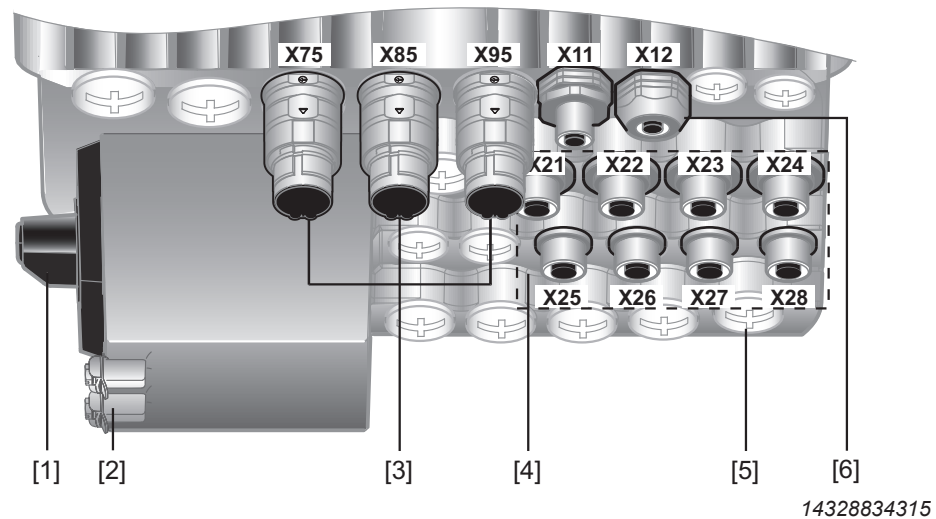
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

- 3 circular connectors (Intercontec) to connect MOVIMOT® drives (downward MOVIMOT® output)
- M12 plug connectors for the connection of I/Os and bus

MTA...-I51.-...-00



- [1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
- [2] PE connection
- [3] Circular connectors (Intercontec), MOVIMOT® output
- [4] M12 plug connector for I/Os
- [5] Diagnostics socket (RJ10) underneath the screw plug
- [6] M12 plug connector for fieldbus connection

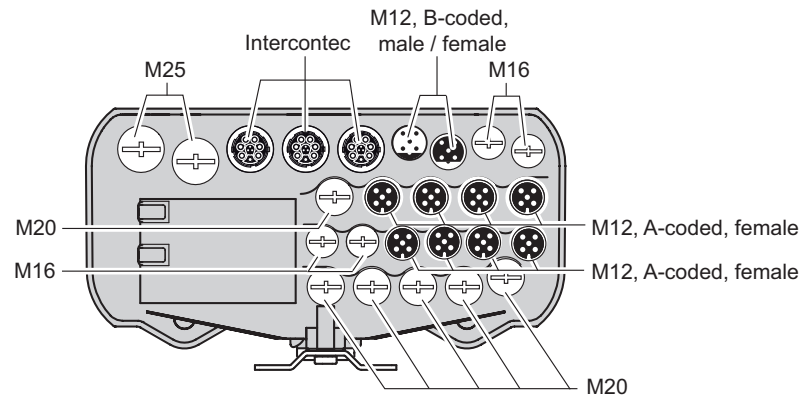
Variants

The hybrid ABOX is available in the following variants:

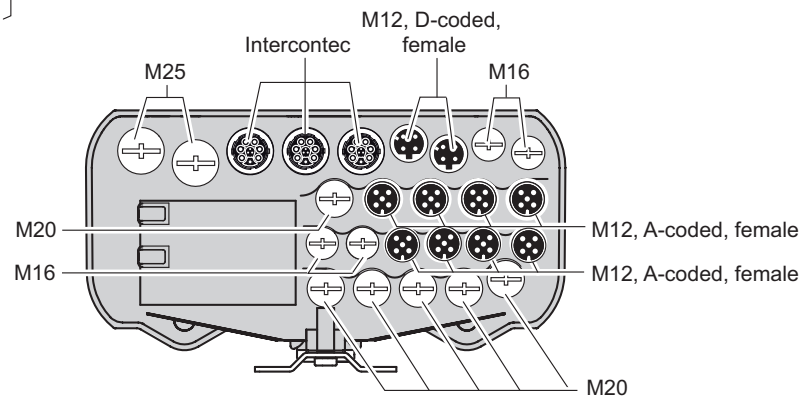
- MTA11A-503-I51.-...-00: Hybrid ABOX for MOVIFIT® MC (MTM)

The following figure shows the cable glands and plug connectors of the Hybrid ABOX depending on the fieldbus interface:

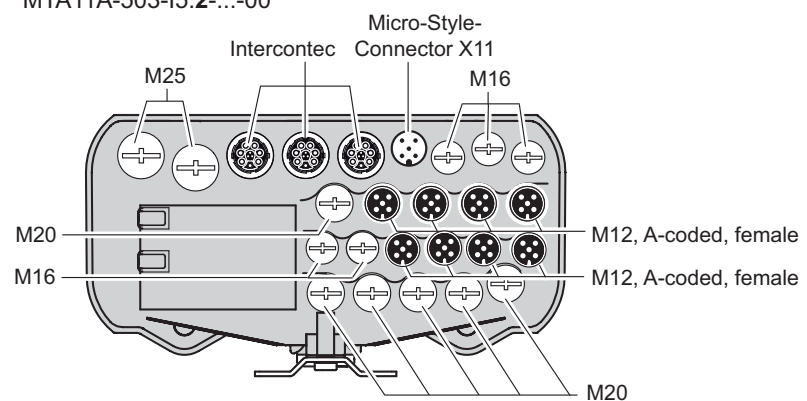
PROFIBUS MTA11A-503-I5.1-...-00



PROFINET EtherNet/IP™ Modbus/TCP MTA11A-503-I5.3-...-00



DeviceNet™ MTA11A-503-I5.2-...-00



9007204199167627

4.9.7 Hybrid ABOX "MTA...-I52.-...-00"



INFORMATION

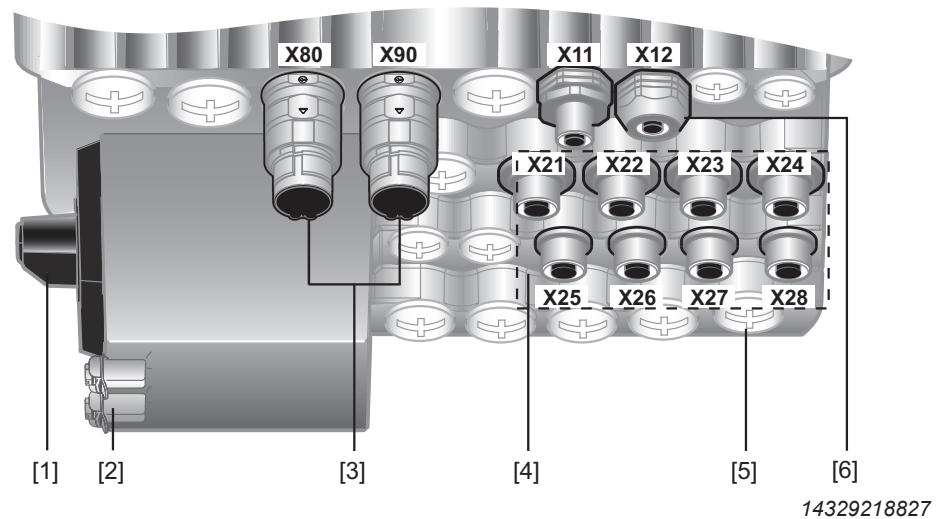
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

- 2 circular connectors (Intercontec) for connecting the motors (downward motor output)
- M12 plug connectors for the connection of I/Os and bus

MTA...-I52.-...-00



- 14329218827
- [1] Maintenance switch (optional)
 - [2] PE connection
 - [3] Circular connectors (Intercontec), motor output
 - [4] M12 plug connector for I/Os
 - [5] Diagnostics socket (RJ10) underneath the screw plug
 - [6] M12 plug connector for fieldbus connection

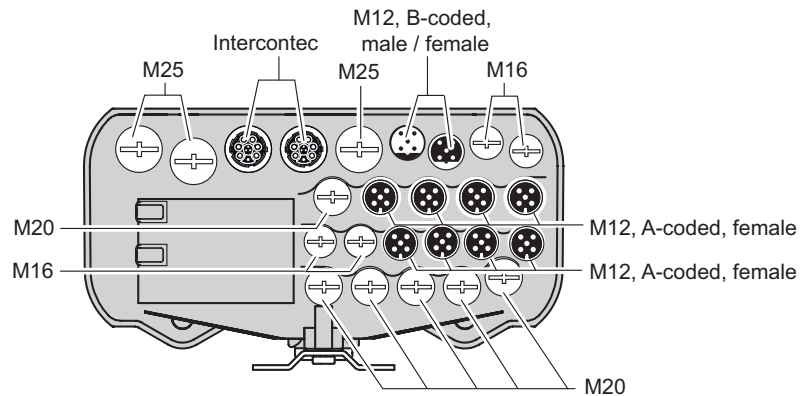
Variants

The hybrid ABOX is available in the following variants:

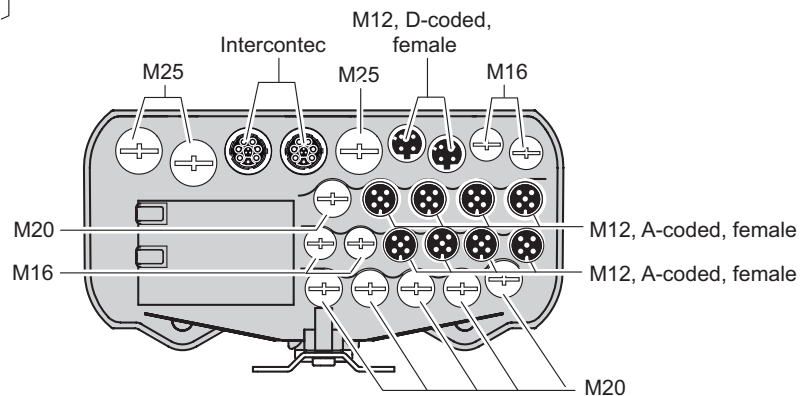
- MTA11A-503-I52.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS)

The following figure shows the cable glands and plug connectors of the Hybrid ABOX depending on the fieldbus interface:

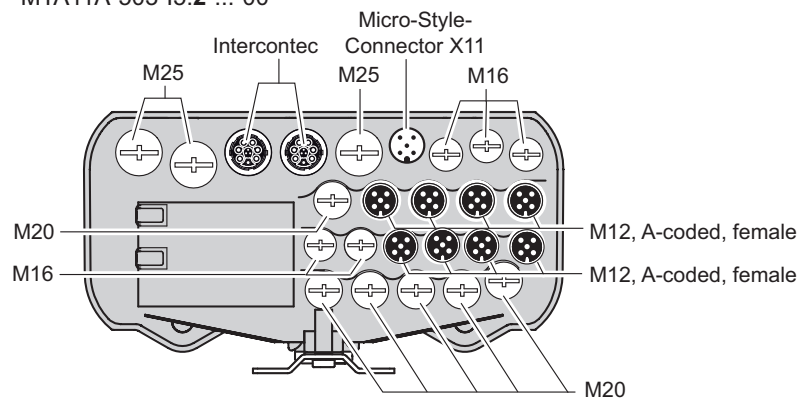
PROFIBUS MTA11A-503-I5.1-...-00



PROFINET EtherNet/IP™ Modbus/TCP MTA11A-503-I5.3-...-00



DeviceNet™ MTA11A-503-I5.2-...-00



9007204199782923

4.9.8 Hybrid ABOX "MTA...-I55.-...-00"



INFORMATION

- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

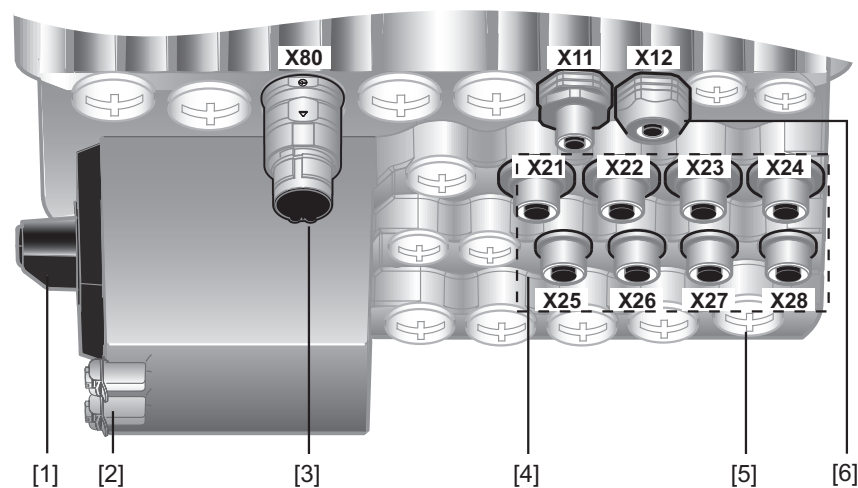
4

Description

The following figure shows the hybrid ABOX with:

- 1 circular connector (Intercontec) for connecting the motors (downward motor output)
- M12 plug connectors for the connection of I/Os and bus

MTA...-I55.-...-00



14329275019

- [1] Maintenance switch (optional)
- [2] PE connection
- [3] Circular connectors (Intercontec), motor output
- [4] M12 plug connector for I/Os
- [5] Diagnostics socket (RJ10) underneath the screw plug
- [6] M12 plug connector for fieldbus connection

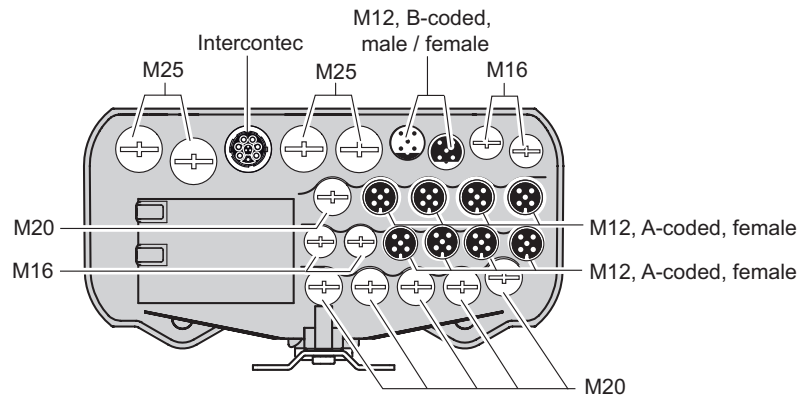
Variants

The hybrid ABOX is available in the following variants:

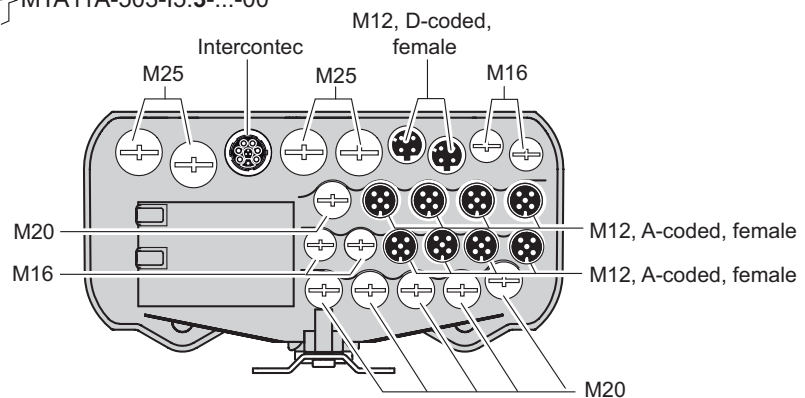
- MTA11A-503-I55.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS) and FC (MTF)

The following figure shows the cable glands and plug connectors of the Hybrid ABOX depending on the fieldbus interface:

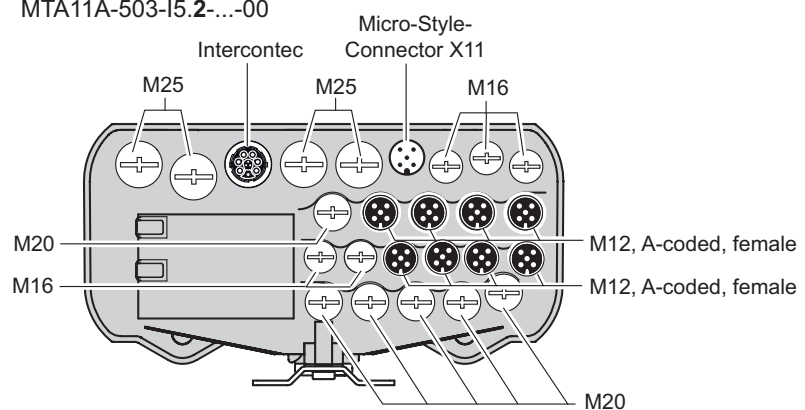
PROFIBUS MTA11A-503-I5.1-...-00



PROFINET EtherNet/IP™ Modbus/TCP MTA11A-503-I5.3-...-00



DeviceNet™ MTA11A-503-I5.2-...-00



9007203556709131

4.9.9 Hybrid ABOX "MTA...-I61.-...-00"

INFORMATION



- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

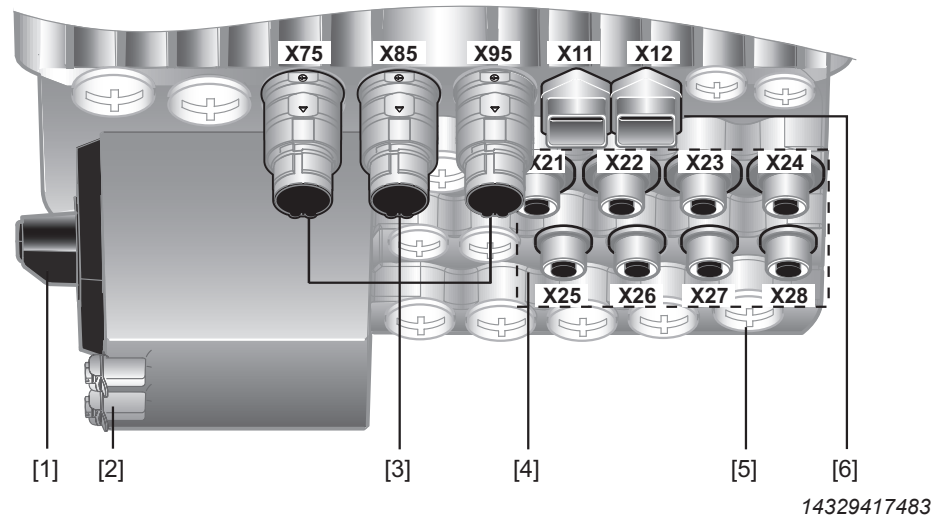
4

Description

The following figure shows the hybrid ABOX with:

- 3 circular connectors (Intercontec) to connect MOVIMOT® drives (downward MOVIMOT® output)
- M12 plug connectors for the connection of I/Os
- Push-pull RJ45 plug connectors for Ethernet connection

MTA...-I61.-...-00



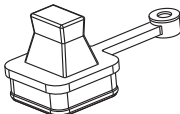
- [1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
- [2] PE connection
- [3] Circular connectors (Intercontec), MOVIMOT® output
- [4] M12 plug connector for I/Os
- [5] Diagnostics socket (RJ10) underneath the screw plug
- [6] Push-pull RJ45 plug connector for Ethernet connection

INFORMATION



Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector according to IEC 1076-3-117. Commercially available RJ45 patch cables without push-pull connector housings do not lock into the connectors. They may damage the socket and are therefore not suited.

Optional closing plug

Type	Figure	Contents	Part number
Ethernet closing plug for Push pull RJ45 socket		10 pieces	18223702
		30 pieces	18223710

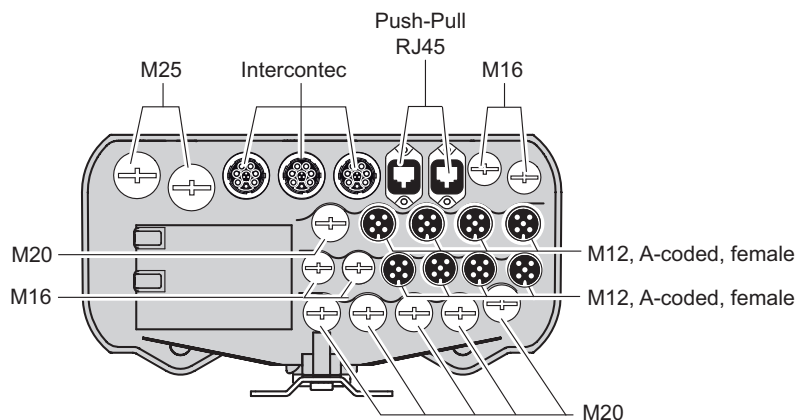
Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-I61.-...-00: Hybrid ABOX for MOVIFIT® MC (MTM)

The following figure shows the screw fittings and plug connectors of the hybrid ABOX:

PROFINET
EtherNet/IP™
Modbus/TCP } MTA11A-503-I6.3-...-00



9007204199800331

4.9.10 Hybrid ABOX "MTA...-I62.-...-00"



INFORMATION

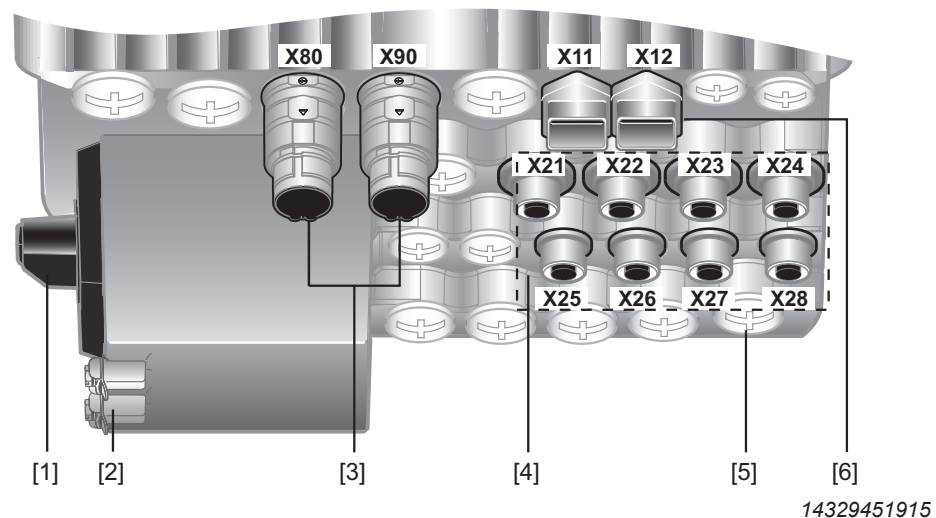
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

- 2 circular connectors (Intercontec) for connecting the motors (downward motor output)
- M12 plug connectors for the connection of I/Os
- Push-pull RJ45 plug connectors for Ethernet connection

MTA...-I62.-...-00



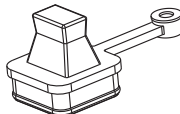
- [1] Maintenance switch (optional)
- [2] PE connection
- [3] Circular connectors (Intercontec), motor output
- [4] M12 plug connector for I/Os
- [5] Diagnostics socket (RJ10) underneath the screw plug
- [6] Push-pull RJ45 plug connector for Ethernet connection

INFORMATION



Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector according to IEC 1076-3-117. Commercially available RJ45 patch cables without push-pull connector housings do not lock into the connectors. They may damage the socket and are therefore not suited.

Optional closing plug

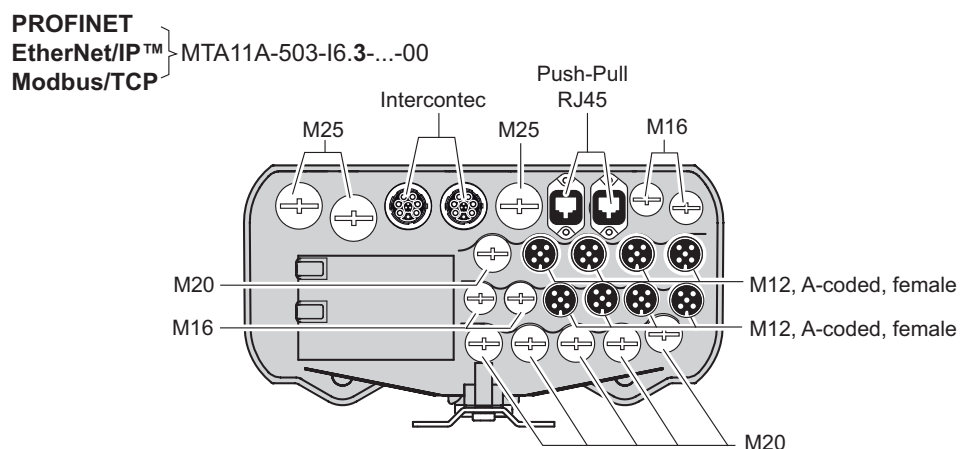
Type	Figure	Contents	Part number
Ethernet closing plug for Push pull RJ45 socket		10 pieces	18223702
		30 pieces	18223710

Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-I62.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS)

The following figure shows the screw fittings and plug connectors of the hybrid ABOX:



9007204200263563

4.9.11 Hybrid ABOX "MTA...-I65.-...-00"



INFORMATION

- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

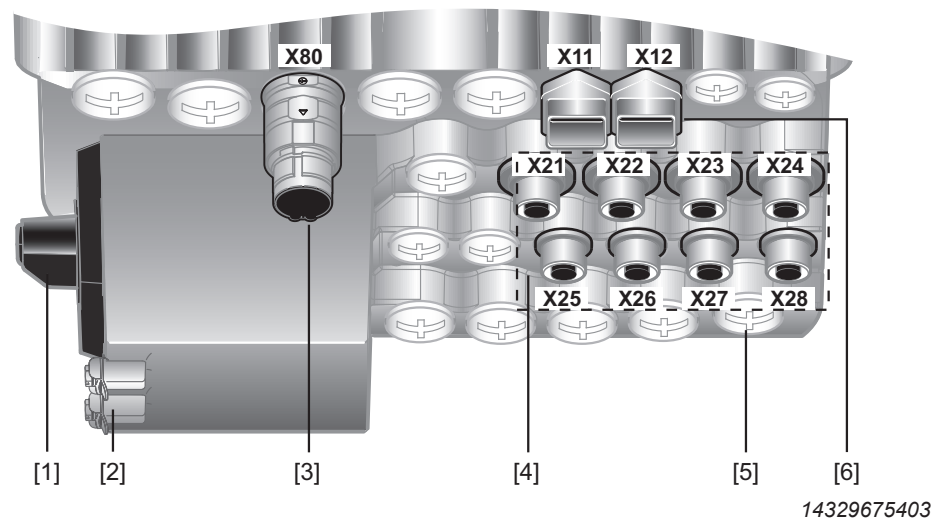
4

Description

The following figure shows the hybrid ABOX with:

- 1 circular connector (Intercontec) for connecting the motors (downward motor output)
- M12 plug connectors for the connection of I/Os
- Push-pull RJ45 plug connectors for Ethernet connection

MTA...-I65.-...-00



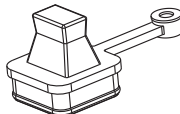
- [1] Maintenance switch (optional)
- [2] PE connection
- [3] Circular connectors (Intercontec), motor output
- [4] M12 plug connector for I/Os
- [5] Diagnostics socket (RJ10) underneath the screw plug
- [6] Push-pull RJ45 plug connector for Ethernet connection

INFORMATION



Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector according to IEC 1076-3-117. Commercially available RJ45 patch cables without push-pull connector housings do not lock into the connectors. They may damage the socket and are therefore not suited.

Optional closing plug

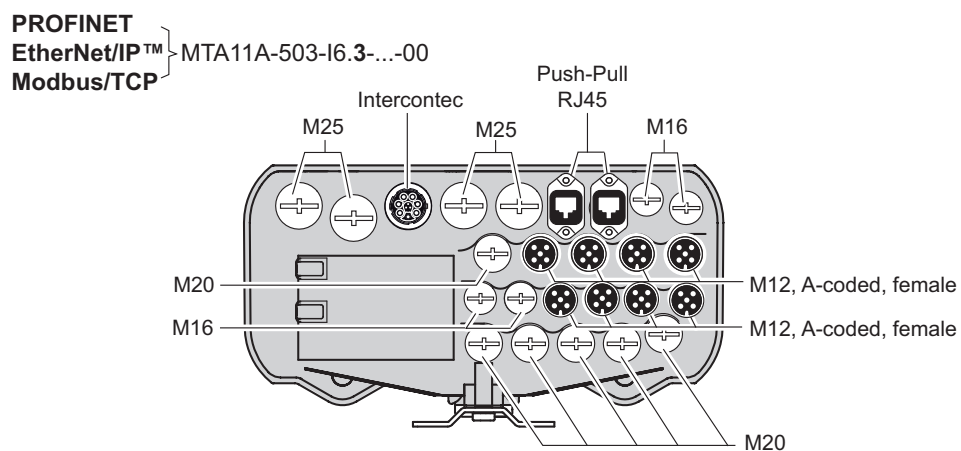
Type	Figure	Contents	Part number
Ethernet closing plug for Push pull RJ45 socket		10 pieces	18223702
		30 pieces	18223710

Variants

The hybrid ABOX is available in the following variants:

- MTA11A-503-I65.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS) and FC (MTF)

The following figure shows the screw fittings and plug connectors of the hybrid ABOX:

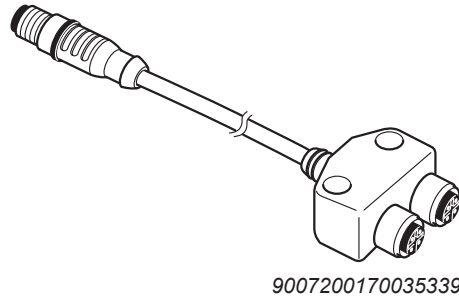


9007204200279563

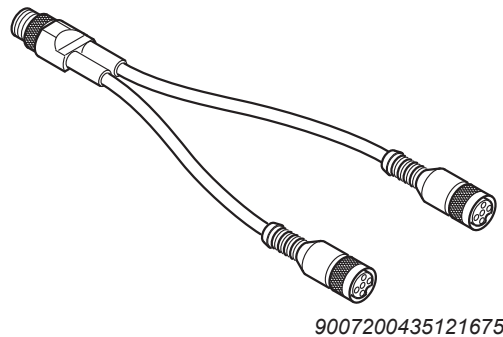
4.9.12 Recommended Y adapter for the hybrid ABOX

For connecting 2 sensors/actuators to an M12 plug connector, use a Y adapter with extension.

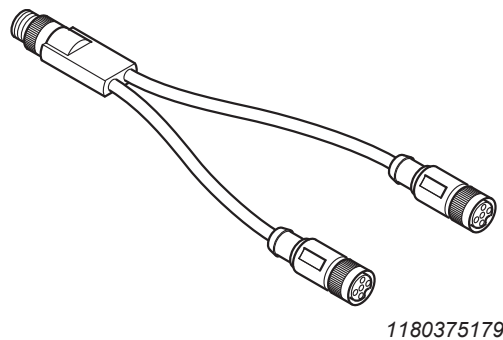
The Y adapter is available from different manufacturers:



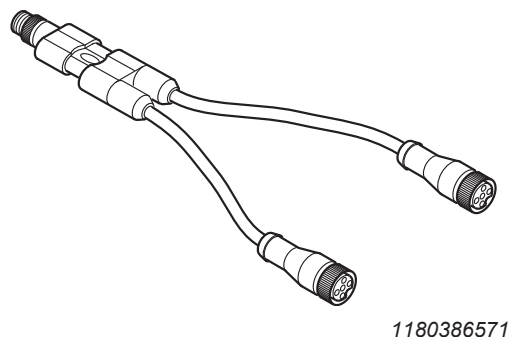
Manufacturer: Escha
Type: WAS4-0,3-2FKM3/..



Manufacturer: Binder
Type: 79 5200..



Manufacturer: Phoenix Contact
Type: SAC-3P-Y-2XFS SCO/.../...
The cable sheath is made of PVC. Provide suitable UV protection.



Manufacturer: Murrelektronik
Type: 7000-40721-..

4.10 Connection options for encoders

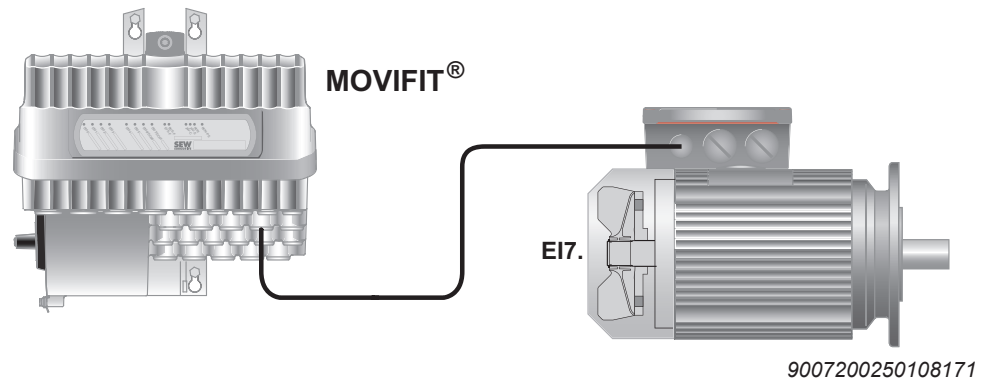
INFORMATION



- MOVIFIT® units in connection with the "Technology" function level offer suitable inputs for connecting, monitoring and evaluating EI7. incremental encoders.
- For detailed information on encoder connection, refer to the relevant MOVIFIT® operating instructions.

4.10.1 Example: EI7. incremental encoder

The following figure shows the connection of the EI7. incremental encoder:



4.10.2 Supported encoders in connection with DR.. motors

EI7. incremental encoder

- The EI7. incremental encoder offers the following features:

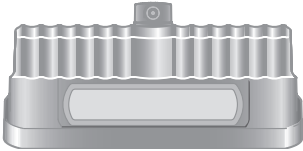
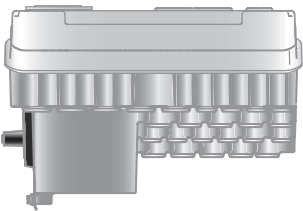
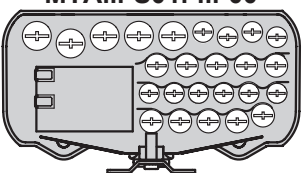
EI71:	1 pulse/revolution	=> 4 increments/revolution ¹⁾
EI72:	2 pulses/revolution	=> 8 increments/revolution ¹⁾
EI76:	6 pulses/revolution	=> 24 increments/revolution ¹⁾
EI7C:	24 pulses/revolution	=> 96 increments/revolution ¹⁾

1) due to 4-fold evaluation
- Encoder monitoring and evaluation is possible with MOVIFIT® "Technology" function level.

4.11 Selection tables

4.11.1 Available combinations for MOVIFIT® MC

MOVIFIT® MC in connection with standard ABOX MTA....S01-....00

	EBOX		ABOX
MC	MTM....-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives		MTA....S01-....00  Standard ABOX with terminals and cable bushings

Function level	Fieldbus	Type of EBOX	Type of ABOX
Classic	PROFIBUS	MTM11A000-P10A-00	MTA11A-503-S011-M..-00
	DeviceNet™	MTM11A000-D10A-00	MTA11A-503-S012-M..-00
	PROFINET	MTM11A000-E20A-00	MTA11A-503-S013-M..-00
Technology	PROFIBUS	MTM11A000-P11A-00	MTA11A-503-S011-M..-00
	PROFINET	MTM11A000-E21A-00	MTA11A-503-S013-M..-00
	EtherNet/IP™ Modbus/TCP	MTM11A000-E31A-00	MTA11A-503-S013-M..-00

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

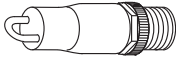
Maintenance switch	Integrated in	Type
Switch disconnecter and line protection	ABOX	MTA....-....- M01 -00 (up to 12 A) ¹⁾ MTA....-....- M14 -00 (up to 9 A) ²⁾ MTA....-....- M15 -00 (up to 12 A) ²⁾

1) For UL only switch disconnecter

2) Only available in connection with UL

Option

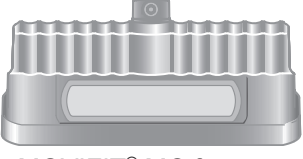
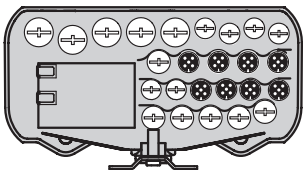
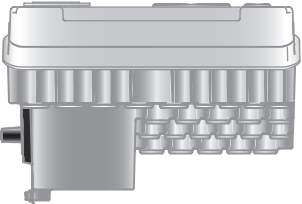
Option	Integrated in	Type
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S

Option	Integrated in	Type
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

MOVIFIT® MC in connection with hybrid ABOX MTA...-S41.-...-00

EBOX

ABOX

MC	MTM...-...-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives	MTA...-S41.-...-00  Hybrid ABOX with M12 for I/Os
		

Function level	Fieldbus	Type of EBOX	Type of ABOX
Classic	PROFIBUS	MTM11A000-P10A-00	MTA11A-503-S411-M..-00
	PROFINET	MTM11A000-E20A-00	MTA11A-503-S413-M..-00
Technology	PROFIBUS	MTM11A000-P11A-00	MTA11A-503-S411-M..-00
	PROFINET	MTM11A000-E21A-00	MTA11A-503-S413-M..-00
	EtherNet/IP™ Modbus/TCP	MTM11A000-E31A-00	MTA11A-503-S413-M..-00

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnecter and line protection	ABOX	MTA...-...-...- M01 -00 (up to 12 A) ¹⁾ MTA...-...-...- M14 -00 (up to 9 A) ²⁾ MTA...-...-...- M15 -00 (up to 12 A) ²⁾

1) For UL only switch disconnecter

2) Only available in connection with UL

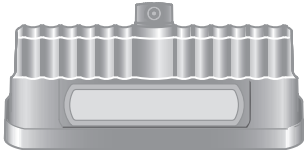
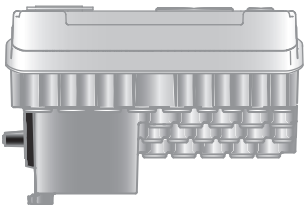
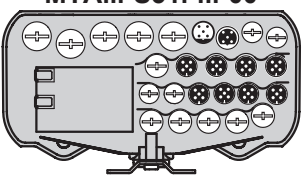
Option

Option	Integrated in	Type
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

MOVIFIT® MC in connection with hybrid ABOX MTA...-S51...-00

EBOX

ABOX

MC	MTM...-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives		MTA...-S51...-00  Hybrid ABOX with M12 for I/Os and bus

Function level	Fieldbus	Type of EBOX	Type of ABOX
Classic	PROFIBUS	MTM11A000-P10A-00	MTA11A-503-S511-M...00
	DeviceNet™	MTM11A000-D10A-00	MTA11A-503-S512-M...00
	PROFINET	MTM11A000-E20A-00	MTA11A-503-S513-M...00
Technology	PROFIBUS	MTM11A000-P11A-00	MTA11A-503-S511-M...00
	PROFINET	MTM11A000-E21A-00	MTA11A-503-S513-M...00
	EtherNet/IP™ Modbus/TCP	MTM11A000-E31A-00	MTA11A-503-S513-M...00

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnecter and line protection	ABOX	MTA...-S51...-M01-00 (up to 12 A) ¹⁾ MTA...-S51...-M14-00 (up to 9 A) ²⁾ MTA...-S51...-M15-00 (up to 12 A) ²⁾

1) For UL only switch disconnecter

2) Only available in connection with UL

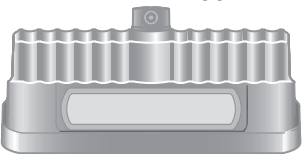
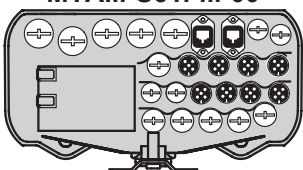
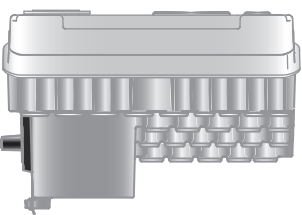
Option

Option	Integrated in	Type
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

MOVIFIT® MC in connection with hybrid ABOX MTA...-S61...-00

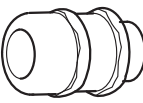
EBOX

ABOX

MC	MTM...-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives	MTA...-S61...-00  Hybrid ABOX with M12 for I/Os and push-pull RJ45 for bus
		

Function level	Fieldbus	Type of EBOX	Type of ABOX
Classic	PROFINET	MTM11A000-E20A-00	MTA11A-503-S613-M...-00
Technology	PROFINET	MTM11A000-E21A-00	MTA11A-503-S613-M...-00
	EtherNet/IP™ Modbus/TCP	MTM11A000-E31A-00	MTA11A-503-S613-M...-00

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

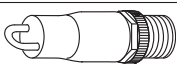
Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnecter and line protection	ABOX	MTA...-...-...- M01 -00 (up to 12 A) ¹⁾ MTA...-...-...- M14 -00 (up to 9 A) ²⁾ MTA...-...-...- M15 -00 (up to 12 A) ²⁾

1) For UL only switch disconnecter

2) Only available in connection with UL

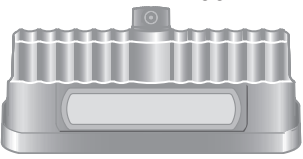
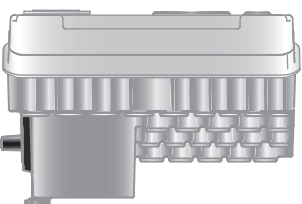
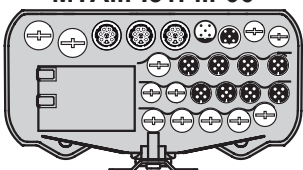
Option

Option	Integrated in	Type
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

MOVIFIT® MC in connection with hybrid ABOX MTA...-S51...-00

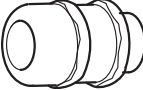
EBOX

ABOX

MC	MTM...-...-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives		MTA...-I51...-00  Hybrid ABOX with 3 circular connectors (Intercontec) (downward motor output), and M12 for I/Os and bus

Function level	Fieldbus	Type of EBOX	Type of ABOX
Classic	PROFIBUS	MTM11A000-P10A-00	MTA11A-503-I511-M...-00
	DeviceNet™	MTM11A000-D10A-00	MTA11A-503-I512-M...-00
	PROFINET	MTM11A000-E20A-00	MTA11A-503-I513-M...-00
Technology	PROFIBUS	MTM11A000-P11A-00	MTA11A-503-I511-M...-00
	PROFINET	MTM11A000-E21A-00	MTA11A-503-I513-M...-00
	EtherNet/IP™ Modbus/TCP	MTM11A000-E31A-00	MTA11A-503-I513-M...-00

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

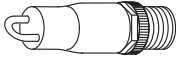
Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnecter and line protection	ABOX	MTA...-...-...- M01 -00 (up to 12 A) ¹⁾ MTA...-...-...- M14 -00 (up to 9 A) ²⁾ MTA...-...-...- M15 -00 (up to 12 A) ²⁾

1) For UL only switch disconnecter

2) Only available in connection with UL

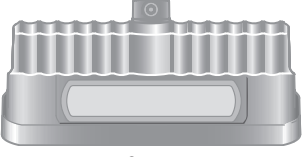
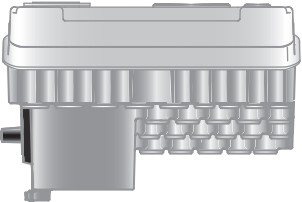
Option

Option	Integrated in	Type
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

MOVIFIT® MC in connection with hybrid ABOX MTA...-I61.-...-00

EBOX

ABOX

MC	MTM...-...-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives	MTA...-I61.-...-00  Hybrid ABOX with 3 circular connectors (Intercontec) (downward motor output), and M12 for I/Os and bus

Function level	Fieldbus	Type of EBOX	Type of ABOX
Classic	PROFINET	MTM11A000-E20A-00	MTA11A-503-I613-M...-00
Technology	PROFINET	MTM11A000-E21A-00	MTA11A-503-I613-M...-00
	EtherNet/IP™ Modbus/TCP	MTM11A000-E31A-00	MTA11A-503-I613-M...-00

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnecter and line protection	ABOX	MTA...-...-...- M01 -00 (up to 12 A) ¹⁾ MTA...-...-...- M14 -00 (up to 9 A) ²⁾ MTA...-...-...- M15 -00 (up to 12 A) ²⁾

1) For UL only switch disconnecter

2) Only available in connection with UL

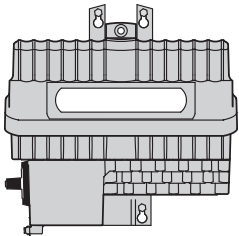
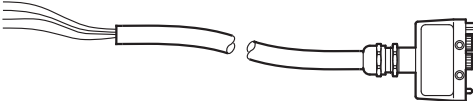
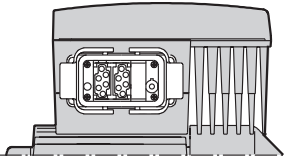
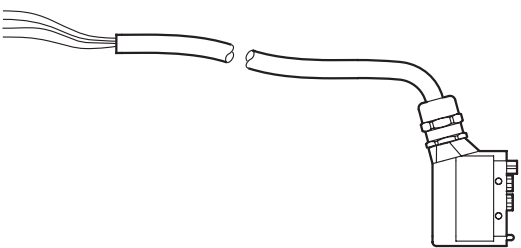
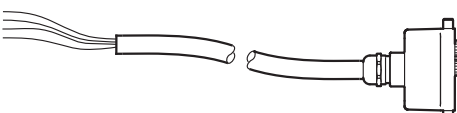
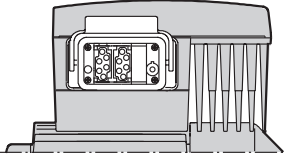
Option

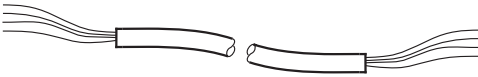
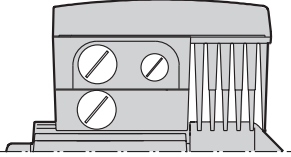
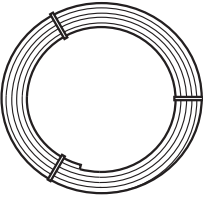
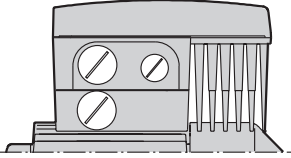
Option	Integrated in	Type
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

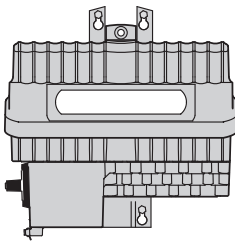
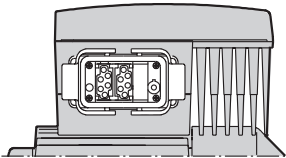
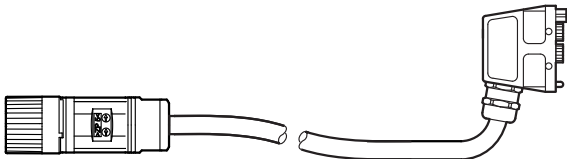
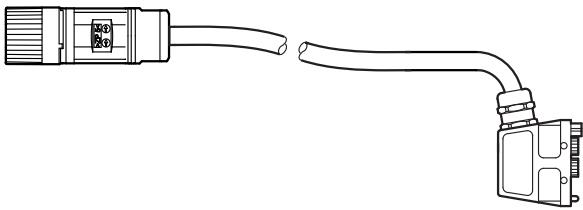
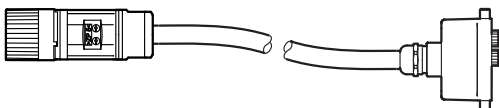
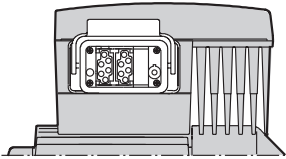
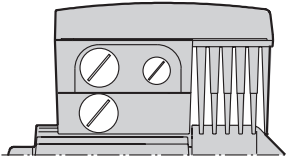
4.11.2 Hybrid cable for connecting MOVIFIT® MC and MOVIMOT®

Overview

Hybrid cables are available for connecting MOVIFIT® MC and MOVIMOT®. The following table lists the available hybrid cables for total currents of up to 12 A (with UL approval only up to 9 A):

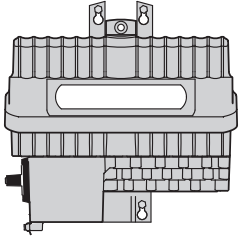
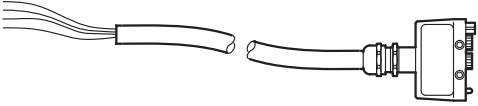
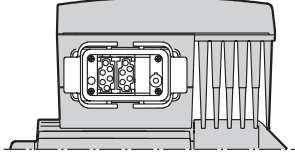
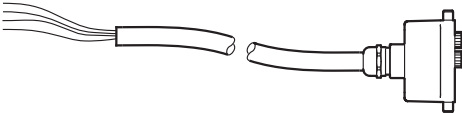
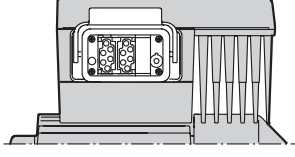
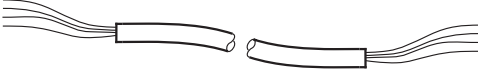
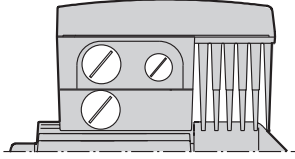
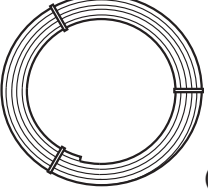
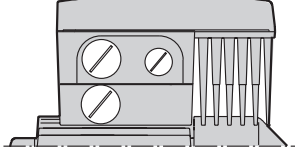
MOVIFIT® MC	Connection cable	Length Type	Drive
Standard ABOX: MTA...-S01.-...-00 Hybrid ABOX: MTA...-S41.-...-00 MTA...-S51.-...-00 MTA...-S61.-...-00 	Part number: 08199655 	variable type B	MOVIMOT® with AMA6 plug connector 
	Part number: 18100554  9007200340340363		
	Part number: 18100562  9007200339769739		
	Part number: 08198713 	variable type B	MOVIMOT® with AMD6 plug connector 

MOVIFIT® MC	Connection cable	Length Type	Drive
	Part number: 08199744 	variable type B	MOVIMOT® with cable glands 
	Part number: 08145172/30 m Part number: 08145172/100 m  (Hybrid cable roll)	30 m 100 m Type B	MOVIMOT® with cable glands 

MOVIFIT® MC	Connection cable	Length Type	Drive
Hybrid ABOX: MTA...-I51.-...-00 MTA...-I61.-...-00 	Part number: 18146155 	variable type B	MOVIMOT® with AMA6 plug connector 
	Part number: 18147348  9007205621179531		
	Part number: 18147321  9007205621164427		
	Part number: 18146171 	variable type B	MOVIMOT® with AMD6 plug connector 
	Part number: 18145213 	variable type B	MOVIMOT® with cable glands 

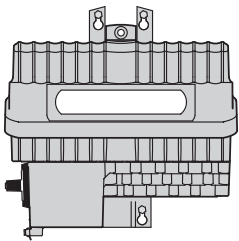
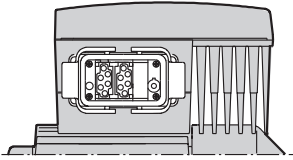
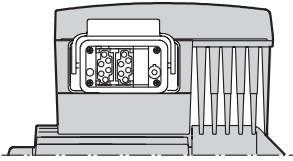
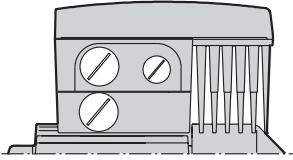
Hybrid cables for UL-compliant installation up to 12 A

The hybrid cables listed in the following table are the only cables permitted for connecting MOVIFIT® MC and MOVIMOT® for use in UL-compliant installation with a total current of up to 12 A:

MOVIFIT® MC	Connection cable	Length Type	Drive
Standard ABOX: MTA...-S01.-...-00 Hybrid ABOX: MTA...-S41.-...-00 MTA...-S51.-...-00 MTA...-S61.-...-00 	Part number: 18112994 	variable type B/2.5	MOVIMOT® with AMA6 plug connector 
	Part number: 18113001 	variable type B/2.5	MOVIMOT® with AMD6 plug connector 
	Part number: 18113036 	variable type B/2.5	MOVIMOT® with cable glands 
	Part number: 13284363/30 m Part number: 13284363/100 m  (Hybrid cable roll)	30 m 100 m Type B/2.5	MOVIMOT® with cable glands 

4 MOVIFIT® MC/SC/FC

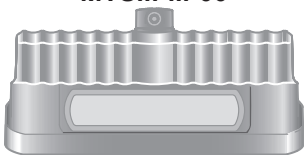
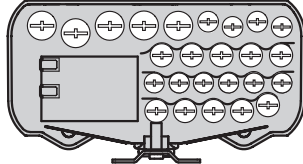
Selection tables

MOVIFIT® MC	Connection cable	Length Type	Drive
Hybrid ABOX: MTA...-I51.-...-00 MTA...-I61.-...-00 	Part number: 18146147 	variable type B/2.5	MOVIMOT® with AMA6 plug connector 
	Part number: 18146163 	variable type B/2.5	MOVIMOT® with AMD6 plug connector 
	Part number: 18145892 	variable type B/2.5	MOVIMOT® with cable glands 

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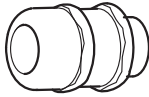
4.11.3 Available combinations for MOVIFIT® SC

MOVIFIT® SC in connection with standard ABOX MTA...-S02...-00

	EBOX	ABOX
SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter	MTA...-S02...-...-00  Standard ABOX with terminals and cable bushings

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFIBUS	1.5 kW	MTS11A015-503-P10A-00	MTA11A-503-S021-00
		3.0 kW	MTS11A030-503-P10A-00	
	DeviceNet™	1.5 kW	MTS11A015-503-D10A-00	MTA11A-503-S022-00
		3.0 kW	MTS11A030-503-D10A-00	
	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-S023-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFIBUS	1.5 kW	MTS11A015-503-P11A-00	MTA11A-503-S021-00
		3.0 kW	MTS11A030-503-P11A-00	
	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-S023-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™ Modbus/TCP	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-S023-00
		3.0 kW	MTS11A030-503-E31A-00	
SBus slave	without	1.5 kW	MTS11A015-503-Z10A-00	MTA11A-503-S021-00
		3.0 kW	MTS11A030-503-Z10A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with standard ABOX and Hygienic^{plus} design

INFORMATION



- IP69K degree of protection is only achieved if the plastic screw plugs delivered as standard are replaced by suitable IP69K screw plugs.
- The screw plugs available from SEW-EURODRIVE are listed on the following pages.

EBOX

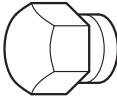
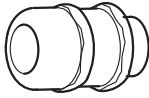
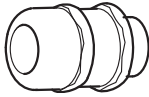
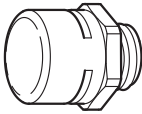
ABOX

SC	MTS12...-...-00 MOVIFIT® SC with integrated motor starter (Hygienic ^{plus} design)	 Standard ABOX with terminals and cable bushings (Hygienic ^{plus} design)

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFIBUS	1.5 kW	MTS12A015-503-P10A-00	MTA12A-503-S021-00
		3.0 kW	MTS12A030-503-P10A-00	
	DeviceNet™	1.5 kW	MTS12A015-503-D10A-00	MTA12A-503-S022-00
		3.0 kW	MTS12A030-503-D10A-00	
	PROFINET	1.5 kW	MTS12A015-503-E20A-00	MTA12A-503-S023-00
		3.0 kW	MTS12A030-503-E20A-00	
Technology	PROFIBUS	1.5 kW	MTS12A015-503-P11A-00	MTA12A-503-S021-00
		3.0 kW	MTS12A030-503-P11A-00	
	PROFINET	1.5 kW	MTS12A015-503-E21A-00	MTA12A-503-S023-00
		3.0 kW	MTS12A030-503-E21A-00	
	EtherNet/IP™	1.5 kW	MTS12A015-503-E31A-00	MTA12A-503-S023-00
		3.0 kW	MTS12A030-503-E31A-00	
SBus slave	without	1.5 kW	MTS12A015-503-Z10A-00	MTA12A-503-S021-00
		3.0 kW	MTS12A030-503-Z10A-00	

Screw fittings/screw plug/pressure compensation

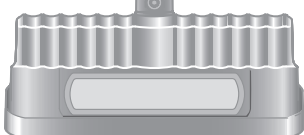
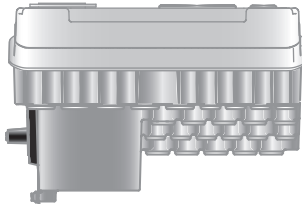
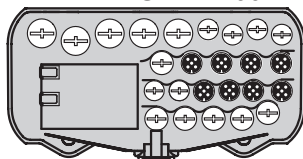
Type of screw fitting	Figure	Contents	Size	Part number
Stainless steel screw plugs		10 pieces	M16 x 1.5	18202233
		10 pieces	M20 x 1.5	18202241
		10 pieces	M25 x 1.5	18202268
M12 screw plug (made of stainless steel)		10 pieces	M12 x 1.0	18202799

Type of screw fitting	Figure	Contents	Size	Part number
M12 screw plug (made of stainless steel)		10 pieces	M12 x 1.0	18202276
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805
EMC cable gland (made of stainless steel)		10 pieces	M16 x 1.5	18216366
		10 pieces	M20 x 1.5	18216374
		10 pieces	M25 x 1.5	18216382
Pressure compensation screw fittings (made of stainless steel)		1 piece	M16 x 1.5	18204090
		1 piece	M20 x 1.5	18204325

MOVIFIT® SC in connection with hybrid ABOX MTA...-S42-...-00

EBOX

ABOX

SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter		MTA...-S42-...-00  Hybrid ABOX with M12 for I/Os

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFIBUS	1.5 kW	MTS11A015-503-P10A-00	MTA11A-503-S421-00
		3.0 kW	MTS11A030-503-P10A-00	
	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-S423-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFIBUS	1.5 kW	MTS11A015-503-P11A-00	MTA11A-503-S421-00
		3.0 kW	MTS11A030-503-P11A-00	
	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-S423-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™ Modbus/TCP	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-S423-00
		3.0 kW	MTS11A030-503-E31A-00	
SBus slave	without	1.5 kW	MTS11A015-503-Z10A-00	MTA11A-503-S421-00
		3.0 kW	MTS11A030-503-Z10A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

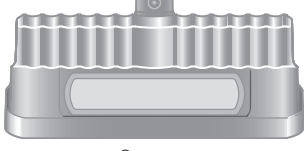
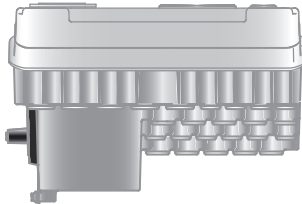
Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with hybrid ABOX MTA...-S52-...-00

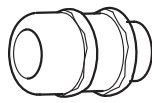
EBOX

ABOX

SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter	 MTA...-S52-...-00 Hybrid ABOX with M12 for I/Os and Bus

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFIBUS	1.5 kW	MTS11A015-503-P10A-00	MTA11A-503-S521-00
		3.0 kW	MTS11A030-503-P10A-00	
	DeviceNet™	1.5 kW	MTS11A015-503-D10A-00	MTA11A-503-S522-00
		3.0 kW	MTS11A030-503-D10A-00	
	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-S523-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFIBUS	1.5 kW	MTS11A015-503-P11A-00	MTA11A-503-S521-00
		3.0 kW	MTS11A030-503-P11A-00	
	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-S523-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-S523-00
	Modbus/TCP	3.0 kW	MTS11A030-503-E31A-00	

Screw fitting

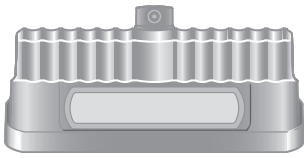
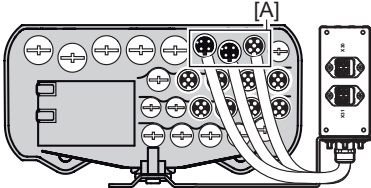
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with hybrid ABOX MTA...-S533-...-00/L10 (POF)

	EBOX	ABOX
SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter	MTA...-S533-...-00/L10  Hybrid ABOX with M12 for I/Os + bus, and 24 V output and L10 SCRJ/POF PROFINET option

[A] The 3 M12 plug connectors (bus + 24 V) for connecting the POF option L10 are assigned at the factory.

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Technology	PROFINET (SCRJ / POF)	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-S533-00/L10
		3.0 kW	MTS11A030-503-E21A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

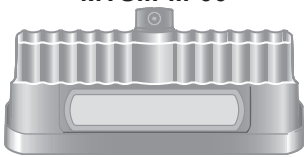
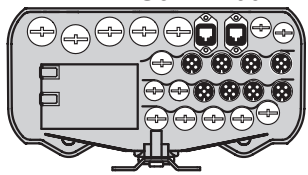
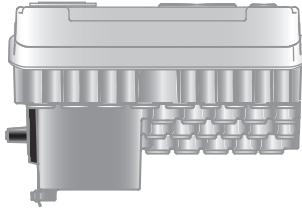
Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with hybrid ABOX MTA...-S62-...-00

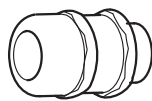
EBOX

ABOX

SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter	MTA...-S62-...-00  Hybrid ABOX with M12 for I/Os and push-pull RJ45 for bus
		

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-S623-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-S623-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-S623-00
	Modbus/TCP	3.0 kW	MTS11A030-503-E31A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

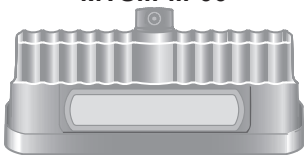
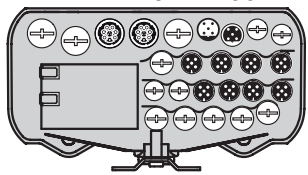
Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with hybrid ABOX MTA...-I52.-...-00

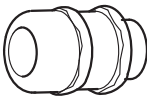
EBOX

ABOX

SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter	 MTA...-I52.-...-00 Hybrid ABOX with 2 circular connectors (Intercontec) (downward motor output), and M12 for I/Os and bus

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFIBUS	1.5 kW	MTS11A015-503-P10A-00	MTA11A-503-I521-00
		3.0 kW	MTS11A030-503-P10A-00	
	DeviceNet™	1.5 kW	MTS11A015-503-D10A-00	MTA11A-503-I522-00
		3.0 kW	MTS11A030-503-D10A-00	
	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-I523-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFIBUS	1.5 kW	MTS11A015-503-P11A-00	MTA11A-503-I521-00
		3.0 kW	MTS11A030-503-P11A-00	
	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-I523-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-I523-00
		3.0 kW	MTS11A030-503-E31A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

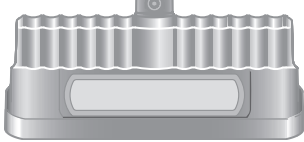
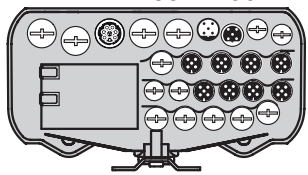
Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with hybrid ABOX MTA...-I55.-...-00

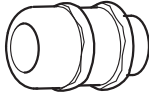
EBOX

ABOX

SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter	MTA...-I55.-...-00  Hybrid ABOX with 1 circular connector (Intercontec) (downward motor output), and M12 for I/Os and bus

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFIBUS	1.5 kW	MTS11A015-503-P10A-00	MTA11A-503-I551-00
		3.0 kW	MTS11A030-503-P10A-00	
	DeviceNet™	1.5 kW	MTS11A015-503-D10A-00	MTA11A-503-I552-00
		3.0 kW	MTS11A030-503-D10A-00	
	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-I553-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFIBUS	1.5 kW	MTS11A015-503-P11A-00	MTA11A-503-I551-00
		3.0 kW	MTS11A030-503-P11A-00	
	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-I553-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-I553-00
		3.0 kW	MTS11A030-503-E31A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

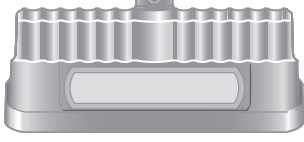
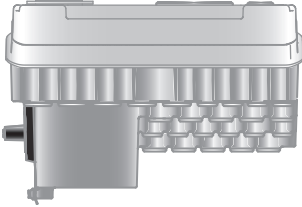
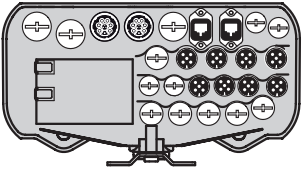
Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with hybrid ABOX MTA...-I62.-...-00

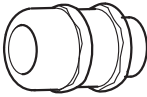
EBOX

ABOX

SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter		MTA...-I62.-...-00  Hybrid ABOX with 2 circular connectors (Intercontec) (downward motor output), and M12 for I/Os and bus

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-I623-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-I623-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-I623-00
	Modbus/TCP	3.0 kW	MTS11A030-503-E31A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

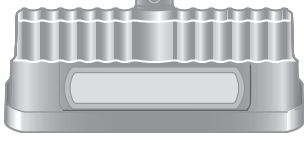
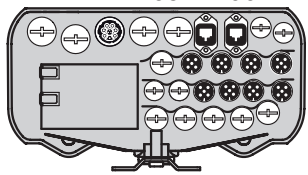
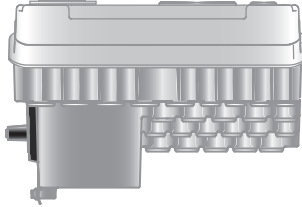
Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

MOVIFIT® SC in connection with hybrid ABOX MTA...-S65-...-00

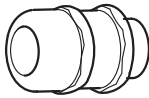
EBOX

ABOX

SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter	 MTA...-I65-...-00 Hybrid ABOX with 1 circular connector (Intercontec) (downward motor output), and M12 for I/Os and push-pull RJ45 for bus
		

Function level	Fieldbus	Unit performance	Type of EBOX	Type of ABOX
Classic	PROFIBUS	1.5 kW	MTS11A015-503-P10A-00	MTA11A-503-I651-00
		3.0 kW	MTS11A030-503-P10A-00	
	DeviceNet™	1.5 kW	MTS11A015-503-D10A-00	MTA11A-503-I652-00
		3.0 kW	MTS11A030-503-D10A-00	
	PROFINET	1.5 kW	MTS11A015-503-E20A-00	MTA11A-503-I653-00
		3.0 kW	MTS11A030-503-E20A-00	
Technology	PROFIBUS	1.5 kW	MTS11A015-503-P11A-00	MTA11A-503-I651-00
		3.0 kW	MTS11A030-503-P11A-00	
	PROFINET	1.5 kW	MTS11A015-503-E21A-00	MTA11A-503-I653-00
		3.0 kW	MTS11A030-503-E21A-00	
	EtherNet/IP™	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-I653-00
		3.0 kW	MTS11A030-503-E31A-00	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) For units with UL, the maintenance switch M12 is mandatory.

Motor requirements in connection with MOVIFIT® SC

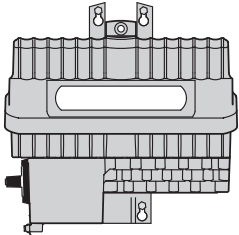
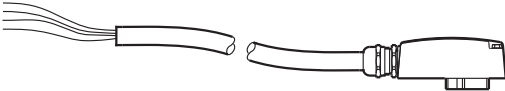
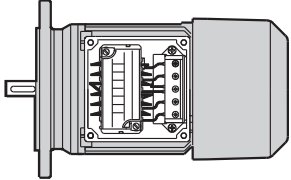
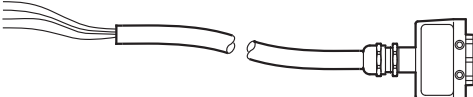
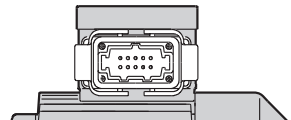
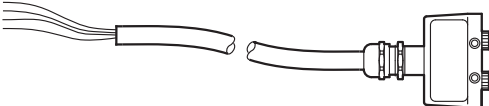
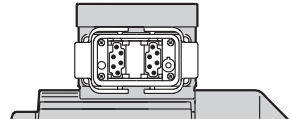
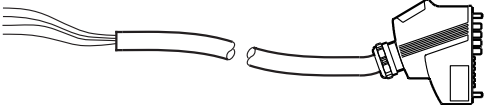
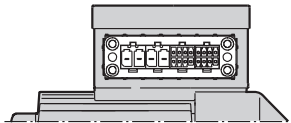
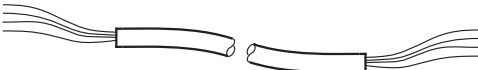
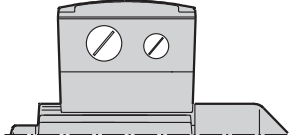
The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications when ordering the drives assigned to MOVIFIT® SC:

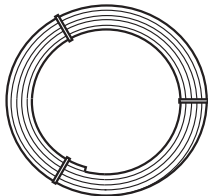
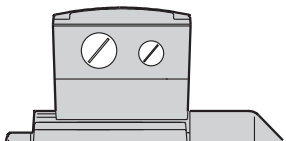
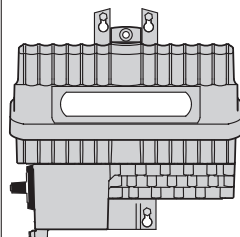
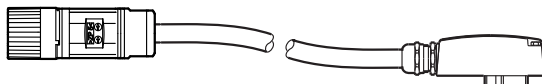
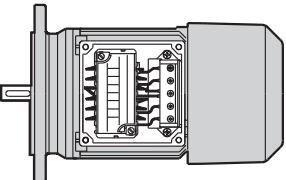
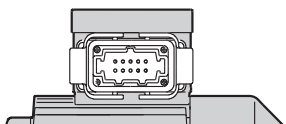
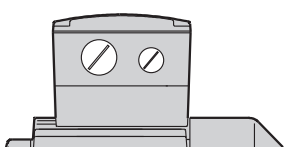
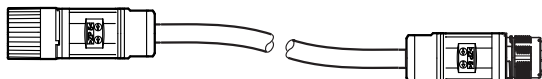
Key features	Requirements for the assigned AC motor
Permitted motors	Motors within the range 0.25 kW to 3 kW are permitted.
Permitted nominal motor voltage	AC 380 V to AC 500 V
Permitted brakes	No restrictions
Permitted brake voltage	In case of brakemotors, the brake voltage must comply with the voltage of the outer conductor. (e.g. 400 V supply system = 400 V brake coil)
Brake rectifier	Always order the assigned motor without brake rectifier .
Permitted plug connectors	The following plug connectors are permitted in connection with the standard or hybrid ABOX: • ISU4 plug connector • ASB4 plug connector • AMB4 plug connector • APG4 plug connector For additional information, refer to chapter "Hybrid cables for connecting MOVIFIT® SC and motors" (→ 171).
Permitted motor protection	• TH thermostat (bimetallic switch) • TF temperature sensor (PTC thermistor or PTC resistor)

4.11.4 Hybrid cables for connecting MOVIFIT® SC and motors

Overview

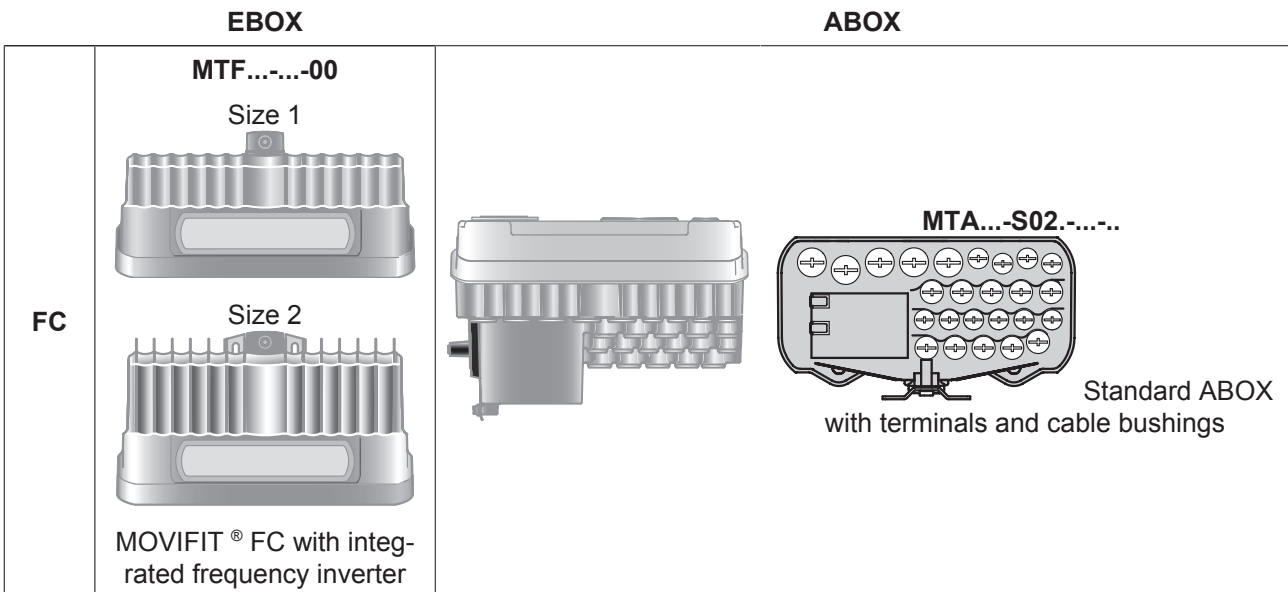
The following hybrid cables are available for connecting MOVIFIT® SC and motor:

MOVIFIT® SC	Connection cable	Length Type	Drive
Standard ABOX: MTA...-S02.-...-00 Hybrid ABOX: MTA...-S42.-...-00 MTA...-S52.-...-00 MTA...-S62.-...-00 	Part number DR63/DT71 – DR90 (⋈): 08199671 Part number DR63/DT71 – DR90 (△): 08199698 	variable Type A	Motor with ISU4 plug connector 
	Part number: 08199728 	variable Type A	Motor with ASB4 plug connector 
	Part number: 08198756 	variable Type A	Motor with AMB4 plug connector 
	Part number: 08199736 	variable Type A	Motor with APG4 plug connector 
	Part no.: DR.71 – 100 (M4 ring cable lug): 08199752 Part no.: DR.112 – 132 (M5 ring cable lug): 18143199 	variable Type A	Motor with cable glands 

MOVIFIT® SC	Connection cable	Length Type	Drive
	Part number: 08179530/30 m Part number: 08179530/100 m  (Hybrid cable roll)	30 m 100 m Type A	Motor with cable glands 
MOVIFIT® SC	Connection cable	Length Type	Drive
Hybrid ABOX: MTA...-I52.-...-00 MTA...-I55.-...-00 MTA...-I62.-...-00 MTA...-I65.-...-00 	Part number DR63 (⌒): 18138411 Part number DR63 (△): 18138438 Part number DR.71 – 132 (⌒): 18138330 Part number DR.71 – 132 (△): 18138365 	variable Type A	Motor with ISU4 plug connector 
	Part number: 18142257 	variable Type A	Motor with ASB4 plug connector 
	Part no.: DR.71 – 100 (M4 ring cable lug): 18141870 Part no.: DR.112 – 132 (M5 ring cable lug): 18142230 	variable Type A	Motor with cable glands 
	Part number: 18141056 (= extension cable) 	variable Type A	Hybrid cable

4.11.5 Available combinations for MOVIFIT® FC

MOVIFIT® FC in connection with standard ABOX MTA...-S02.-...-..

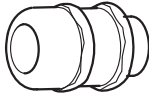


Function level	Fieldbus	Unit performance	Size	Type of EBOX .. = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF11A003-503-P10A-..	MTA11A-503-S021-00 MTA11A-503-S021-30 MTA11A-503-S021-32
		0.55 kW		MTF11A005-503-P10A-..	
		0.75 kW		MTF11A007-503-P10A-..	
		1.1 kW		MTF11A011-503-P10A-..	
		1.5 kW		MTF11A015-503-P10A-..	
		2.2 kW	2	MTF11A022-503-P10A-..	
		3.0 kW		MTF11A030-503-P10A-..	
		4.0 kW		MTF11A040-503-P10A-..	
Classic	DeviceNet™	0.37 kW	1	MTF11A003-503-D10A-..	MTA11A-503-S022-00 MTA11A-503-S022-30 MTA11A-503-S022-33
		0.55 kW		MTF11A005-503-D10A-..	
		0.75 kW		MTF11A007-503-D10A-..	
		1.1 kW		MTF11A011-503-D10A-..	
		1.5 kW		MTF11A015-503-D10A-..	
		2.2 kW	2	MTF11A022-503-D10A-..	
		3.0 kW		MTF11A030-503-D10A-..	
		4.0 kW		MTF11A040-503-D10A-..	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-□	MTA11A-503-S023-00 MTA11A-503-S023-30 MTA11A-503-S023-33
		0.55 kW		MTF11A005-503-E20A-□	
		0.75 kW		MTF11A007-503-E20A-□	
		1.1 kW		MTF11A011-503-E20A-□	
		1.5 kW		MTF11A015-503-E20A-□	
		2.2 kW	2	MTF11A022-503-E20A-□	
		3.0 kW		MTF11A030-503-E20A-□	
		4.0 kW		MTF11A040-503-E20A-□	
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-□	MTA11A-503-S021-00 MTA11A-503-S021-30 MTA11A-503-S021-33
		0.55 kW		MTF11A005-503-P11A-□	
		0.75 kW		MTF11A007-503-P11A-□	
		1.1 kW		MTF11A011-503-P11A-□	
		1.5 kW		MTF11A015-503-P11A-□	
		2.2 kW	2	MTF11A022-503-P11A-□	
		3.0 kW		MTF11A030-503-P11A-□	
		4.0 kW		MTF11A040-503-P11A-□	
Technology	PROFINET	0.37 kW	1	MTF11A003-503-E21A-□	MTA11A-503-S023-00 MTA11A-503-S023-30 MTA11A-503-S023-33
		0.55 kW		MTF11A005-503-E21A-□	
		0.75 kW		MTF11A007-503-E21A-□	
		1.1 kW		MTF11A011-503-E21A-□	
		1.5 kW		MTF11A015-503-E21A-□	
		2.2 kW	2	MTF11A022-503-E21A-□	
		3.0 kW		MTF11A030-503-E21A-□	
		4.0 kW		MTF11A040-503-E21A-□	
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF11A003-503-E31A-□	MTA11A-503-S023-00 MTA11A-503-S023-30 MTA11A-503-S023-33
		0.55 kW		MTF11A005-503-E31A-□	
		0.75 kW		MTF11A007-503-E31A-□	
		1.1 kW		MTF11A011-503-E31A-□	
		1.5 kW		MTF11A015-503-E31A-□	
		2.2 kW	2	MTF11A022-503-E31A-□	
		3.0 kW		MTF11A030-503-E31A-□	
		4.0 kW		MTF11A040-503-E31A-□	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
SBus slave	Without	0.37 kW	1	MTF11A003-503-Z10A-□	MTA11A-503-S021-00
		0.55 kW		MTF11A005-503-Z10A-□	
		0.75 kW		MTF11A007-503-Z10A-□	
		1.1 kW		MTF11A011-503-Z10A-□	
		1.5 kW		MTF11A015-503-Z10A-□	
		2.2 kW	2	MTF11A022-503-Z10A-□	
		3.0 kW		MTF11A030-503-Z10A-□	
		4.0 kW		MTF11A040-503-Z10A-□	

Screw fitting

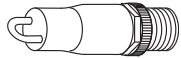
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M11-00 (up to 4 A) ¹⁾
		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../BW1 (Part number 18207057)
		MTF11A003... to MTF11A040.../BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-

- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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MOVIFIT® FC in connection with standard ABOX and Hygienic^{plus} design

INFORMATION

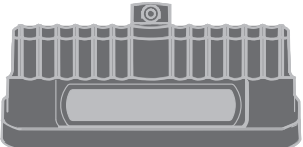
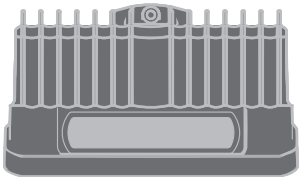
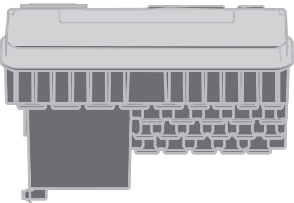
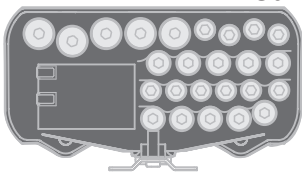


- IP69K degree of protection is only achieved if the plastic screw plugs delivered as standard are replaced by suitable IP69K screw plugs.
- The screw plugs available from SEW-EURODRIVE are listed on the following pages.

4

EBOX

ABOX

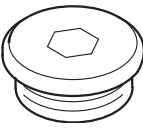
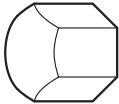
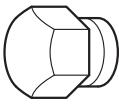
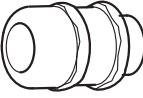
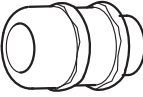
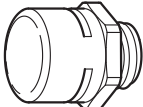
FC	MTF12....-...-00 Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter (Hygienic ^{plus} design)	  MTA12...-S02.-...-.. Standard ABOX with terminals and cable glands (Hygienic ^{plus} design)

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF12A003-503-P10A-□	MTA12A-503-S021-00 MTA12A-503-S021-30 MTA12A-503-S021-33
		0.55 kW		MTF12A005-503-P10A-□	
		0.75 kW		MTF12A007-503-P10A-□	
		1.1 kW		MTF12A011-503-P10A-□	
		1.5 kW		MTF12A015-503-P10A-□	
		2.2 kW	2	MTF12A022-503-P10A-□	
		3.0 kW		MTF12A030-503-P10A-□	
		4.0 kW		MTF12A040-503-P10A-□	

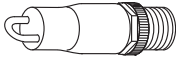
Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	DeviceNet™	0.37 kW	1	MTF12A003-503-D10A-□	MTA12A-503-S022-00 MTA12A-503-S022-30 MTA12A-503-S022-33
		0.55 kW		MTF12A005-503-D10A-□	
		0.75 kW		MTF12A007-503-D10A-□	
		1.1 kW		MTF12A011-503-D10A-□	
		1.5 kW		MTF12A015-503-D10A-□	
		2.2 kW	2	MTF12A022-503-D10A-□	
		3.0 kW		MTF12A030-503-D10A-□	
		4.0 kW		MTF12A040-503-D10A-□	
Classic	PROFINET	0.37 kW	1	MTF12A003-503-E20A-□	MTA12A-503-S023-00 MTA12A-503-S022-30 MTA12A-503-S022-33
		0.55 kW		MTF12A005-503-E20A-□	
		0.75 kW		MTF12A007-503-E20A-□	
		1.1 kW		MTF12A011-503-E20A-□	
		1.5 kW		MTF12A015-503-E20A-□	
		2.2 kW	2	MTF12A022-503-E20A-□	
		3.0 kW		MTF12A030-503-E20A-□	
		4.0 kW		MTF12A040-503-E20A-□	
Technology	PROFIBUS	0.37 kW	1	MTF12A003-503-P11A-□	MTA12A-503-S021-00 MTA12A-503-S021-30 MTA12A-503-S021-33
		0.55 kW		MTF12A005-503-P11A-□	
		0.75 kW		MTF12A007-503-P11A-□	
		1.1 kW		MTF12A011-503-P11A-□	
		1.5 kW		MTF12A015-503-P11A-□	
		2.2 kW	2	MTF12A022-503-P11A-□	
		3.0 kW		MTF12A030-503-P11A-□	
		4.0 kW		MTF12A040-503-P11A-□	
Technology	PROFINET	0.37 kW	1	MTF12A003-503-E21A-□	MTA12A-503-S023-00 MTA12A-503-S023-30 MTA12A-503-S023-33
		0.55 kW		MTF12A005-503-E21A-□	
		0.75 kW		MTF12A007-503-E21A-□	
		1.1 kW		MTF12A011-503-E21A-□	
		1.5 kW		MTF12A015-503-E21A-□	
		2.2 kW	2	MTF12A022-503-E21A-□	
		3.0 kW		MTF12A030-503-E21A-□	
		4.0 kW		MTF12A040-503-E21A-□	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF12A003-503-E31A-□	MTA12A-503-S023-00 MTA12A-503-S023-30 MTA12A-503-S023-33
		0.55 kW		MTF12A005-503-E31A-□	
		0.75 kW		MTF12A007-503-E31A-□	
		1.1 kW		MTF12A011-503-E31A-□	
		1.5 kW		MTF12A015-503-E31A-□	
		2.2 kW	2	MTF12A022-503-E31A-□	
		3.0 kW		MTF12A030-503-E31A-□	
		4.0 kW		MTF12A040-503-E31A-□	
SBus slave	Without	0.37 kW	1	MTF12A003-503-Z10A-□	MTA12A-503-S021-00
		0.55 kW		MTF12A005-503-Z10A-□	
		0.75 kW		MTF12A007-503-Z10A-□	
		1.1 kW		MTF12A011-503-Z10A-□	
		1.5 kW		MTF12A015-503-Z10A-□	
		2.2 kW	2	MTF12A022-503-Z10A-□	
		3.0 kW		MTF12A030-503-Z10A-□	
		4.0 kW		MTF12A040-503-Z10A-□	

Screw fittings/screw plug/pressure compensation

Type of screw fitting	Figure	Contents	Size	Part number
Stainless steel screw plugs		10 pieces	M16 x 1.5	18202233
		10 pieces	M20 x 1.5	18202241
		10 pieces	M25 x 1.5	18202268
M12 screw plug (made of stainless steel)		10 pieces	M12 x 1.0	18202799
M12 screw plug (made of stainless steel)		10 pieces	M12 x 1.0	18202276
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805
EMC cable gland (made of stainless steel)		10 pieces	M16 x 1.5	18216366
		10 pieces	M20 x 1.5	18216374
		10 pieces	M25 x 1.5	18216382
Pressure compensation screw fittings (made of stainless steel)		1 piece	M16 x 1.5	18204090
		1 piece	M20 x 1.5	18204325

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015...:/BW1 (Part number 18207057)
		MTF11A003... to MTF11A040...:/BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

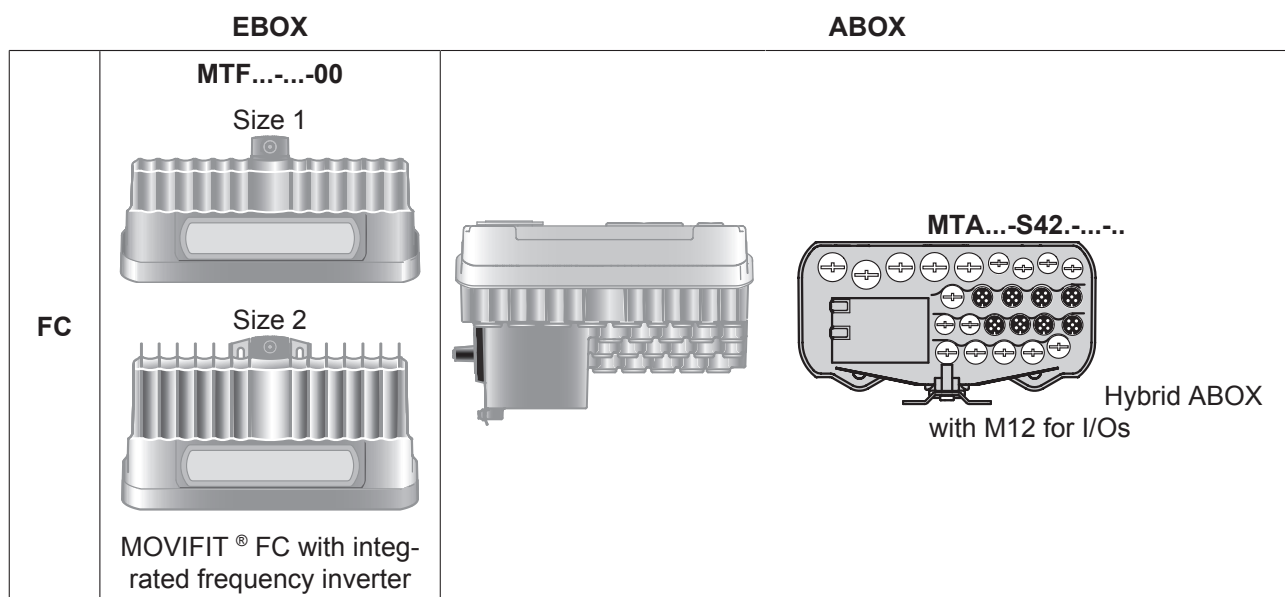
Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-...

- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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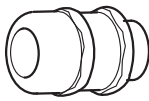
MOVIFIT® FC in connection with hybrid ABOX MTA...-S42.-...-



Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF11A003-503-P10A-□	MTA11A-503-S421-00 MTA11A-503-S421-30 MTA11A-503-S421-33
		0.55 kW		MTF11A005-503-P10A-□	
		0.75 kW		MTF11A007-503-P10A-□	
		1.1 kW		MTF11A011-503-P10A-□	
		1.5 kW		MTF11A015-503-P10A-□	
		2.2 kW	2	MTF11A022-503-P10A-□	
		3.0 kW		MTF11A030-503-P10A-□	
		4.0 kW		MTF11A040-503-P10A-□	
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-□	MTA11A-503-S423-00 MTA11A-503-S423-30 MTA11A-503-S423-33
		0.55 kW		MTF11A005-503-E20A-□	
		0.75 kW		MTF11A007-503-E20A-□	
		1.1 kW		MTF11A011-503-E20A-□	
		1.5 kW		MTF11A015-503-E20A-□	
		2.2 kW	2	MTF11A022-503-E20A-□	
		3.0 kW		MTF11A030-503-E20A-□	
		4.0 kW		MTF11A040-503-E20A-□	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-□	MTA11A-503-S421-00 MTA11A-503-S421-30 MTA11A-503-S421-33
		0.55 kW		MTF11A005-503-P11A-□	
		0.75 kW		MTF11A007-503-P11A-□	
		1.1 kW		MTF11A011-503-P11A-□	
		1.5 kW		MTF11A015-503-P11A-□	
		2.2 kW	2	MTF11A022-503-P11A-□	
		3.0 kW		MTF11A030-503-P11A-□	
		4.0 kW		MTF11A040-503-P11A-□	
Technology	PROFINET	0.37 kW	1	MTF11A003-503-E21A-□	MTA11A-503-S423-00 MTA11A-503-S423-30 MTA11A-503-S423-33
		0.55 kW		MTF11A005-503-E21A-□	
		0.75 kW		MTF11A007-503-E21A-□	
		1.1 kW		MTF11A011-503-E21A-□	
		1.5 kW		MTF11A015-503-E21A-□	
		2.2 kW	2	MTF11A022-503-E21A-□	
		3.0 kW		MTF11A030-503-E21A-□	
		4.0 kW		MTF11A040-503-E21A-□	
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF11A003-503-E31A-□	MTA11A-503-S423-00 MTA11A-503-S423-30 MTA11A-503-S423-33
		0.55 kW		MTF11A005-503-E31A-□	
		0.75 kW		MTF11A007-503-E31A-□	
		1.1 kW		MTF11A011-503-E31A-□	
		1.5 kW		MTF11A015-503-E31A-□	
		2.2 kW	2	MTF11A022-503-E31A-□	
		3.0 kW		MTF11A030-503-E31A-□	
		4.0 kW		MTF11A040-503-E31A-□	
SBus slave	Without	0.37 kW	1	MTF11A003-503-Z10A-□	MTA11A-503-S421-00
		0.55 kW		MTF11A005-503-Z10A-□	
		0.75 kW		MTF11A007-503-Z10A-□	
		1.1 kW		MTF11A011-503-Z10A-□	
		1.5 kW		MTF11A015-503-Z10A-□	
		2.2 kW	2	MTF11A022-503-Z10A-□	
		3.0 kW		MTF11A030-503-Z10A-□	
		4.0 kW		MTF11A040-503-Z10A-□	

Screw fitting

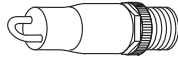
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...- D01-00
Switch disconnecter and line protection		MTA...-...-...- M11-00 (up to 4 A) ¹⁾
		MTA...-...-...- M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../ BW1 (Part number 18207057)
		MTF11A003... to MTF11A040...: /BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

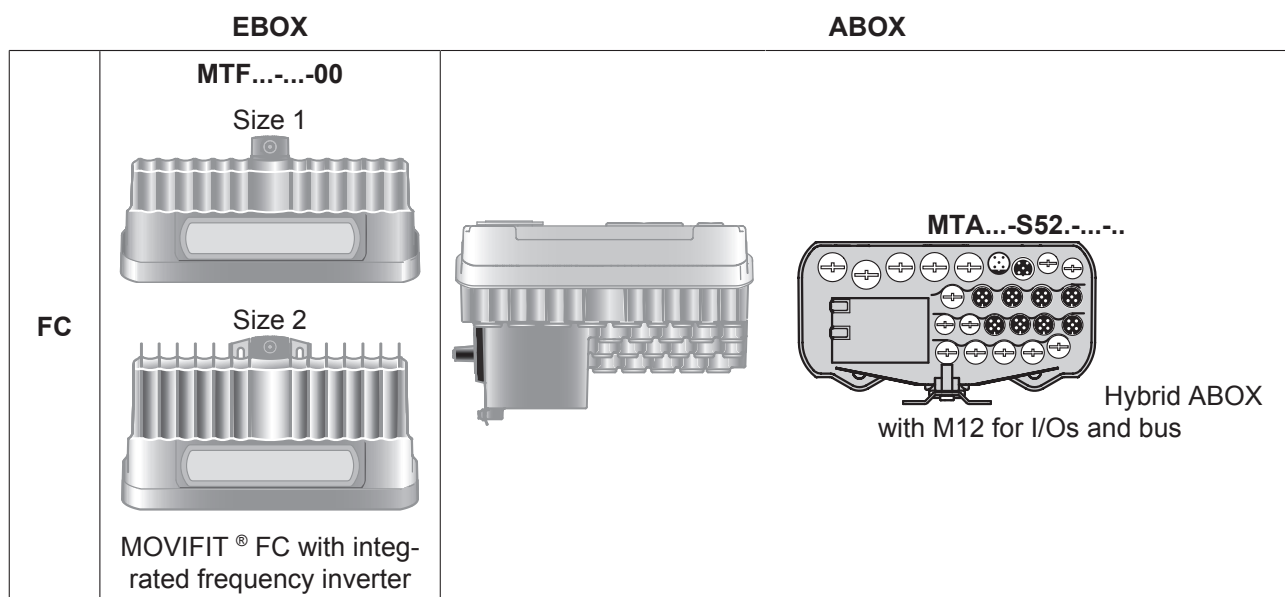
Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-...

- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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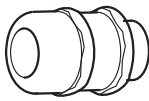
MOVIFIT® FC in connection with hybrid ABOX MTA...-S52.-...-



Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF11A003-503-P10A-□	MTA11A-503-S521-00 MTA11A-503-S521-30 MTA11A-503-S521-33
		0.55 kW		MTF11A005-503-P10A-□	
		0.75 kW		MTF11A007-503-P10A-□	
		1.1 kW		MTF11A011-503-P10A-□	
		1.5 kW		MTF11A015-503-P10A-□	
		2.2 kW	2	MTF11A022-503-P10A-□	
		3.0 kW		MTF11A030-503-P10A-□	
		4.0 kW		MTF11A040-503-P10A-□	
Classic	DeviceNet™	0.37 kW	1	MTF11A003-503-D10A-□	MTA11A-503-S522-00 MTA11A-503-S522-30 MTA11A-503-S522-33
		0.55 kW		MTF11A005-503-D10A-□	
		0.75 kW		MTF11A007-503-D10A-□	
		1.1 kW		MTF11A011-503-D10A-□	
		1.5 kW		MTF11A015-503-D10A-□	
		2.2 kW	2	MTF11A022-503-D10A-□	
		3.0 kW		MTF11A030-503-D10A-□	
		4.0 kW		MTF11A040-503-D10A-□	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-□	MTA11A-503-S523-00 MTA11A-503-S523-30 MTA11A-503-S523-33
		0.55 kW		MTF11A005-503-E20A-□	
		0.75 kW		MTF11A007-503-E20A-□	
		1.1 kW		MTF11A011-503-E20A-□	
		1.5 kW		MTF11A015-503-E20A-□	
		2.2 kW	2	MTF11A022-503-E20A-□	
		3.0 kW		MTF11A030-503-E20A-□	
		4.0 kW		MTF11A040-503-E20A-□	
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-□	MTA11A-503-S521-00 MTA11A-503-S521-30 MTA11A-503-S521-33
		0.55 kW		MTF11A005-503-P11A-□	
		0.75 kW		MTF11A007-503-P11A-□	
		1.1 kW		MTF11A011-503-P11A-□	
		1.5 kW		MTF11A015-503-P11A-□	
		2.2 kW	2	MTF11A022-503-P11A-□	
		3.0 kW		MTF11A030-503-P11A-□	
		4.0 kW		MTF11A040-503-P11A-□	
Technology	PROFINET	0.37 kW	1	MTF11A003-503-E21A-□	MTA11A-503-S523-00 MTA11A-503-S523-30 MTA11A-503-S523-33
		0.55 kW		MTF11A005-503-E21A-□	
		0.75 kW		MTF11A007-503-E21A-□	
		1.1 kW		MTF11A011-503-E21A-□	
		1.5 kW		MTF11A015-503-E21A-□	
		2.2 kW	2	MTF11A022-503-E21A-□	
		3.0 kW		MTF11A030-503-E21A-□	
		4.0 kW		MTF11A040-503-E21A-□	
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF11A003-503-E31A-□	MTA11A-503-S523-00 MTA11A-503-S523-30 MTA11A-503-S523-33
		0.55 kW		MTF11A005-503-E31A-□	
		0.75 kW		MTF11A007-503-E31A-□	
		1.1 kW		MTF11A011-503-E31A-□	
		1.5 kW		MTF11A015-503-E31A-□	
		2.2 kW	2	MTF11A022-503-E31A-□	
		3.0 kW		MTF11A030-503-E31A-□	
		4.0 kW		MTF11A040-503-E31A-□	

Screw fitting

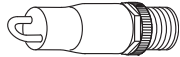
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...- D01-00
Switch disconnecter and line protection		MTA...-...-...- M11-00 (up to 4 A) ¹⁾
		MTA...-...-...- M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../ BW1 (Part number 18207057)
		MTF11A003... to MTF11A040...: /BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-

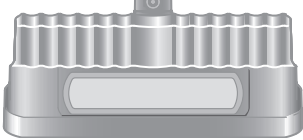
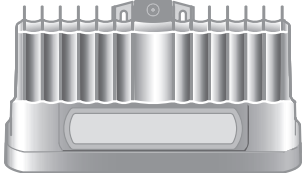
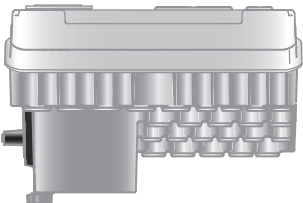
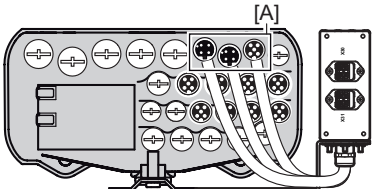
- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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MOVIFIT® FC in connection with hybrid ABOX MTA...-S533-...-00/L10 (POF)

EBOX

ABOX

FC	MTF...-...-00 Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter		MTA...-S533-...-00/L10  Hybrid ABOX with M12 for I/Os + bus, and 24 V output and L10 SCRJ/POF PROFINET option

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Technology	PROFINET (SCRJ/POF)	0.37 kW	1	MTF11A003-503-E21A-□	MTA11A-503-S533-00/L10
		0.55 kW		MTF11A005-503-E21A-□	
		0.75 kW		MTF11A007-503-E21A-□	
		1.1 kW		MTF11A011-503-E21A-□	
		1.5 kW		MTF11A015-503-E21A-□	
		2.2 kW	2	MTF11A022-503-E21A-□	
		3.0 kW		MTF11A030-503-E21A-□	
		4.0 kW		MTF11A040-503-E21A-□	

Screw fitting

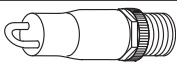
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...- D01-00
Switch disconnecter and line protection		MTA...-...-...- M11-00 (up to 4 A) ¹⁾
		MTA...-...-...- M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../ BW1 (Part number 18207057)
		MTF11A003... to MTF11A040...: /BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-

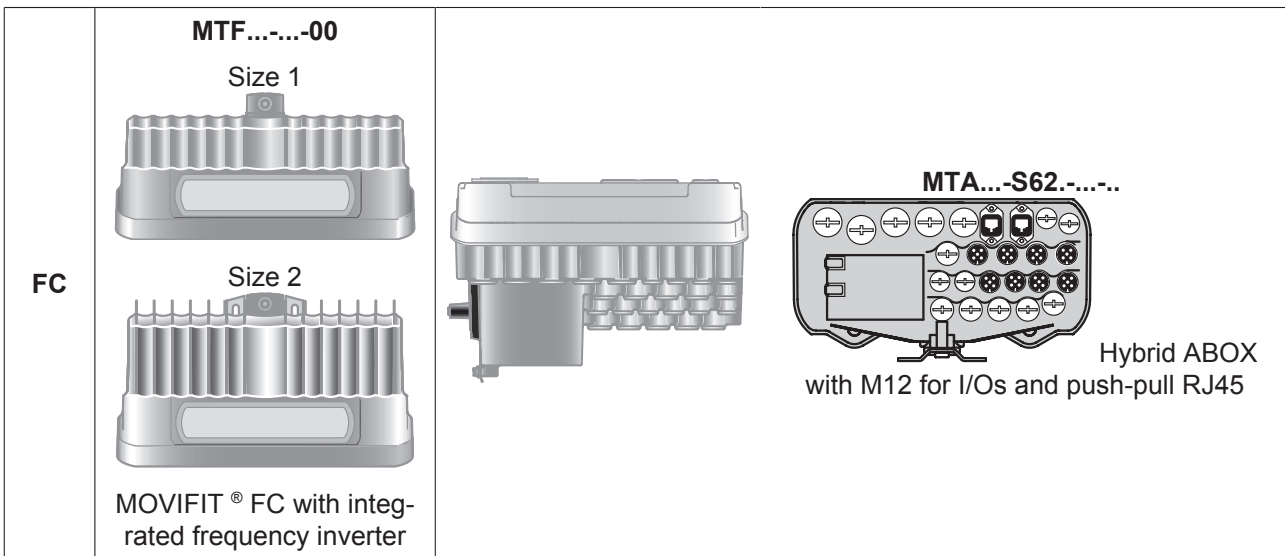
- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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MOVIFIT® FC in connection with hybrid ABOX MTA...-S62.-...-

EBOX

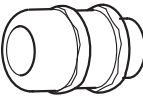
ABOX



Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-□	MTA11A-503-S623-00 MTA11A-503-S623-30 MTA11A-503-S623-33
		0.55 kW		MTF11A005-503-E20A-□	
		0.75 kW		MTF11A007-503-E20A-□	
		1.1 kW		MTF11A011-503-E20A-□	
		1.5 kW		MTF11A015-503-E20A-□	
		2.2 kW	2	MTF11A022-503-E20A-□	
		3.0 kW		MTF11A030-503-E20A-□	
		4.0 kW		MTF11A040-503-E20A-□	
Technology	PROFINET	0.37 kW	1	MTF11A003-503-E21A-□	MTA11A-503-S623-00 MTA11A-503-S623-30 MTA11A-503-S623-33
		0.55 kW		MTF11A005-503-E21A-□	
		0.75 kW		MTF11A007-503-E21A-□	
		1.1 kW		MTF11A011-503-E21A-□	
		1.5 kW		MTF11A015-503-E21A-□	
		2.2 kW	2	MTF11A022-503-E21A-□	
		3.0 kW		MTF11A030-503-E21A-□	
		4.0 kW		MTF11A040-503-E21A-□	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF11A003-503-E31A-□	MTA11A-503-S623-00 MTA11A-503-S623-30 MTA11A-503-S623-33
		0.55 kW		MTF11A005-503-E31A-□	
		0.75 kW		MTF11A007-503-E31A-□	
		1.1 kW		MTF11A011-503-E31A-□	
		1.5 kW		MTF11A015-503-E31A-□	
		2.2 kW	2	MTF11A022-503-E31A-□	
		3.0 kW		MTF11A030-503-E31A-□	
		4.0 kW		MTF11A040-503-E31A-□	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M11-00 (up to 4 A) ¹⁾
		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../BW1 (Part number 18207057)
		MTF11A003... to MTF11A040.../BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-...

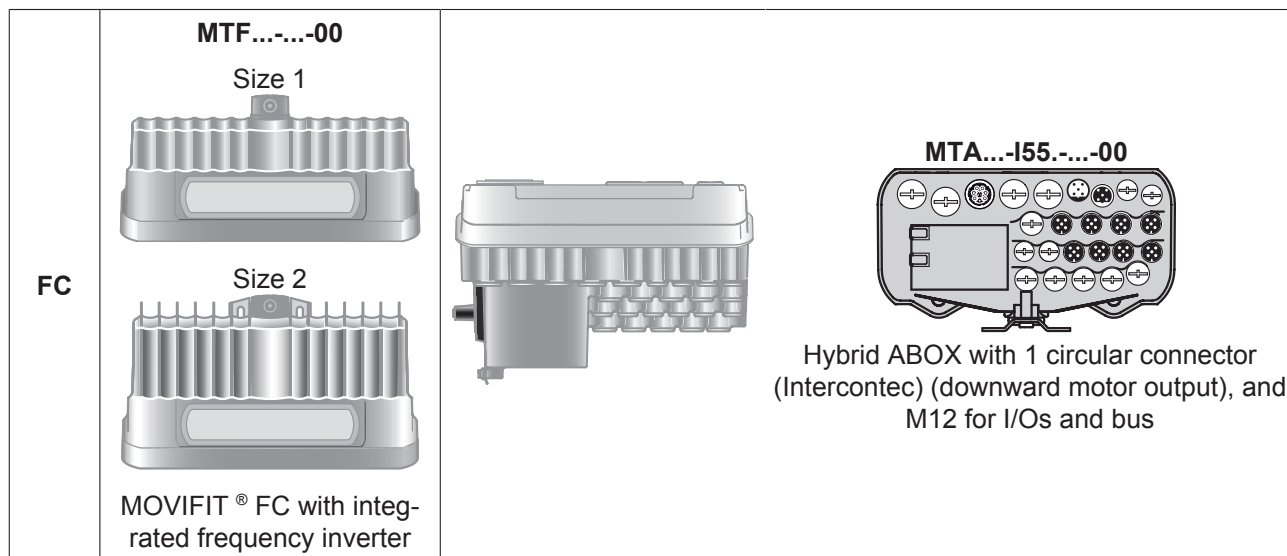
- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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MOVIFIT® F in connection with hybrid ABOX MTA...-I55-...-00

EBOX

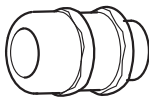
ABOX



Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF11A003-503-P10A-□	MTA11A-503-I551-00
		0.55 kW		MTF11A005-503-P10A-□	
		0.75 kW		MTF11A007-503-P10A-□	
		1.1 kW		MTF11A011-503-P10A-□	
		1.5 kW		MTF11A015-503-P10A-□	
		2.2 kW	2	MTF11A022-503-P10A-□	
		3.0 kW		MTF11A030-503-P10A-□	
		4.0 kW		MTF11A040-503-P10A-□	
Classic	DeviceNet™	0.37 kW	1	MTF11A003-503-D10A-□	MTA11A-503-I552-00
		0.55 kW		MTF11A005-503-D10A-□	
		0.75 kW		MTF11A007-503-D10A-□	
		1.1 kW		MTF11A011-503-D10A-□	
		1.5 kW		MTF11A015-503-D10A-□	
		2.2 kW	2	MTF11A022-503-D10A-□	
		3.0 kW		MTF11A030-503-D10A-□	
		4.0 kW		MTF11A040-503-D10A-□	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-□	MTA11A-503-I553-00
		0.55 kW		MTF11A005-503-E20A-□	
		0.75 kW		MTF11A007-503-E20A-□	
		1.1 kW		MTF11A011-503-E20A-□	
		1.5 kW		MTF11A015-503-E20A-□	
		2.2 kW	2	MTF11A022-503-E20A-□	
		3.0 kW		MTF11A030-503-E20A-□	
		4.0 kW		MTF11A040-503-E20A-□	
Technology	PROFIBUS	0.37 kW	1	MTF11A003-503-P11A-□	MTA11A-503-I551-00
		0.55 kW		MTF11A005-503-P11A-□	
		0.75 kW		MTF11A007-503-P11A-□	
		1.1 kW		MTF11A011-503-P11A-□	
		1.5 kW		MTF11A015-503-P11A-□	
		2.2 kW	2	MTF11A022-503-P11A-□	
		3.0 kW		MTF11A030-503-P11A-□	
		4.0 kW		MTF11A040-503-P11A-□	
Technology	PROFINET	0.37 kW	1	MTF11A003-503-E21A-□	MTA11A-503-I553-00
		0.55 kW		MTF11A005-503-E21A-□	
		0.75 kW		MTF11A007-503-E21A-□	
		1.1 kW		MTF11A011-503-E21A-□	
		1.5 kW		MTF11A015-503-E21A-□	
		2.2 kW	2	MTF11A022-503-E21A-□	
		3.0 kW		MTF11A030-503-E21A-□	
		4.0 kW		MTF11A040-503-E21A-□	
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF11A003-503-E31A-□	MTA11A-503-I553-00
		0.55 kW		MTF11A005-503-E31A-□	
		0.75 kW		MTF11A007-503-E31A-□	
		1.1 kW		MTF11A011-503-E31A-□	
		1.5 kW		MTF11A015-503-E31A-□	
		2.2 kW	2	MTF11A022-503-E31A-□	
		3.0 kW		MTF11A030-503-E31A-□	
		4.0 kW		MTF11A040-503-E31A-□	

Screw fitting

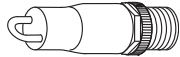
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...- D01-00
Switch disconnecter and line protection		MTA...-...-...- M11-00 (up to 4 A) ¹⁾
		MTA...-...-...- M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../ BW1 (Part number 18207057)
		MTF11A003... to MTF11A040...: /BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-...

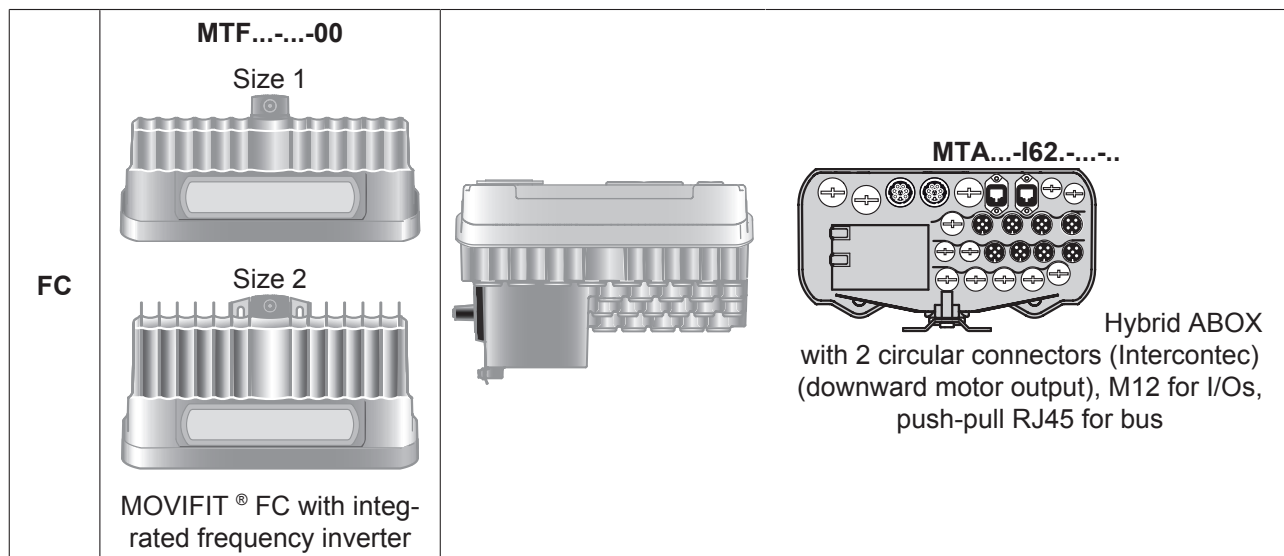
- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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MOVIFIT® FC in connection with hybrid ABOX MTA...-I62-...-...

EBOX

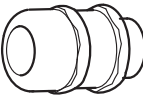
ABOX



Function level	Fieldbus	Unit performance	Size	Type of EBOX .. = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-..	MTA11A-503-I623-30 MTA11A-503-I623-33
		0.55 kW		MTF11A005-503-E20A-..	
		0.75 kW		MTF11A007-503-E20A-..	
		1.1 kW		MTF11A011-503-E20A-..	
		1.5 kW		MTF11A015-503-E20A-..	
		2.2 kW	2	MTF11A022-503-E20A-..	
		3.0 kW		MTF11A030-503-E20A-..	
		4.0 kW		MTF11A040-503-E20A-..	
Technology	PROFINET	0.37 kW	1	MTF11A003-503-E21A-..	MTA11A-503-I623-30 MTA11A-503-I623-33
		0.55 kW		MTF11A005-503-E21A-..	
		0.75 kW		MTF11A007-503-E21A-..	
		1.1 kW		MTF11A011-503-E21A-..	
		1.5 kW		MTF11A015-503-E21A-..	
		2.2 kW	2	MTF11A022-503-E21A-..	
		3.0 kW		MTF11A030-503-E21A-..	
		4.0 kW		MTF11A040-503-E21A-..	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF11A003-503-E31A-□	MTA11A-503-I623-30 MTA11A-503-I623-33
		0.55 kW		MTF11A005-503-E31A-□	
		0.75 kW		MTF11A007-503-E31A-□	
		1.1 kW		MTF11A011-503-E31A-□	
		1.5 kW		MTF11A015-503-E31A-□	
		2.2 kW	2	MTF11A022-503-E31A-□	
		3.0 kW		MTF11A030-503-E31A-□	
		4.0 kW		MTF11A040-503-E31A-□	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M11-00 (up to 4 A) ¹⁾
		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../BW1 (Part number 18207057)
		MTF11A003... to MTF11A040.../BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX
MTF11A003-503-E20A-

..

10 = DRS 400 V, 50 Hz

11 = DRE 400 V, 50 Hz

12 = DRS 460 V, 60 Hz

13 = DRE 460 V, 60 Hz

14 = DRS-DRE 380 V, 60 Hz

15 = DRS-DRE 50 – 60 Hz

16 = DRP 400 V, 50 Hz

17 = DRP 460 V, 60 Hz

18 = DRN 400 V, 50 Hz

19 = DRN 460 V, 60 Hz

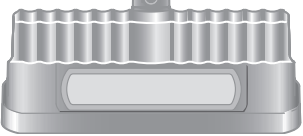
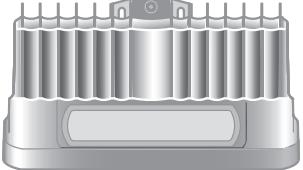
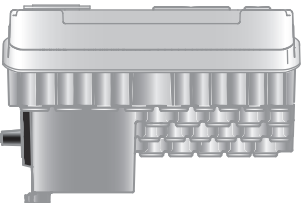
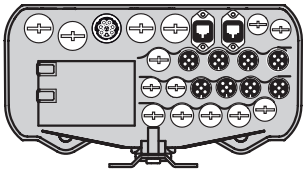
20 = DRN 50 – 60 Hz

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MOVIFIT® FC in connection with hybrid ABOX MTA...-l65-...-00

EBOX

ABOX

FC	MTF...-...-00 Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter		MTA...-l65-...-00  Hybrid ABOX with 1 circular connector (Intercontec) (downward motor output), and M12 for I/Os and push-pull RJ45 for bus

Function level	Fieldbus	Unit performance	Size	Type of EBOX .. = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-..	MTA11A-503-l653-00
		0.55 kW		MTF11A005-503-E20A-..	
		0.75 kW		MTF11A007-503-E20A-..	
		1.1 kW		MTF11A011-503-E20A-..	
		1.5 kW		MTF11A015-503-E20A-..	
		2.2 kW	2	MTF11A022-503-E20A-..	
		3.0 kW		MTF11A030-503-E20A-..	
		4.0 kW		MTF11A040-503-E20A-..	
Technology	PROFINET	0.37 kW	1	MTF11A003-503-E21A-..	MTA11A-503-l653-00
		0.55 kW		MTF11A005-503-E21A-..	
		0.75 kW		MTF11A007-503-E21A-..	
		1.1 kW		MTF11A011-503-E21A-..	
		1.5 kW		MTF11A015-503-E21A-..	
		2.2 kW	2	MTF11A022-503-E21A-..	
		3.0 kW		MTF11A030-503-E21A-..	
		4.0 kW		MTF11A040-503-E21A-..	

Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF11A003-503-E31A-□	MTA11A-503-I653-00
		0.55 kW		MTF11A005-503-E31A-□	
		0.75 kW		MTF11A007-503-E31A-□	
		1.1 kW		MTF11A011-503-E31A-□	
		1.5 kW		MTF11A015-503-E31A-□	
		2.2 kW	2	MTF11A022-503-E31A-□	
		3.0 kW		MTF11A030-503-E31A-□	
		4.0 kW		MTF11A040-503-E31A-□	

Screw fitting

Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 x 1.5	18204783
		10 pieces	M20 x 1.5	18204791
		10 pieces	M25 x 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnecter	ABOX	MTA...-...-...-D01-00
Switch disconnecter and line protection		MTA...-...-...-M11-00 (up to 4 A) ¹⁾
		MTA...-...-...-M12-00 (up to 9 A) ¹⁾

1) Only available in connection with UL

Option

Option	Integrated in	Type
Integrated braking resistor For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).	ABOX	MTF11A003... to MTF11A015.../BW1 (Part number 18207057)
		MTF11A003... to MTF11A040.../BW2 (Part number 18207545)
S12A safety option	EBOX	/S12A
S12B safety option		/S12B
STO pluggable (M12)	ABOX	/00S, /M1S or /M2S
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

External braking resistors

The following table shows the assignments of external braking resistors to MOVIFIT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

Braking resistor	MOVIFIT® type	Part number	Protective grid
BW200-003/K-1.5	MTF11A003... to MTF11A015...	08282919	0813152X
BW200-005/K-1.5		08282838	-
BW150-006-T		17969565	-
BW100-003/K-1.5	MTF11A022... to MTF11A040...	08282935	0813152X
BW100-005/K-1.5		08282862	-
BW068-006-T		17970008	-
BW068-012-T		17970016	-

Motor assignment

Depending on the motor used, you have to complete the order designations for the MOVIFIT® EBOX listed in the selection tables as follows:

MOVIFIT®-EBOX MTF11A003-503-E20A-...

- 10 = DRS 400 V, 50 Hz
- 11 = DRE 400 V, 50 Hz
- 12 = DRS 460 V, 60 Hz
- 13 = DRE 460 V, 60 Hz
- 14 = DRS-DRE 380 V, 60 Hz
- 15 = DRS-DRE 50 – 60 Hz
- 16 = DRP 400 V, 50 Hz
- 17 = DRP 460 V, 60 Hz
- 18 = DRN 400 V, 50 Hz
- 19 = DRN 460 V, 60 Hz
- 20 = DRN 50 – 60 Hz

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Motor requirements in connection with MOVIFIT® FC

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications when ordering the drives assigned to MOVIFIT® FC:

Key features	Requirements for the assigned AC motor
Permitted motors and brakes	All motors and brakes listed in chapter "Assignment of MOVIFIT® FC to SEW-EURODRIVE AC motor" (→ 207) are approved.
Preferred brake voltage	- Size 1 (MTF11A003.. to MTF11A015..): 230 V - Size 2 (MTF11A022.. to MTF11A040..): 120 V
Brake rectifier	Always order the assigned motor without brake rectifier .
Permitted plug connectors	The following plug connectors are permitted in connection with the standard or hybrid ABOX: - ISU4 plug connector - ASB4 plug connector - AMB4 plug connector - APG4 plug connector For further information, refer to chapter "Hybrid cables for connecting MOVIFIT® FC and motors" (→ 212).
Permitted motor protection	- TH thermostat (bimetallic switch) - TF temperature sensor (PTC thermistor or PTC resistor)
Permitted encoder system	In connection with DR.. motors: - EI71 incremental encoder - EI72 incremental encoder - EI76 incremental encoder - EI7C incremental encoder Can be evaluated in connection with MOVIFIT® function level Technology. For additional information, refer to chapter "Connection options for encoders" (→ 146).

Assignment of MOVIFIT® FC to SEW-EURODRIVE AC motor

INFORMATION



- As a standard, i.e. when MOVIFIT® FC in Easy mode is parameterized via DIP switches, the following motor/brake combinations can be started up with the corresponding MOVIFIT® FC (see tables below).
- For the regenerative current-carrying capacity of the brake coils, refer to chapter "4Q operation with motors with mechanical brake" (→ 359).
- The expanded parameterization in Expert mode via fieldbus or diagnostic interface allows for additional motor/brake combinations. For additional information, refer to the manual "MOVIFIT® Function Level Classic..." or "MOVIFIT® Function Level Technology...".

MTF...-10 and MTF...-12

DRS V = AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Λ connection			Δ connection			Λ connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-10 MTF...003...-12	DRS71S4	BE05	BE1	DR63L4	BR03	-	DR63L4	BR03	-	-	-	-
MTF...005...-10 MTF...005...-12	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1	DRS71S4	BE05	BE1	DR63L4	BR03	-
MTF...007...-10 MTF...007...-12	DRS80S4	BE1	BE05	DRS71M4	BE1	BE05	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1
MTF...011...-10 MTF...011...-12	DRS80M4	BE2	BE1	DRS80S4	BE1	BE05	DRS80S4	BE1	BE05	DRS71M4	BE1	BE05
MTF...015...-10 MTF...015...-12	DRS90M4	BE2	BE1	DRS80M4	BE2	BE1	DRS80M4	BE2	BE1	DRS80S4	BE1	BE05
MTF...022...-10 MTF...022...-12	DRS90L4	BE5	BE2	DRS90M4	BE2	BE1	DRS90M4	BE2	BE1	DRS80M4	BE2	BE1
MTF...030...-10 MTF...030...-12	DRS100M4	BE5	BE2	DRS90L4	BE5	BE2	DRS90L4	BE5	BE2	DRS90M4	BE2	BE1
MTF...040...-10 MTF...040...-12	DRS100LC4	BE5	BE2	DRS100M4	BE5	BE2	DRS100M4	BE5	BE2	DRS90L4	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V

MTF...-11 and MTF...-13

DRE V = AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Y connection			Δ connection			Y connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-11 MTF...003...-13	DRE80S4 0.37 kW	BE05	BE1	DRE80S4 0.25 kW	BE05	BE1	DRE80S4 0.25 kW	BE05	BE1	-	-	-
MTF...005...-11 MTF...005...-13	DRE80M4 0.55 kW	BE1	BE05	DRE80S4 0.37 kW	BE05	BE1	DRE80S4 0.37 kW	BE05	BE1	DRE80S4 0.25 kW	BE05	BE1
MTF...007...-11 MTF...007...-13	DRE80M4 0.75 kW	BE1	BE05	DRE80M4 0.55 kW	BE1	BE05	DRE80M4 0.55 kW	BE1	BE05	DRE80S4 0.37 kW	BE5	BE1
MTF...011...-11 MTF...011...-13	DRE90M4	BE2	BE1	DRE80M4 0.75 kW	BE1	BE05	DRE80M4 0.75 kW	BE1	BE05	DRE80M4 0.55 kW	BE1	BE05
MTF...015...-11 MTF...015...-13	DRE90L4	BE2	BE1	DRE90M4	BE2	BE1	DRE90M4	BE2	BE1	DRE80M4 0.75 kW	BE1	BE05
MTF...022...-11 MTF...022...-13	DRE100M4	BE5	BE2	DRE90L4	BE2	BE1	DRE90L4	BE2	BE1	DRE90M4	BE2	BE1
MTF...030...-11 MTF...030...-13	DRE100LC4	BE5	BE2	DRE100M4	BE5	BE2	DRE100M4	BE5	BE2	DRE90L4	BE2	BE1
MTF...040...-11 MTF...040...-13	DRE132S4	BE5	BE11	DRE100LC4	BE5	BE2	DRE100LC4	BE5	BE2	DRE10M4	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V

MTF...-14

DRS – DRE V = AC 3 x 380 V, 60 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Y connection			Δ connection			Y connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-14	DRS71S4	BE05	BE1	-	-	-	-	-	-	-	-	-
MTF...005...-14	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1	DRS71S4	BE05	BE1	-	-	-
MTF...007...-14	DRE80S4	BE1	BE05	DRS71M4	BE1	BE05	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1
MTF...011...-14	DRE80M4	BE2	BE1	DRE80S4	BE1	BE05	DRE80S4	BE1	BE05	DRS71M4	BE1	BE05
MTF...015...-14	DRE90M4	BE2	BE1	DRE80M4	BE2	BE1	DRE80M4	BE2	BE1	DRE80S4	BE1	BE05
MTF...022...-14	DRE90L4	BE5	BE2	DRE90M4	BE2	BE1	DRE90M4	BE2	BE1	DRE80M4	BE2	BE1
MTF...030...-14	DRE100M4	BE5	BE2	DRE90L4	BE5	BE2	DRE90L4	BE5	BE2	DRE90M4	BE2	BE1
MTF...040...-14	DRE100L4	BE5	BE2	DRE100M4	BE5	BE2	DRE100M4	BE5	BE2	DRE90L4	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V

MTF...-15

DRS – DRE V = AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Δ connection			Δ connection			Δ connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-15	DRS71S4	BE05	BE1	DR63L4 ²⁾	BR03	BR03	DR63L4 ²⁾	BR03	BR03	-	-	-
MTF...005...-15	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1	DRS71S4	BE05	BE1	DR63L4 ²⁾	BR03	BR03
MTF...007...-15	DRE80M4	BE1	BE05	DRS71M4	BE1	BE05	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1
MTF...011...-15	DRE90M4	BE2	BE1	DRE80M4	BE1	BE05	DRE80M4	BE1	BE05	DRS71M4	BE1	BE05
MTF...015...-15	DRE90L4	BE2	BE1	DRE90M4	BE2	BE1	DRE90M4	BE2	BE1	DRE80M4	BE1	BE05
MTF...022...-15	DRE100L4	BE5	BE2	DRE90L4	BE2	BE1	DRE90L4	BE2	BE1	DRE90M4	BE2	BE1
MTF...030...-15	DRE100LC4	BE5	BE2	DRE100 L4	BE5	BE2	DRE100 L4	BE5	BE2	DRE90 L4	BE2	BE1
MTF...040...-15	DRE132S4	BE5	BE11	DRE100LC4	BE5	BE2	DRE100LC4	BE5	BE2	DRE100L4	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V

2) This motor is included in the data set. The motor is only available as IEC motor with V = 3 x 400 V, 50 Hz (no motor with 50/60 Hz voltage range).

MTF...-16

DRP V = AC 3 x 400 V, 50 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Δ connection			Δ connection			Δ connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-16	-	-	-	-	-	-	-	-	-	-	-	-
MTF...005...-16	-	-	-	-	-	-	-	-	-	-	-	-
MTF...007...-16	DRP90M4	BE1	BE2	-	-	-	-	-	-	-	-	-
MTF...011...-16	DRP90L4	BE2	BE1	DRP90M4	BE1	BE2	DRP90M4	BE1	BE2	-	-	-
MTF...015...-16	DRP100M4	BE2	BE5	DRP90L4	BE2	BE1	DRP90L4	BE2	BE1	DRP90M4	BE1	BE2
MTF...022...-16	DRP100L4	BE5	BE2	DRP100M4	BE2	BE5	DRP100M4	BE2	BE5	DRP90L4	BE2	BE1
MTF...030...-16	DRP112M4	BE5	BE11	DRP100L4	BE5	BE2	DRP100L4	BE5	BE2	DRP100M4	BE2	BE5
MTF...040...-16	DRP132M4	BE5	BE11	DRP112M4	BE5	BE11	DRP112M4	BE5	BE11	DRP100L4	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V

MTF...-17

DRP V = AC 3 x 460 V, 60 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Λ connection			Δ connection			Λ connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-17	-	-	-	-	-	-	-	-	-	-	-	-
MTF...005...-17	-	-	-	-	-	-	-	-	-	-	-	-
MTF...007...-17	DRP90M4	BE1	BE2	-	-	-	-	-	-	-	-	-
MTF...011...-17	DRP90L4 1.1 kW	BE2	BE1	DRP90M4	BE1	BE2	DRP90M4	BE1	BE2	-	-	-
MTF...015...-17	DRP90L4 1.5 kW	BE2	BE1	DRP90L4 1.1 kW	BE2	BE1	DRP90L4 1.1 kW	BE2	BE1	DRP90M4	BE1	BE2
MTF...022...-17	DRP112M4	BE5	BE11	DRP90L4 1.5 kW	BE2	BE1	DRP90L4 1.5 kW	BE2	BE1	DRP90L4 1.1 kW	BE2	BE1
MTF...030...-17	DRP132S4	BE5	BE11	DRP112M4	BE5	BE11	DRP112M4	BE5	BE11	DRP90L4 1.5 kW	BE2	BE1
MTF...040...-17	-	-	-	-	-	-	DRP132S4	BE5	BE11	DRP112M4	BE5	BE11

1) Possible brake voltages: 120 V, 230 V, 400 V

MTF...-18

DRN V = AC 3 x 400 V, 50 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Λ connection			Δ connection			Λ connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-18	-	-	-	-	-	-	-	-	-	-	-	-
MTF...005...-18	-	-	-	-	-	-	-	-	-	-	-	-
MTF...007...-18	DRN80M4	BE1	BE05	-	-	-	-	-	-	-	-	-
MTF...011...-18	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05	DRN80M4	BE1	BE05	-	-	-
MTF...015...-18	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05
MTF...022...-18	DRN100LS4	BE5	BE2	DRN90L4	BE2	BE1	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1
MTF...030...-18	DRN100L4	BE5	BE2	DRN100LS4	BE5	BE2	DRN100LS4	BE5	BE2	DRN90L4	BE2	BE1
MTF...040...-18	DRN112M4	BE5	BE11	DRN100L4	BE5	BE2	DRN100L4	BE5	BE2	DRN100LS4	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V

MTF...-19

DRN V = AC 3 x 460 V, 60 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Λ connection			Δ connection			Λ connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-19	-	-	-	-	-	-	-	-	-	-	-	-
MTF...005...-19	-	-	-	-	-	-	-	-	-	-	-	-
MTF...007...-19	DRN80M4	BE1	BE05	-	-	-	-	-	-	-	-	-
MTF...011...-19	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05	DRN80M4	BE1	BE05	-	-	-
MTF...015...-19	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05
MTF...022...-19	DRN100L4 2.2 kW	BE5	BE2	DRN90L4	BE2	BE1	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1
MTF...030...-19	DRN100L4 3.7 kW	BE5	BE2	DRN100L4 2.2 kW	BE5	BE2	DRN100L4 2.2 kW	BE5	BE2	DRN90 L4	BE2	BE1
MTF...040...-19	DRN112M4	BE5	BE11	DRN100L4 3.7 kW	BE5	BE2	DRN100L4 3.7 kW	BE5	BE2	DRN100L4 2.2 kW	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V

MTF...-20

DRN V = AC 3 x 400 V, 50 Hz or AC 3 x 460 V, 60 Hz												
MOVIFIT®	Assigned motor and brake ¹⁾											
	S10/5 = OFF						S10/5 = ON					
	Λ connection			Δ connection			Λ connection			Δ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion		Stand-ard	Op-tion
MTF...003...-20	DRS71S4	BE05	BE1	DR63L4 ²⁾	BR03	BR03	DR63L4 ²⁾	BR03	BR03	-	-	-
MTF...005...-20	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1	DRS71S4	BE05	BE1	DR63L4 ²⁾	BR03	BR03
MTF...007...-20	DRN80M4	BE1	BE05	DRS71M4	BE1	BE05	DRS71M4	BE1	BE05	DRS71S4	BE05	BE1
MTF...011...-20	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05	DRN80M4	BE1	BE05	DRS71M4	BE1	BE05
MTF...015...-20	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05
MTF...022...-20	DRN100L4 2.2 kW	BE5	BE2	DRN90L4	BE2	BE1	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1
MTF...030...-20	DRN100L4 3.0 kW	BE5	BE2	DRN100L4 2.2 kW	BE5	BE2	DRN100L4 2.2 kW	BE5	BE2	DRN90L4	BE2	BE1
MTF...040...-20	DRN112M4	BE5	BE11	DRN100L4 3.0 kW	BE5	BE2	DRN100L4 3.0 kW	BE5	BE2	DRN100L4 2.2 kW	BE5	BE2

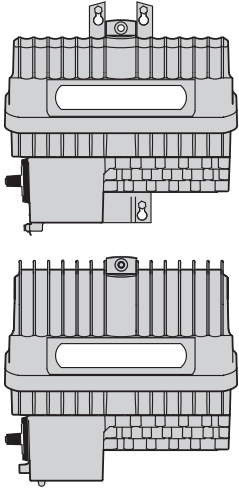
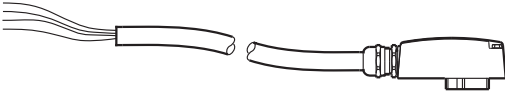
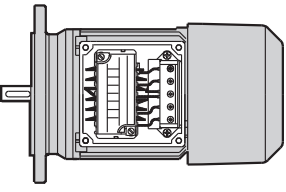
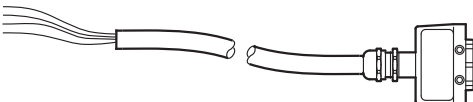
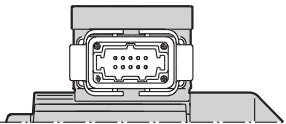
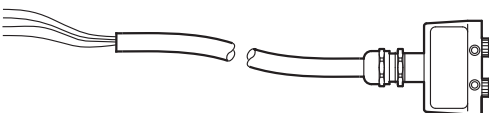
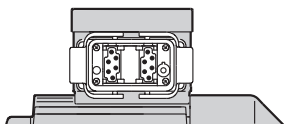
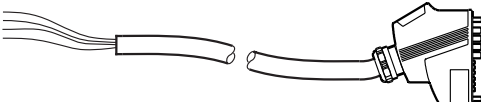
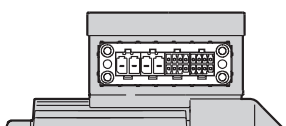
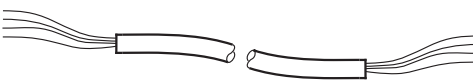
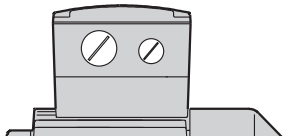
1) Possible brake voltages: 120 V, 230 V, 400 V

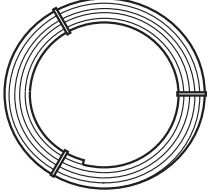
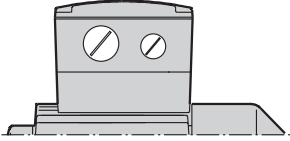
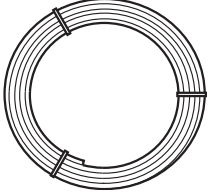
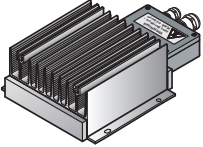
2) This motor is included in the data set. The motor is only available as IEC motor with V = 3 x 400 V, 50 Hz (no motor with 50/60 Hz voltage range).

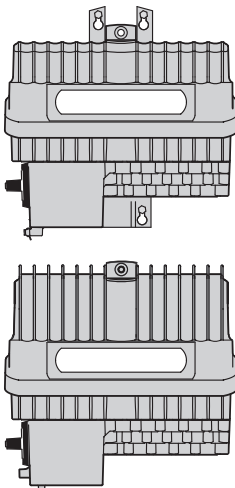
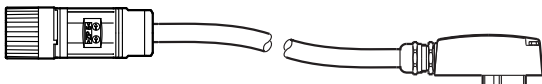
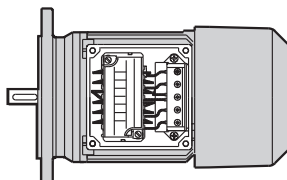
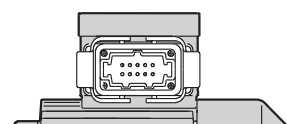
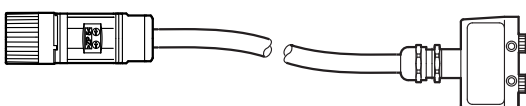
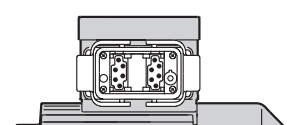
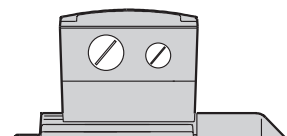
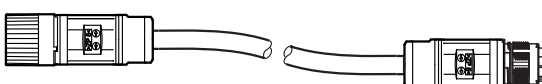
4.11.6 Hybrid cables for connecting MOVIFIT® FC and motors

Overview

Hybrid cables are available for connecting MOVIFIT® FC and motor:

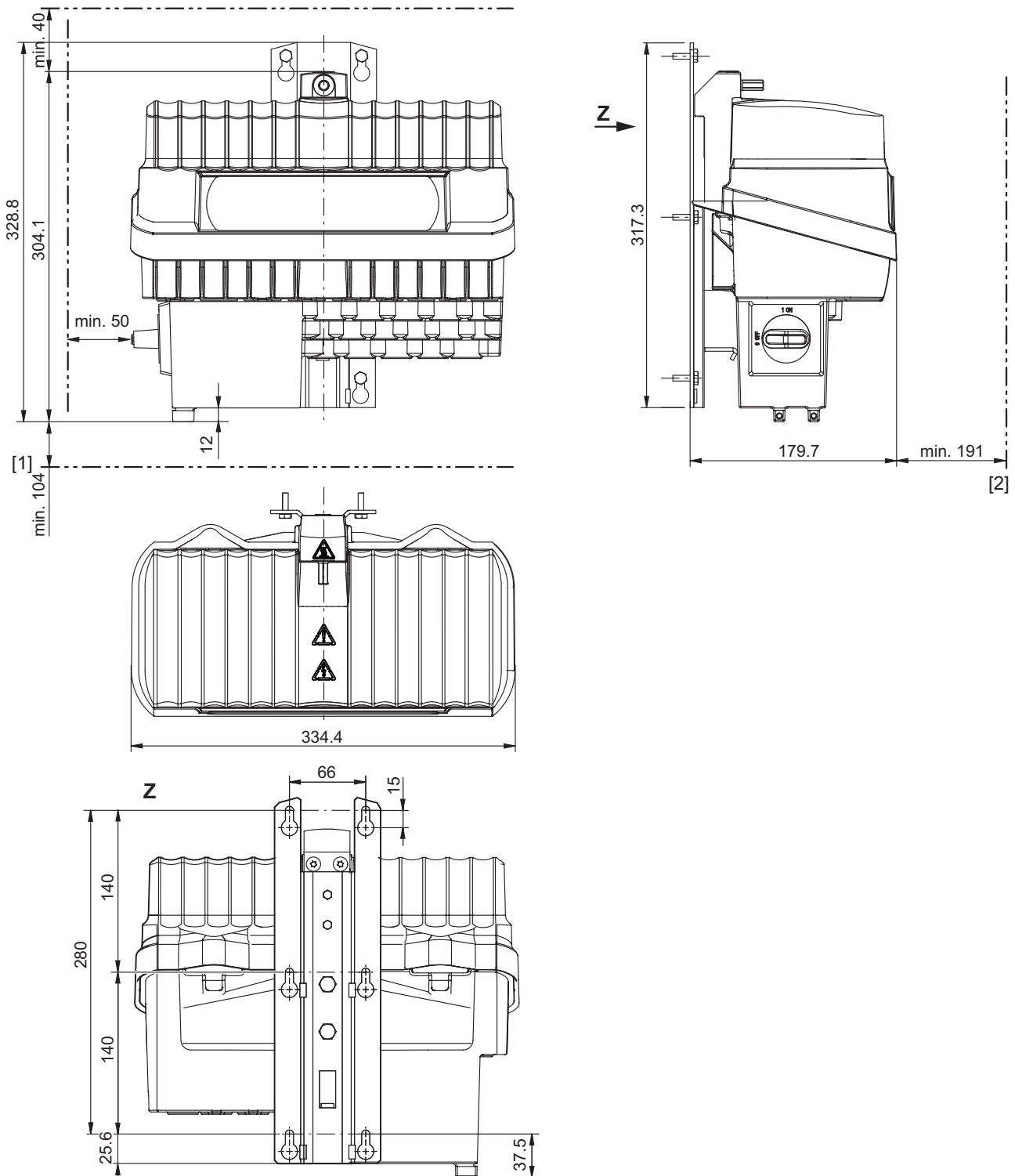
MOVIFIT® FC	Connection cable	Length Type	Drive
Standard ABOX: MTA...-S02.-...-00 Hybrid ABOX: MTA...-S42.-...-00 MTA...-S52.-...-00 MTA...-S53.-...-00 MTA...-S62.-...-00 	Part number DR63/DT71 – DR90 (∧): 08199671 Part number DR63/DT71 – DR90 (Δ): 08199698 Part number DV100, DV112 DR.71-132 (∧): 08199701 Part number DV100, DV112 DR.71-132 (Δ): 08198748 	variable Type A	Motor with ISU4 plug connector 
	Part number: 08199728 	variable Type A	Motor with ASB4 plug connector 
	Part number: 08198756 	variable Type A	Motor with AMB4 plug connector 
	Part number: 08199736 	variable Type A	Motor with APG4 plug connector 
	Part no.: DR.71 – 100 (M4 ring cable lug): 08199752 Part no.: DR.112 – 132 (M5 ring cable lug): 18143199 	variable Type A	Motor with cable glands 

MOVIFIT® FC	Connection cable	Length Type	Drive
	Part number: 08179530/30 m Part number: 08179530/100 m  (Hybrid cable roll)	30 m 100 m Type A	Motor with cable glands 
	Part number: 13230409  (cable roll)	30 m	External braking resistor 

MOVIFIT® FC	Connection cable	Length Type	Drive
Hybrid ABOX: MTA...-I55.-...-00 MTA...-I65.-...-00 	Part number DR63 (⌒): 18138411 Part number DR63 (△): 18138438 Part number DR.71 – 132 (⌒): 18138330 Part number DR.71 – 132 (△): 18138365 	variable Type A	Motor with ISU4 plug connector 
	Part number: 18142257 	variable Type A	Motor with ASB4 plug connector 
	Part number: 18142249 	variable Type A	Motor with AMB4 plug connector 
	Part no.: DR.71 – 100 (M4 ring cable lug): 18141870 Part no.: DR.112 – 132 (M5 ring cable lug): 18142230 	variable Type A	Motor with cable glands 
	Part number: 18141056 (= extension cable) 	variable Type A	Hybrid cable

4.12 Dimension drawings

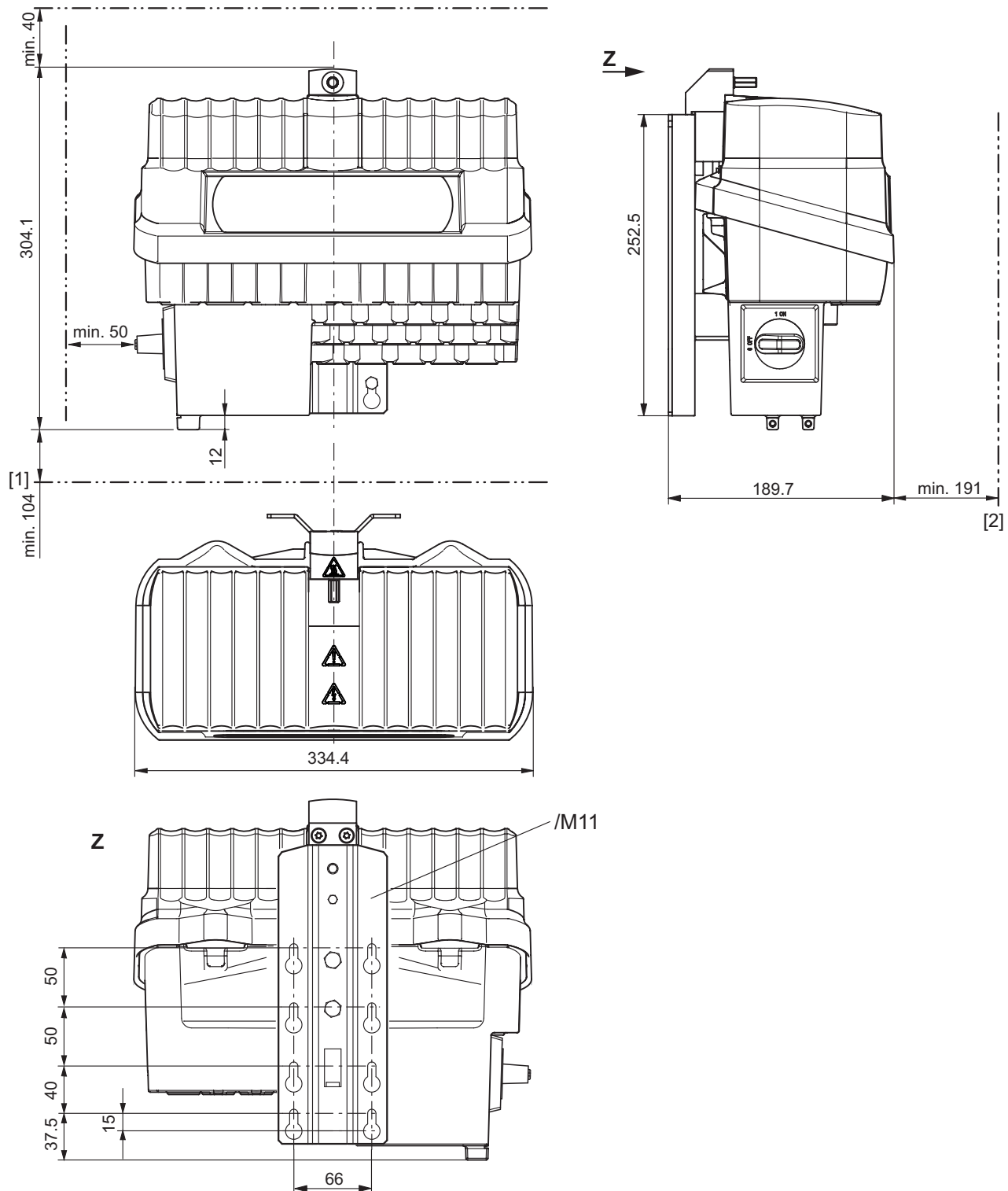
4.12.1 MOVIFIT® size 1 with standard mounting rail



27021598603385995

- [1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (Intercontec) motor output pointing downward.
- [2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (Intercontec) motor output at the front.

4.12.2 MOVIFIT® size 1 with optional stainless steel mounting rail /M11

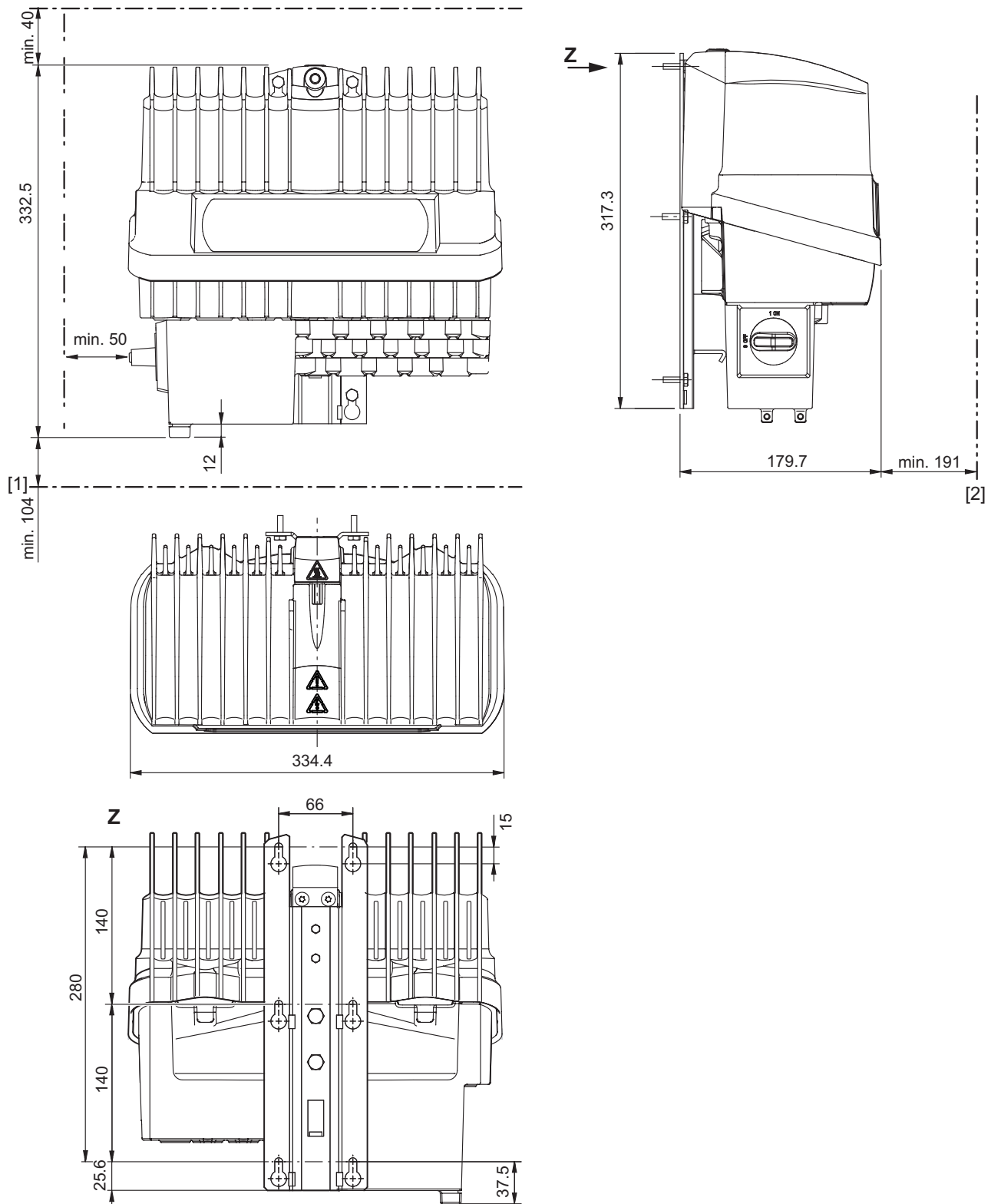


9007202920497803

- [1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (Intercontec) motor output pointing downward.
- [2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (Intercontec) motor output at the front.

21914796/EN – 09/2015

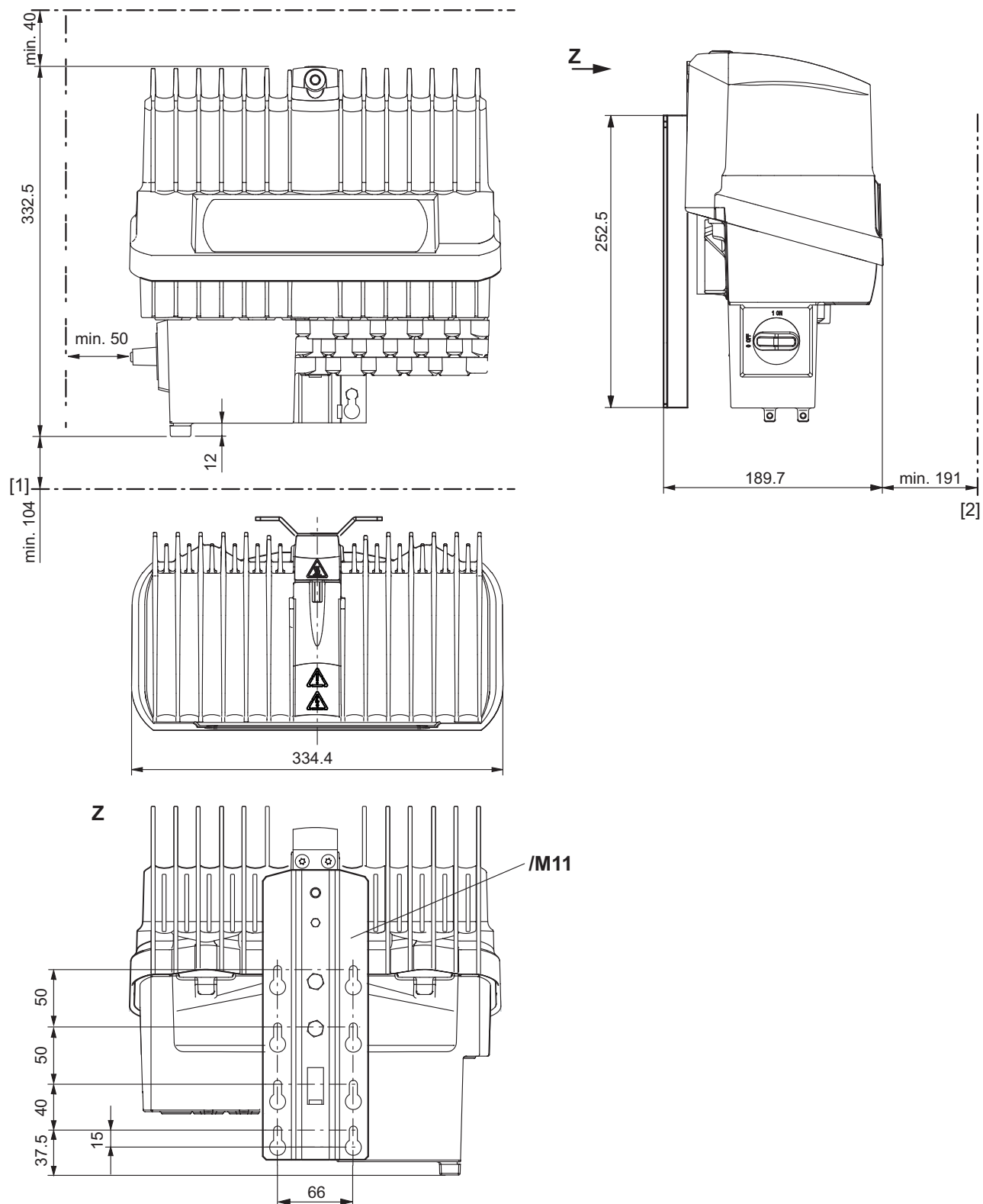
4.12.3 MOVIFIT® size 2 with standard mounting rail



27021598603390347

- [1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (Intercontec) motor output pointing downward.
- [2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (Intercontec) motor output at the front.

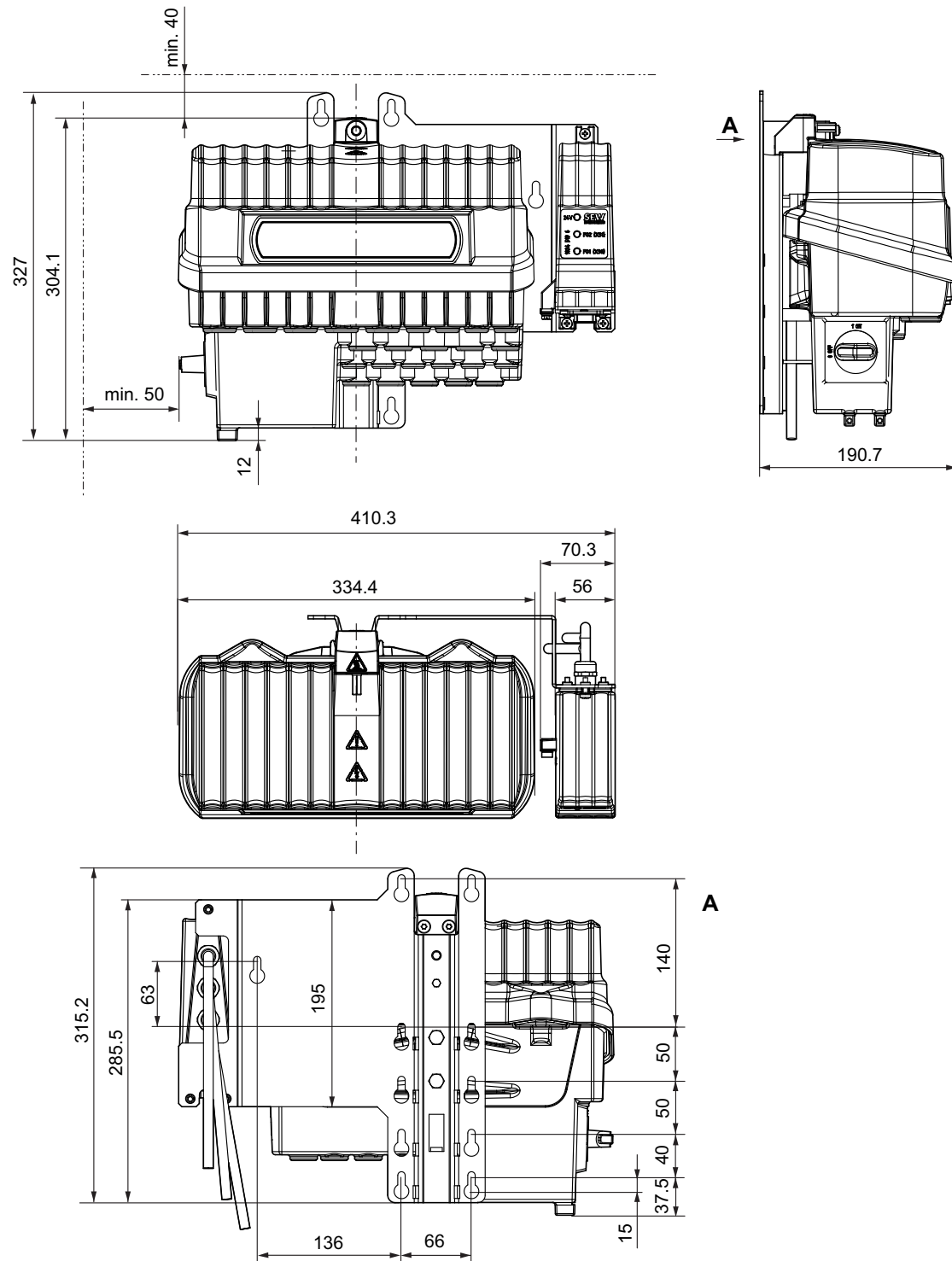
4.12.4 MOVIFIT® size 2 with optional stainless steel mounting rail /M11



9007202968012171

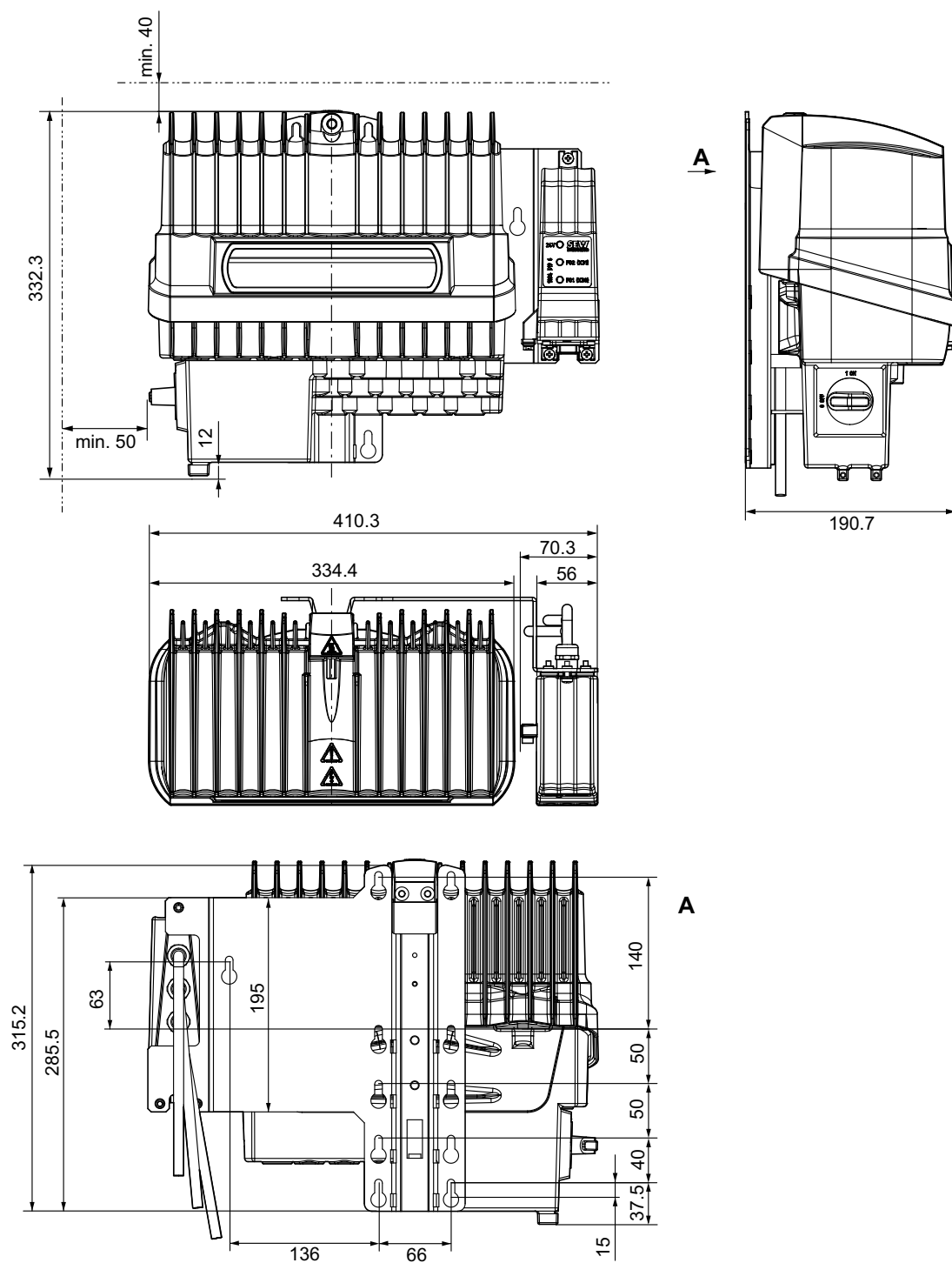
- [1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (Intercontec) motor output pointing downward.
- [2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (Intercontec) motor output at the front.

4.12.5 MOVIFIT® size 1 with POF option L10



18014402366515211

4.12.6 MOVIFIT® size 2 with POF option L10



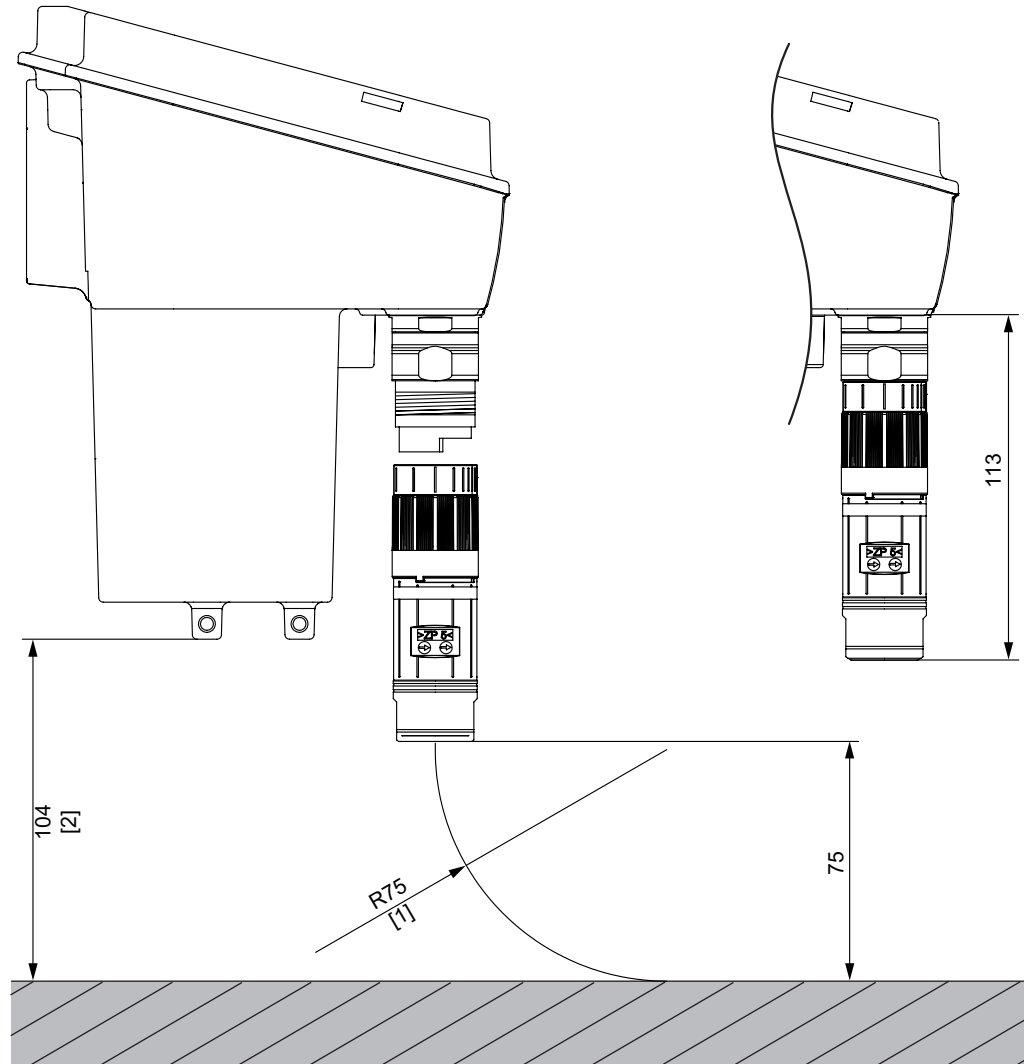
9007203640500875

21914796/EN – 09/2015

4.12.7 Minimum installation clearance for ABOX with round connector (Intercontec)

ABOX with round connector (Intercontec), motor output pointing downward

The following figure shows the minimum installation clearance of the hybrid ABOX with circular connector (Intercontec) and motor output pointing downward:



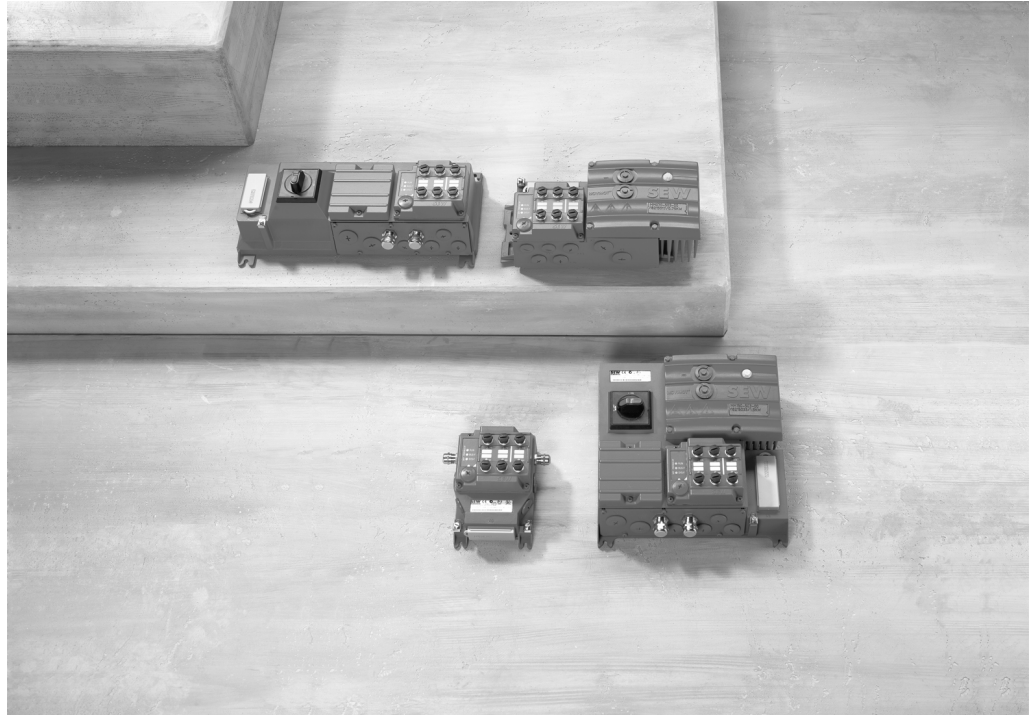
36028801787793163

- [1] Smallest permitted bending radius of bulk cable: 75 mm
- [2] Minimum distance to the bottom of the ABOX: 104 mm

5 Fieldbus interfaces and field distributors

5.1 Description

The following figure shows field distributors from SEW-EURODRIVE:



13883616139

5.1.1 Fieldbus interfaces MF../MQ..

Type MF.. fieldbus interfaces allow for connecting MOVIMOT® and MOVI-SWITCH® drives to a standardized fieldbus system. These fieldbus interfaces not only allow for controlling MOVIMOT® and MOVI-SWITCH® drives, but also for reading sensor signals as well as controlling actuators via the digital output terminals. All fieldbus interfaces and field distributors are supplied in IP65 degree of protection as standard.

Type MQ.. fieldbus interfaces are based on the same housing and fieldbus technology as type MF.. fieldbus interfaces but are additionally equipped with an integrated control featuring the following functions:

- Programmable via IPOS^{plus}®
- Simple positioning with EI76 incremental encoder
- Integrated I/O preprocessing and timing elements
- Protocol modification

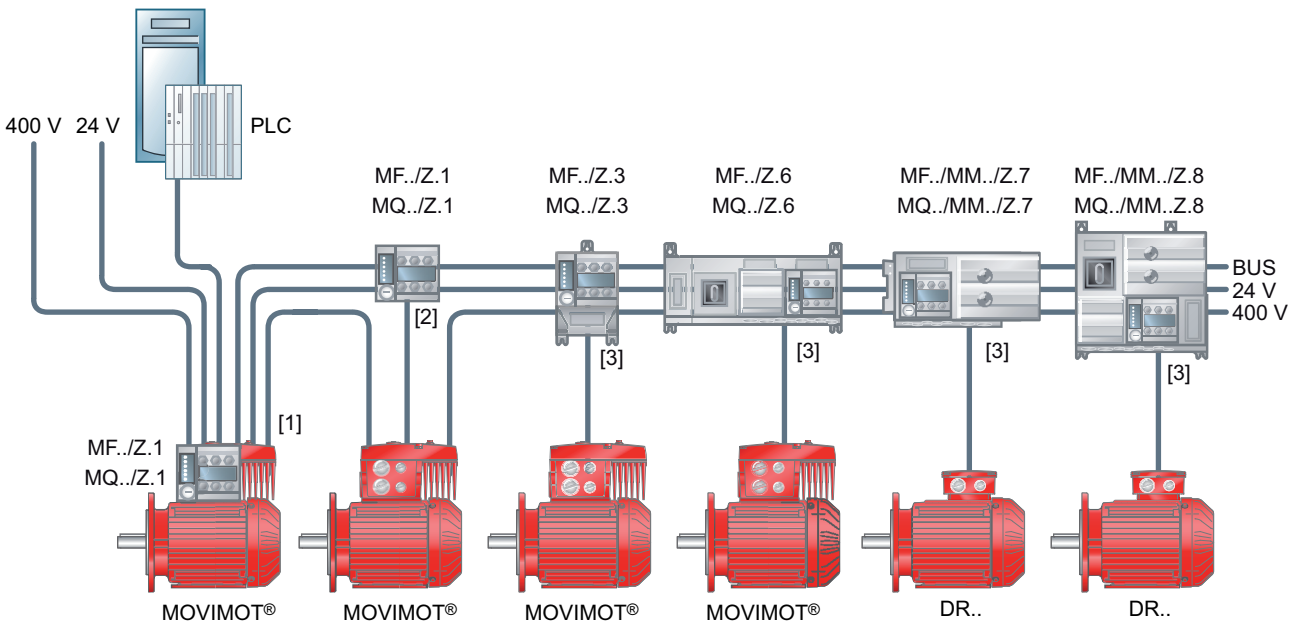
5.1.2 Field distributor

Field distributors rationalize the connection of drives with the power supply system, the control voltage and the fieldbus. The units are based on the bus interfaces technology with additional connection technology for power distribution.

Field distributors reduce the amount of work involved in project planning and the time required for installation and startup to a minimum.

5.1.3 Installation topology

The following figure shows the installation topology of MOVIMOT® with fieldbus interfaces MF../MQ.. and field distributors:



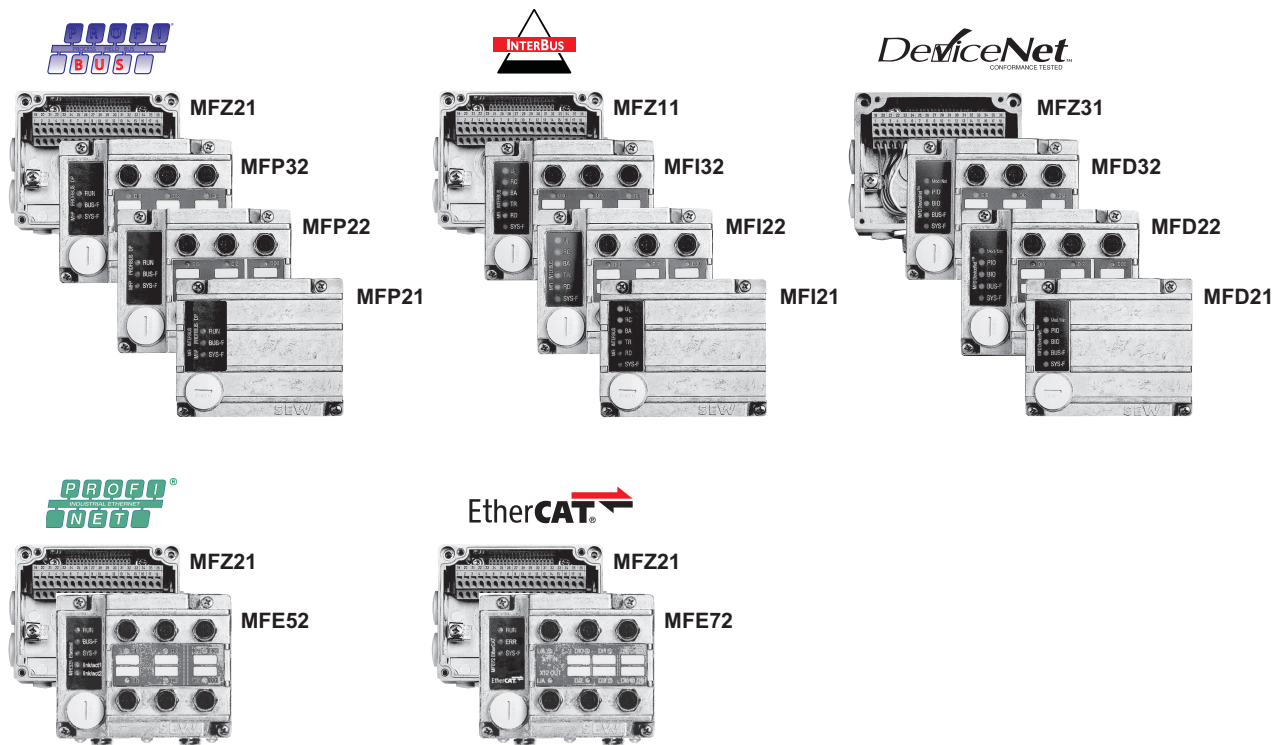
5068858507

- [1] Fieldbus interface of the drive
- [2] Fieldbus interface in the field
- [3] Fieldbus interface of the field distributor

5.2 Fieldbus interfaces

5.2.1 MF../Z.1 fieldbus interfaces

The following figure shows the dimensions of the fieldbus interface MF../Z.1:



18014399922990475

Example for type designation MF../Z.1

The following table shows the type designation of the fieldbus interface MF../Z.1:

MFE	Fieldbus interface
	MFI.. = INTERBUS
	MFP.. = PROFIBUS
	MFE.. = PROFINET IO or EtherCAT®
	MFD.. = DeviceNet™
52	Connections
	21 = 4 x I, 2 x O (connection via terminals)
	22 = 4 x I, 2 x O (connection via plug connector + terminals)
	32 = 6 x I (connection via plug connector + terminals)
	52 = 4 x I, 2 x I/O (connection via plug connector + terminals) for PROFINET IO
	72 = 4 x I, 2 x I/O (connection via plug connector + terminals) for EtherCAT®
A	Variant
/	
Z21	Connection module
	Z11 = For INTERBUS
	Z21 = For PROFIBUS, PROFINET IO and EtherCAT®
	Z31 = For DeviceNet™
D	Variant

PROFIBUS variants

The following figure shows the PROFIBUS variants of the fieldbus interface MF../Z.1:

Module type	MFP21D	MFP22D	MFP32D
Part number	8236240	8236259	8236267
Connection technology for sensors/actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Associated module terminal box	MFZ21D or MFZ21D/AVT2/AWT2		
Part number	8236275 or 8242992		
Fieldbus connection technology	Terminals or M12 plug connectors		
Module + module terminal box	MFP21D/Z21D..	MFP22D/Z21D..	MFP32D/Z21D..

INTERBUS variants

The following table shows the INTERBUS variants of the fieldbus interface MF../Z.1:

Module type	MFI21A	MFI22A	MFI32A
Part number	8235260	8235279	8235287
Connection technology for sensors/actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Associated module terminal box	MFZ11A		
Part number	8235147		
Fieldbus connection technology	Terminals		
Module + module terminal box	MFI21A/Z11A	MFI22A/Z11A	MFI32A/Z11A

PROFINET IO variant

The following figure shows the PROFINET I/O variant of the fieldbus interface MF../Z.1:

Module type	MFE52A
Part number	18241379
Connection technology	
Fieldbus	M12, D-coded
Sensors/actuators	M12 and terminals
Digital inputs	4 or 6 ¹⁾
Digital outputs	2 or 0 ¹⁾
Associated module terminal box	MFZ21D
Part number	8236275
Module + module terminal box	MFE52A/Z21D

1) Startup configuration: 4 DI and 2 DO or 6 DI and 0 DO

EtherCAT® variants

The following table shows the EtherCAT® variants of the fieldbus interface MF../Z.1:

Module type	MFE72A
Part number	18241379
Connection technology	
Fieldbus	M12, D-coded
Sensors/actuators	M12 and terminals
Digital inputs	4 or 6 ¹⁾
Digital outputs	2 or 0 ¹⁾
Associated module terminal box	MFZ21D
Part number	8236275
Module + module terminal box	MFE72A/Z21D

1) Startup configuration: 4 DI and 2 DO or 6 DI and 0 DO

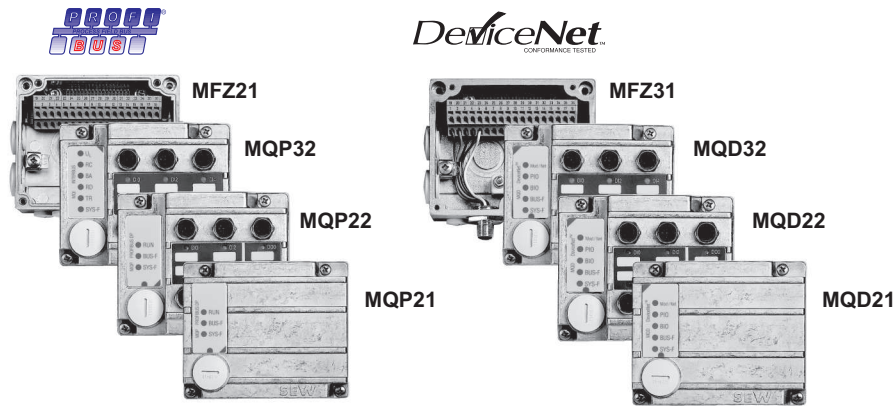
DeviceNet™ variants

The following table shows the DeviceNet™ variants of the fieldbus interface MF../Z.1:

Module type	MFD21A	MFD22A	MFD32A
Part number	8235511	823552X	8235538
Connection technology	Terminals	M12 and terminals	M12 and terminals
Sensors/actuators			
Digital inputs	4	4	6
Digital outputs	2	2	0
Associated module terminal box	MFZ31A		
Part number	8235481		
Fieldbus connection technology	Micro-style connector		
Module + module terminal box	MFD21A/Z31A	MFD22A/Z31A	MFD32A/Z31A

5.2.2 MQ../Z.1 fieldbus interfaces

The following figure shows the variants of the fieldbus interface MQ../Z.1:



18014399923590411

Example for type designation MQ../Z.1

The following table shows the type designation of the fieldbus interface MQ../Z.1:

MQP	Fieldbus interface	
	MQP..	= PROFIBUS with integrated minicontroller
	MQD..	= DeviceNet™ with integrated minicontroller
21	Connections	
	21 = 4 x I, 2 x O	(connection via terminals)
	22 = 4 x I, 2 x O	(connection via plug connector + terminals)
	32 = 6 x I	(connection via plug connector + terminals)
D	Variant	
/		
Z21	Connection module	
	Z21	= for PROFIBUS
	Z31	= For DeviceNet™
D	Variant	

PROFIBUS variants

The following table shows the PROFIBUS variants of the fieldbus interface MQ../Z.1:

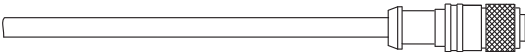
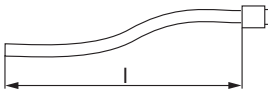
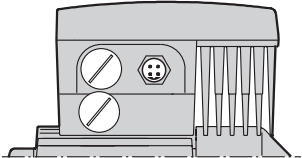
Module type	MQP21D	MQP22D	MQP32D
Part number	8241902	8241910	8241929
Connection technology sensors/actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Associated module terminal box	MFZ21D or MFZ21D/AVT2/AWT2		
Part number	8236275 or 8242992		
Fieldbus connection technology	Terminals or M12 plug connectors		
Module + module terminal box	MQP21D/Z21D..	MQP22D/Z21D..	MQP32D/Z21D..

DeviceNet™ variants

The following table shows the DeviceNet™ variants of the fieldbus interface MQ../Z.1:

Module type	MQD21A	MQD22A	MQD32A
Part number	8242003	8242011	824202X
Connection technology sensors/actuators	Terminals	M12 and terminals	M12 and terminals
Digital inputs	4	4	6
Digital outputs	2	2	0
Associated module terminal box	MFZ31A		
Part number	8235481		
Fieldbus connection technology	Micro-style connector		
Module + module terminal box	MQD21A/Z31A	MQD22A/Z31A	MQD32A/Z31A

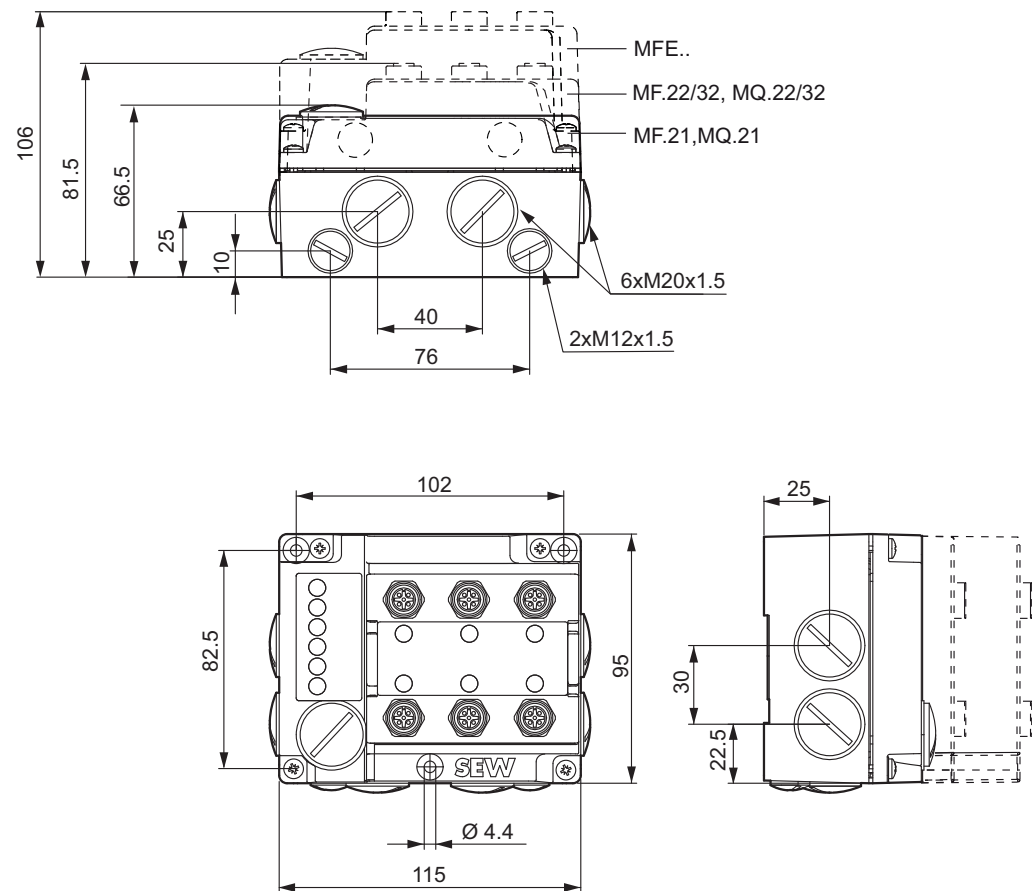
5.2.3 Cables for connecting fieldbus interfaces and MOVIMOT®

Field distributor Fieldbus interface	Cable	Cable type	Drive
Z.1 or RS485 master	 Available cable lengths:  l = 5 m: Part number 08155925 l = 10 m: Part number 08155933	–	MOVIMOT® with AVT1 plug connector 

5.2.4 Dimension drawing of MF../Z.1, MQ../Z.1 fieldbus interfaces

Dimension drawing of MF../MQ.. fieldbus interface

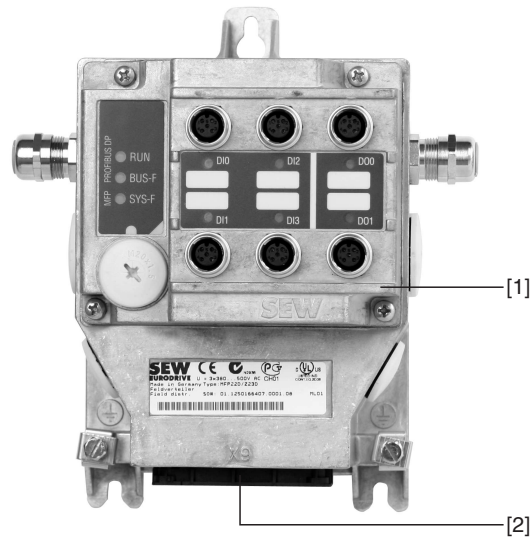
The following figure shows the dimensions of the fieldbus interface MF../MQ.. :



18014399925147915

5.3 MF../Z.3., MQ../Z.3. field distributors

The following figure shows the MF../Z.3., MQ../Z.3. field distributor:



1415970827

- [1] MF../MQ.. fieldbus interface
- [2] Connection of prefabricated hybrid cable

5.3.1 Unit properties

MF../Z.3., MQ../Z.3. field distributors have the following functional characteristics:

- Communication interface with I/Os (I/Os can only be used in combination with M12 plug connector)
- Common wiring space for bus and power terminals
- Pluggable connection to MOVIMOT®/MOVI-SWITCH® (via hybrid cable)

5 Fieldbus interfaces and field distributors

MF../Z.3., MQ../Z.3. field distributors

5.3.2 Example for type designation MF../Z.3., MQ../Z.3.:

The following table shows the type designation of MF../Z.3, MQ../Z.3 field distributors:

MFP 21D	Fieldbus interface	
	MFI..	= INTERBUS
	MFP../MQP..	= PROFIBUS
	MFE..	= PROFINET IO or EtherCAT®
Z23D	MFD../MQD..	= DeviceNet™
	Connection module for controlling MOVIMOT®	
	Z13A	= For INTERBUS
	Z23D	= For PROFIBUS, PROFINET IO or EtherCAT®
Z23D	Z23D/AVT2/AWT2	= For PROFIBUS with M12 plug connector
	Z33A	= For DeviceNet™
	Connection module for controlling MOVI-SWITCH®	
	Z23W	= For PROFIBUS
Z23D	Z23W/AVT2/AWT2	= For PROFIBUS with M12 plug connector
	Z33W	= For DeviceNet™

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5.3.3 Possible combinations MF../Z.3. (MOVIMOT® control)

The following table shows the possible combinations of the MF../Z.3 field distributor with fieldbus interfaces:

	 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
PROFINET IO	—	MFE52A/Z23D	
EtherCAT®	—	MFE72A/Z23D	
DeviceNet™	MFD21A/Z33A	MFD22A/Z33A	MFD32A/Z33A

5.3.4 Possible combinations for MQ../Z.3. (MOVIMOT® control)

The following table shows the possible combinations of the MQ../Z.3 field distributor with fieldbus interfaces:

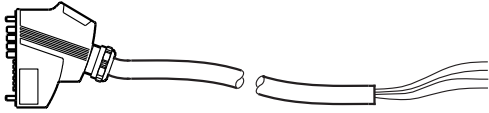
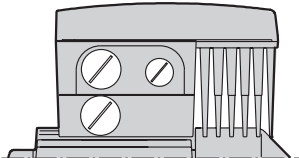
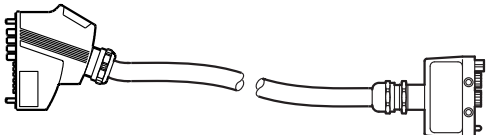
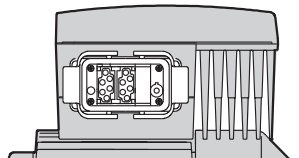
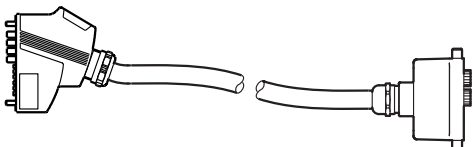
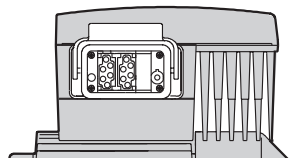
	 no I/O	 4 x I, 2 x O (M12)	 6 x I (M12)
PROFIBUS	MQP21D/Z23D	MQP22D/Z23D	MQP32D/Z23D
PROFIBUS with M12 plug connector for bus connection	MQP21D/Z23D/ AVT2/AWT2	MQP22D/Z23D/ AVT2/AWT2	MQP32D/Z23D/ AVT2/AWT2
DeviceNet™	MQD21A/Z33A	MQD22A/Z33A	MQD32A/Z33A

5 Fieldbus interfaces and field distributors

MF../Z.3., MQ../Z.3. field distributors

5.3.5 Hybrid cables for connecting Z.3 field distributor and MOVIMOT®

The following table shows the hybrid cables for connecting the MOVIMOT® drive to the field distributors MF../Z.3 or MQ../Z.3:

Field distributor	Hybrid cable	Cable type	Drive
Z.3	Part number: 01867253  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice	B	MOVIMOT® with cable glands 
	Part number: 05935164  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice		MOVIMOT® with AMA6 plug connector 
	Part number: 08171122 		MOVIMOT® with AMD6 plug connector 

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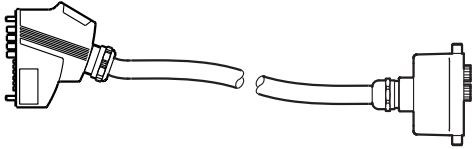
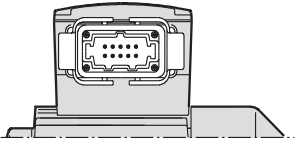
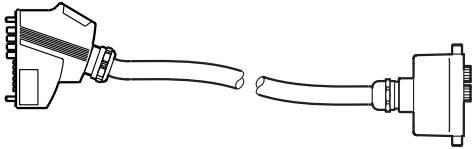
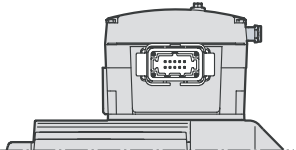
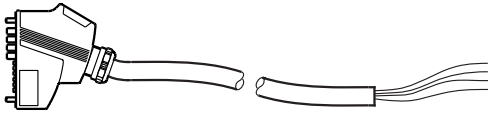
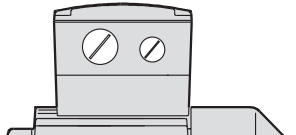
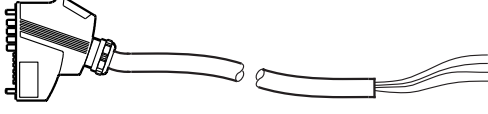
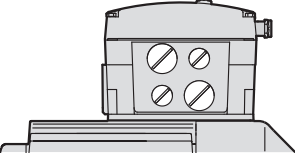
5.3.6 Possible combinations of MF../Z.3W (MOVI-SWITCH® control)

The following table shows the possible combinations of the MF../Z.3W field distributor with fieldbus interfaces:

	no I/O	4 x I, 2 x O (M12)	6 x I (M12)
			
PROFIBUS	MFP21D/Z23W	MFP22D/Z23W	—
PROFIBUS with M12 plug connector for bus	MFP21D/Z23W/ AVT2/AWT2	MFP22D/Z23W/ AVT2/AWT2	—
DeviceNet™	MFD21A/Z33W	MFD22A/Z33W	—

5.3.7 Hybrid cables for connecting Z.3W field distributor and MOVI-SWITCH®

The following table shows the hybrid cables for connecting the MOVI-SWITCH® drive to the field distributor MF../Z.3W:

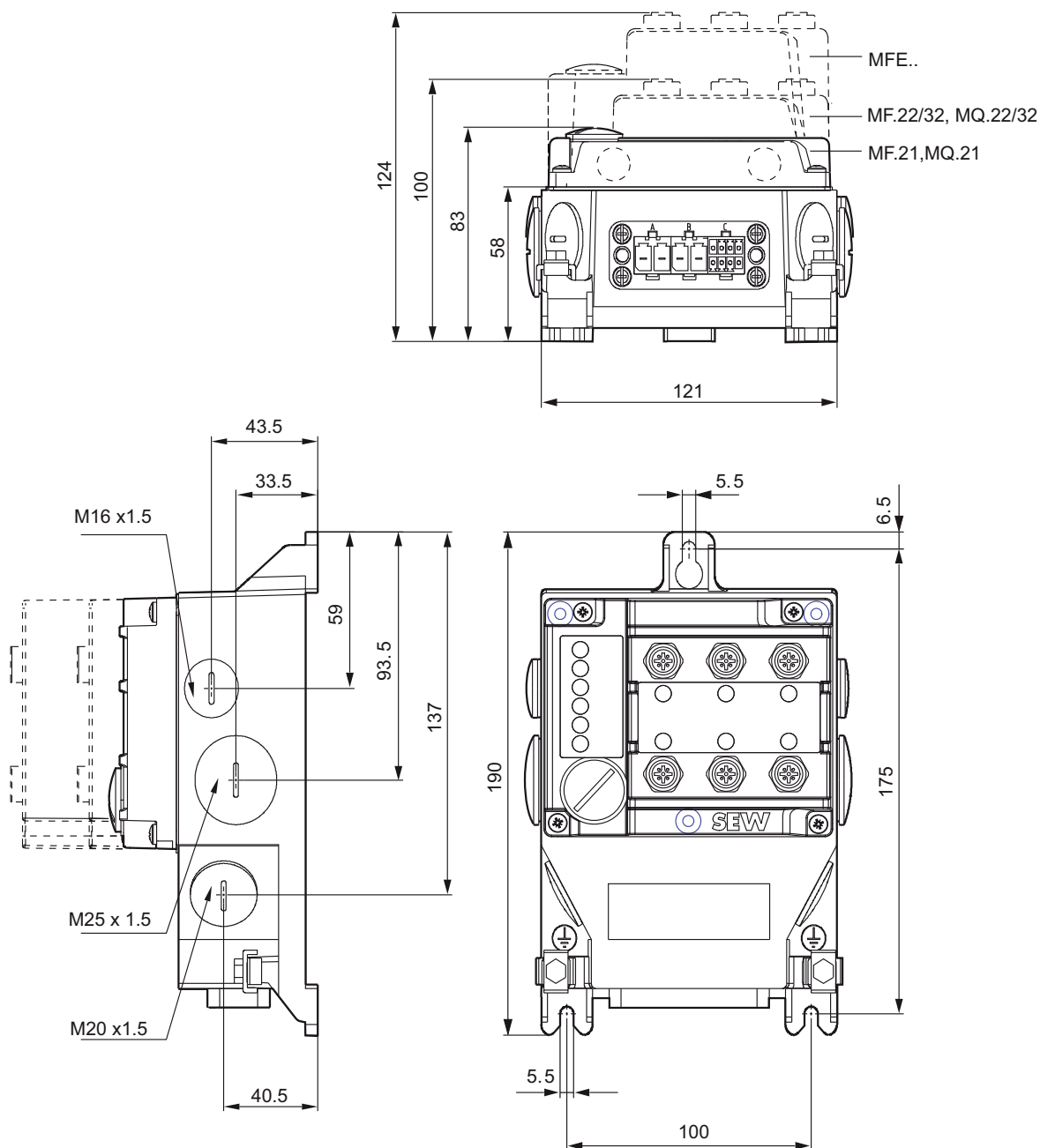
Field distributor	Hybrid cable	Cable type	Drive
Z.3W	Part number: 8183686 	B	MOVI-SWITCH® 1E with ASAW plug connector 
	Part number: 8183686 	B	MOVI-SWITCH® 2S with ASAW plug connector 
	Part number: 8187053 	B	MOVI-SWITCH® 1E with cable glands 
	Part number: 8187088 	B	MOVI-SWITCH® 2S with cable glands 

5 Fieldbus interfaces and field distributors

MF../Z.3., MQ../Z.3. field distributors

5.3.8 MF../Z.3., MQ../Z.3. field distributors – dimension drawing

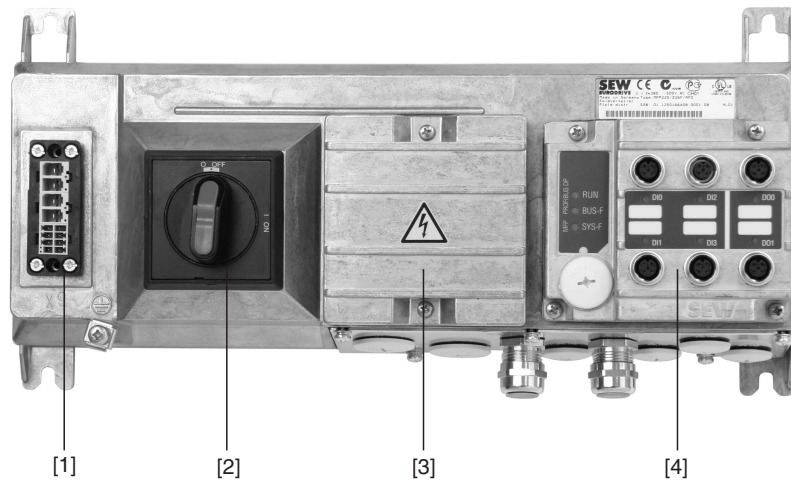
The following figure shows the dimensions of the field distributors MF../Z.3. and MQ../Z.3.:



18014399990838283

5.4 MF../Z.6., MQ../Z.6. field distributors

The following figure shows the MF../Z.6., MQ../Z.6. field distributor:



1481358731

- [1] Connection of prefabricated hybrid cable
- [2] Maintenance switch
- [3] Wiring space for line connection
- [4] MF../MQ.. fieldbus interface

5.4.1 Unit properties

MF../Z.6., MQ../Z.6. field distributors have the following functional characteristics:

- Communication interface with I/Os
- Separate wiring space for bus and supply system
- Pluggable connection to MOVIMOT® (via hybrid cable)
- Maintenance switch (triple lock)
 - with line protection function
 - Made by ABB
 - Type switch element MS 325 - 9
 - Type auxiliary contact HK 20
 - Color: black/red

5 Fieldbus interfaces and field distributors

MF../Z.6., MQ../Z.6. field distributors

5.4.2 Example for type designation MF../Z.6., MQ../Z.6.

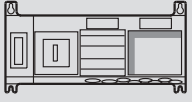
The following table shows the type designation of the MF../Z.6., MQ../Z.6. field distributors:

MFP 21D	Fieldbus interface	
	MFI..	= INTERBUS
	MFP../MQP..	= PROFIBUS
	MFE..	= PROFINET IO or EtherCAT®
Z26F	MFD../MQD..	= DeviceNet™
	/	
	Connection module for controlling MOVIMOT®	
	Z16F	= For INTERBUS
Z26W	Z26F	= For PROFIBUS, PROFINET IO or EtherCAT®
	Z36F	= For DeviceNet™
	Connection module for controlling MOVI-SWITCH®	
	Z26W	= For PROFIBUS
AF0	/	
	Connection technology	
	AF0	= Metric cable entry
	AF1	= With Micro-style connector for DeviceNet™
AF2	AF2	= M12 plug connector for PROFIBUS
	AF3	= M12 plug connector for PROFIBUS and M12 plug connector for 24 V supply

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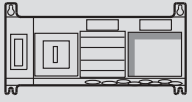
5.4.3 Possible combinations for MF../Z.6. (MOVIMOT® control)

The following table shows the possible combinations of the MF../Z.6 field distributor with fieldbus interfaces:

	4 x I, 2 x O (terminals)	4 x I, 2 x O (M12)	6 x I (M12)
INTERBUS	MFI21A/Z16F/AF0	MFI22A/Z16F/AF0	MFI32A/Z16F/AF0
PROFIBUS	MFP21D/Z26F/AF0	MFP22D/Z26F/AF0	MFP32D/Z26F/AF0
	MFP21D/Z26F/AF2	MFP22D/Z26F/AF2	MFP32D/Z26F/AF2
	MFP21D/Z26F/AF3	MFP22D/Z26F/AF3	MFP32D/Z26F/AF3
PROFINET IO	—	MFE52A/Z26F/AF0	
EtherCAT®	—	MFE72A/Z26F/AF0	
DeviceNet™	MFD21A/Z36F/AF1	MFD22A/Z36F/AF1	MFD32A/Z36F/AF1

5.4.4 Possible combinations for MQ../Z.6. (MOVIMOT® control)

The following table shows the possible combinations of the MQ../Z.6 field distributor with fieldbus interfaces:

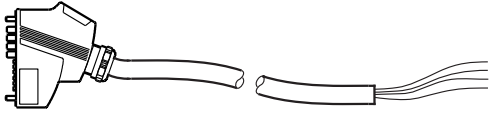
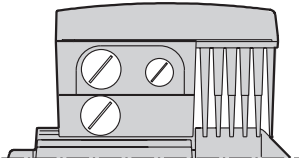
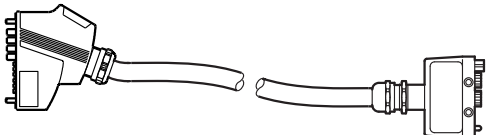
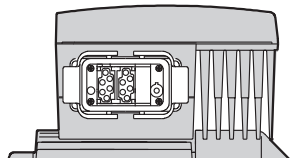
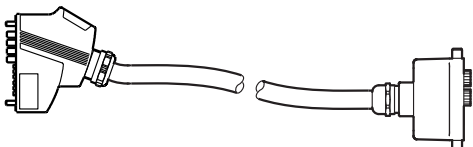
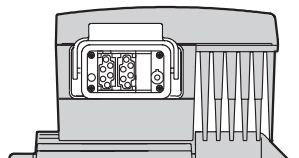
	4 x I, 2 x O (terminals)	4 x I, 2 x O (M12)	6 x I (M12)
PROFIBUS	MQP21D/Z26F/AF0	MQP22D/Z26F/AF0	MQP32D/Z26F/AF0
	MQP21D/Z26F/AF2	MQP22D/Z26F/AF2	MQP32D/Z26F/AF2
	MQP21D/Z26F/AF3	MQP22D/Z26F/AF3	MQP32D/Z26F/AF3
DeviceNet™	MQD21A/Z36F/AF1	MQD22A/Z36F/AF1	MQD32A/Z36F/AF1

5 Fieldbus interfaces and field distributors

MF../Z.6., MQ../Z.6. field distributors

5.4.5 Hybrid cables for connecting Z..6. field distributor and MOVIMOT®

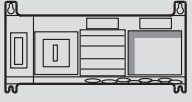
The following table shows the hybrid cables for connecting the MOVIMOT® drive to the field distributors MF../Z.6. or MQ../Z.6.:

Field distributor	Hybrid cable	Cable type	Drive
Z.6	Part number: 01867253  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice	B	MOVIMOT® with cable glands 
	Part number: 05935164  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice		MOVIMOT® with AMA6 plug connector 
	Part number: 08171122 		MOVIMOT® with AMD6 plug connector 

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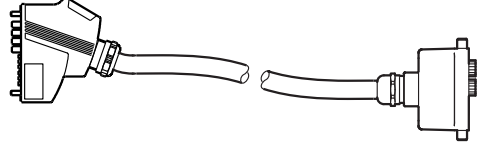
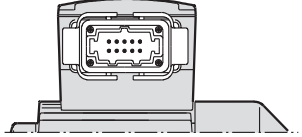
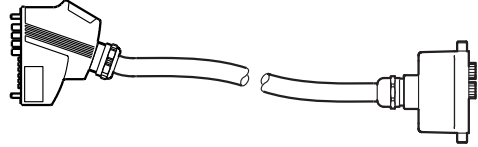
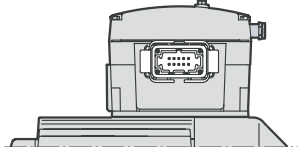
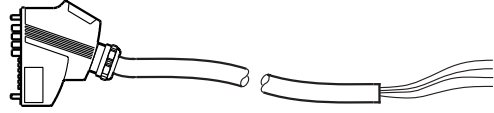
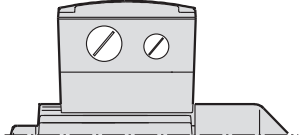
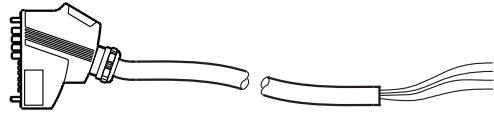
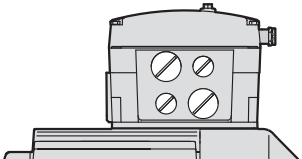
5.4.6 Possible combinations for MF../Z.6W (MOVI-SWITCH® control)

The following table shows the possible combinations of the MF../Z.6W field distributor with fieldbus interfaces:

	4 x I, 2 x O (terminals)	4 x I, 2 x O (M12)	6 x I (M12)
			
PROFIBUS	MFP21D/Z26W/AF0	MFP22D/Z26W/AF0	—
	MFP21D/Z26W/AF2	MFP22D/Z26W/AF2	—
	MFP21D/Z26W/AF3	MFP22D/Z26W/AF3	—

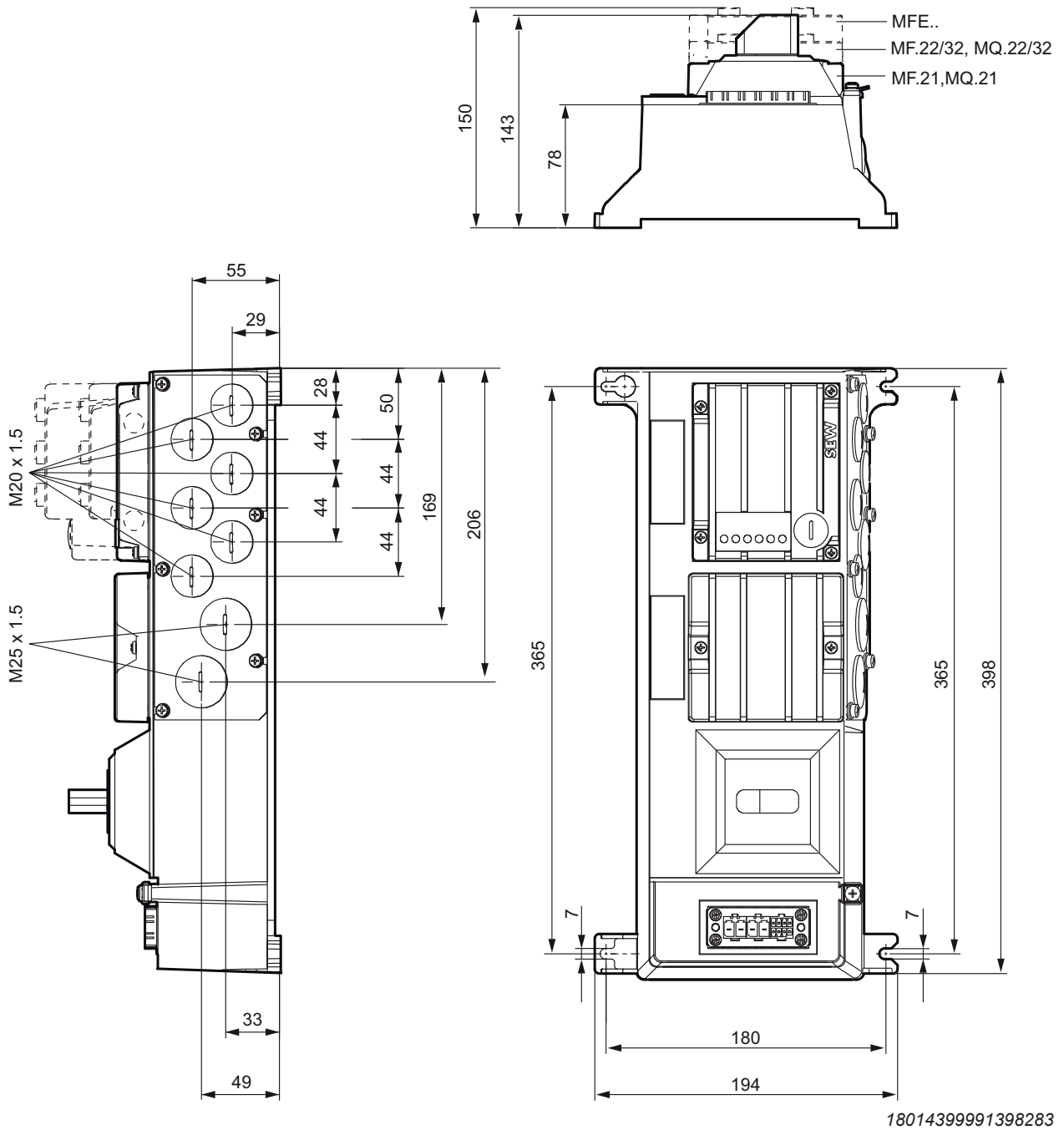
5.4.7 Hybrid cables for connecting Z.6W field distributor and MOVI-SWITCH®

The following table shows the hybrid cables for connecting the MOVIMOT® drive to the field distributor MF../Z.6W:

Field distributor	Hybrid cable	Cable type	Drive
Z.6W	Part number: 8183686 	B	MOVI-SWITCH® 1E with ASAW plug connector 
	Part number: 8183686 	B	MOVI-SWITCH® 2S with ASAW plug connector 
	Part number: 8187053 	B	MOVI-SWITCH® 1E with cable glands 
	Part number: 8187088 	B	MOVI-SWITCH® 2S with cable glands 

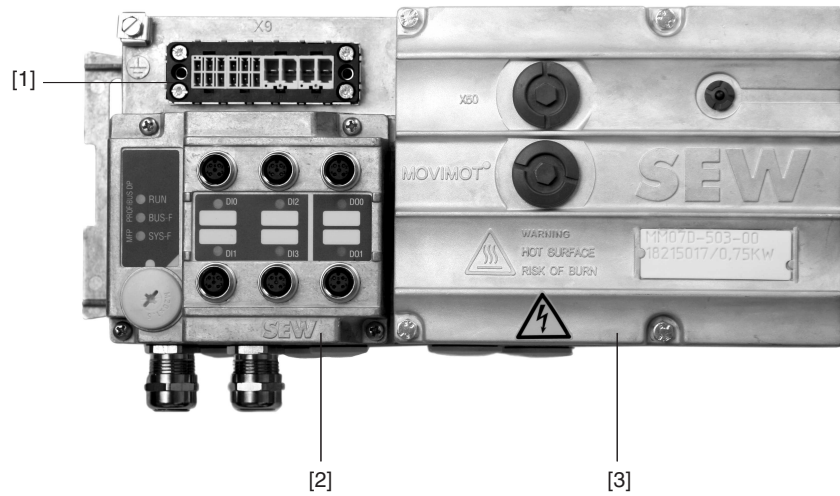
5.4.8 MF../Z.6., MQ../Z.6. field distributors – dimension drawing

The following figure shows the dimensions of the field distributors MF../Z.6. and MQ../Z.6.:



5.5 MF../MM../Z.7., MQ../MM../Z.7. field distributors

The following figure shows the MF../MM../Z.7., MQ../MM../Z.7. field distributor:



1481919115

- [1] Connection of prefabricated hybrid cable
- [2] MF../MQ.. fieldbus interface
- [3] MOVIMOT® inverter

5.5.1 Unit properties

The MF../MM../Z.7., MQ../MM../Z.7. field distributors have the following functional characteristics:

- Communication interface with I/Os
- Pluggable connection to MOVIMOT® (via hybrid cable)
- MOVIMOT® inverter integrated

5 Fieldbus interfaces and field distributors

MF../MM../Z.7., MQ../MM../Z.7. field distributors

5.5.2 Example for type designation MF../MM../Z.7., MQ../MM../Z.7.

The following table shows the type designation of MF../MM../Z.7., MQ../MM../Z.7. field distributors:

MFP 22D	Fieldbus interface MFI.. = INTERBUS MFP../MQP.. = PROFIBUS MFE.. = PROFINET IO or EtherCAT® MFD../MQD.. = DeviceNet™
/	
MM15D -503-00	MOVIMOT® inverter MM03D – MM15D... = MOVIMOT® inverter
/	
Z27F	Connection module for controlling MOVIMOT® Z17F = For INTERBUS Z27F = For PROFIBUS, PROFINET IO or EtherCAT® Z37F = For DeviceNet™
0	Connection type 0 =  1 = 

The field distributor must be ordered with an integral braking resistor if the field distributor is used in conjunction with a drive without a mechanical holding brake.

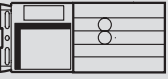
Integrated braking resistor:

MF../MM../D/Z.7../BW1
 MM03 - MM15: BW1

For the regenerative current-carrying capacity of the braking resistors, refer to chapter ""4Q operation with integrated BW.. braking resistor"" (→ 358).

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

The following table shows the possible combinations of the MF../MM../Z.7. field distributor with fieldbus interfaces:

		4 x I, 2 x O (terminals)	4 x I / 2 x O (M12)	6 x I (M12)
				
INTERBUS	⋈	MFI21A/MM../D/Z17F0	MFI22A/MM../D/Z17F0	MFI32A/MM../D/Z17F0
	△	MFI21A/MM../D/Z17F1	MFI22A/MM../D/Z17F1	MFI32A/MM../D/Z17F1
PROFIBUS	⋈	MFP21D/MM../D/Z27F0	MFP22D/MM../D/Z27F0	MFP32D/MM../D/Z27F0
	△	MFP21D/MM../D/Z27F1	MFP22D/MM../D/Z27F1	MFP32D/MM../D/Z27F1
PROFINET IO	⋈	—	MFE52A/MM../D/Z27F0	
	△	—	MFE52A/MM../D/Z27F1	
EtherCAT®	⋈	—	MFE72A/MM../D/Z27F0	
	△	—	MFE72A/MM../D/Z27F1	
DeviceNet™	⋈	MFD21A/MM../D/Z37F0	MFD22A/MM../D/Z37F0	MFD32A/MM../D/Z37F0
	△	MFD21A/MM../D/Z37F1	MFD22A/MM../D/Z37F1	MFD32A/MM../D/Z37F1

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

The following table shows the possible combinations of the MQ../MM../Z.7. field distributor with fieldbus interfaces:

		4 x I, 2 x O (terminals)	4 x I / 2 x O (M12)	6 x I (M12)
				
PROFIBUS	⋈	MQP21D/MM../D/Z27F0	MQP22D/MM../D/Z27F0	MQP32D/MM../D/Z27F0
	△	MQP21D/MM../D/Z27F1	MQP22D/MM../D/Z27F1	MQP32D/MM../D/Z27F1
DeviceNet™	⋈	MQD21A/MM../D/Z37F0	MQD22A/MM../D/Z37F0	MQD32A/MM../D/Z37F0
	△	MQD21A/MM../D/Z37F1	MQD22A/MM../D/Z37F1	MQD32A/MM../D/Z37F1

5.5.5 Assignment of motors to MF../MM../Z.7., MQ../MM../Z.7. field distributors

Motor requirements

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications when ordering the drives assigned to the field distributors:

Characteristics	Requirements for the assigned AC motor		
Permitted motors	Only motors listed in the following chapters are approved: "Motor assignment 1400 min-1" (→ 250) and "Motor assignment 2900 min-1" (→ 251).		
Permitted nominal motor voltage	Depending on motor series:		
	Motor [type]	Nominal voltage [V]	Line frequency [Hz]
	DRS..	230/400	50
	DRE..	230/400	50
	DRS../DRE..	230/400	50
	DRN..	230/400	50
Permitted brakes	Depending on motor series:		
	Motor [type]	Standard brake [type]	Optional brake [type]
	DR63L4	BR03	–
	DRS71S4 DRE80S4	BE05	BE1
	DRS71M4 DRS80S4 DRE80M4 DRN80M4	BE1	BE05
	DRS80M4 DRE90M4 DRN90S4	BE2	BE1
	DRS90M4 DRE90L4 DRN90L4	BE2	BE1

Characteristics	Requirements for the assigned AC motor	
Preferred brake voltage	MM..D-503, size 1 (MM03.. – MM15..)	230 V
	MM..D-233, size 1 (MM03.. – MM15..)	120 V
Brake rectifier	Always order the assigned motor without brake rectifier .	
Permitted plug connectors	• ASB4 plug connector • ISU4 plug connector For additional information, refer to chapter ""Hybrid cables for connecting Z.7 field distributor and motors"" (→ 252).	
Permitted motor protection	SEW-EURODRIVE recommends to always order the motor with TH thermostat (bimetallic switch). Motor protection can also be implemented in the Expert mode of the MOVIMOT® inverter.	
Permitted encoder system	EI76 incremental encoder (can be evaluated via fieldbus interface with integrated MQ.. mini-controller).	

Motor assignment 1400 min⁻¹

Power [kW]	Motor (230/400 V, 50 Hz) ⌋	Field distributor	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.25	DR63L4/TH. DRE80S4/TH.	MF../MM03D/Z.7F0/BW1 ¹⁾	MQ../MM03D/Z.7F0 /BW1 ¹⁾
	DR63L4/BR/TH. DRE80S4/BE/TH.	MF../MM03D/Z.7F0 ¹⁾	MQ../MM03D/Z.7F0 ¹⁾
0.37	DRS71S4/TH.	MF../MM03D/Z.7F0/BW1	MQ../MM03D /Z.7F0/BW1
	DRE80S4/TH.	MF../MM05D/Z.7F0/BW1 ¹⁾	MQ../MM05D /Z.7F0/BW1 ¹⁾
	DRS71S4/BE/TH.	MF../MM03D/Z.7F0	MQ../MM03D /Z.7F0
	DRE80S4/BE/TH.	MF../MM05D/Z.7F0 ¹⁾	MQ../MM05D /Z.7F0 ¹⁾
0.55	DRS71M4/TH.	MF../MM05D/Z.7F0/BW1	MQ../MM05D /Z.7F0/BW1
	DRE80M4/TH.	MF../MM07D/Z.7F0/BW1 ¹⁾	MQ../MM07D /Z.7F0/BW1 ¹⁾
	DRS71M4/BE/TH.	MF../MM05D/Z.7F0	MQ../MM05D /Z.7F0
	DRE80M4/BE/TH.	MF../MM07D/Z.7F0 ¹⁾	MQ../MM07D /Z.7F0 ¹⁾
0.75	DRS80S4/TH.	MF../MM07D/Z.7F0/BW1	MQ../MM07D /Z.7F0/BW1
	DRE80M4/TH.	MF../MM11D/Z.7F0/BW1 ¹⁾	MQ../MM11D /Z.7F0/BW1 ¹⁾
	DRN80M4/TH.		
	DRS80S4/BE/TH.	MF../MM07D/Z.7F0	MQ../MM07D /Z.7F0
	DRE80M4/BE/TH.	MF../MM11D/Z.7F0 ¹⁾	MQ../MM11D /Z.7F0 ¹⁾
	DRN80M4/BE/TH.		
1.1	DRS80M4/TH.	MF../MM11D/Z.7F0/BW1	MQ../MM11D /Z.7F0/BW1
	DRE90M4/TH.	MF../MM15D/Z.7F0/BW1 ¹⁾	MQ../MM15D /Z.7F0/BW1 ¹⁾
	DRN90S4/TH.		
	DRS80M4/BE/TH.	MF../MM11D/Z.7F0	MQ../MM11D /Z.7F0
	DRE90M4/BE/TH.	MF../MM15D/Z.7F0 ¹⁾	MQ../MM15D /Z.7F0 ¹⁾
	DRN90S4/BE/TH.		
1.5	DRS90M4/TH.		
	DRE90L4/TH.	MF../MM15D/Z.7F0/BW1	MQ../MM15D /Z.7F0/BW1
	DRN90L4/TH.		
	DRS90M4/BE/TH.		
	DRE90L4/BE/TH.	MF../MM15D/Z.7F0	MQ../MM15D/Z.7F0
	DRN90L4/BE/TH.		

1) Combination with increased short-term torque

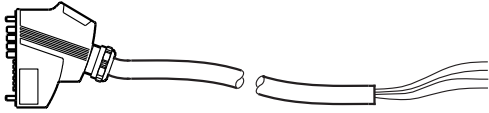
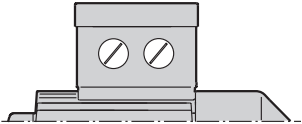
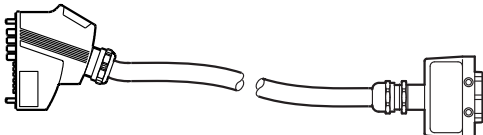
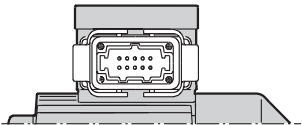
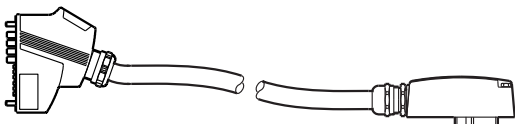
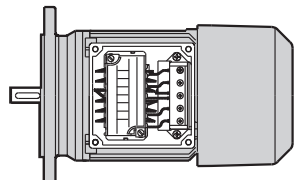
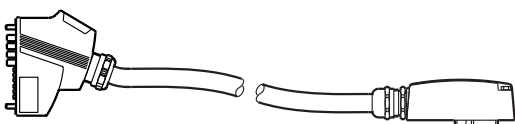
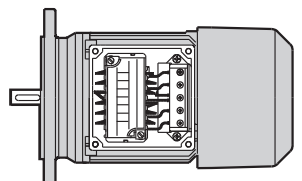
Motor assignment 2900 min⁻¹

Power [kW]	Motor (230/400 V, 50 Hz) △	Field distributor	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.37	DR63L4/TH	MF../MM03D/Z.7F1/BW1	MQ../MM03D/Z.7F1/BW1
	DRE80S4/TH.	MF../MM05D/Z.7F1/BW1 ¹⁾	MQ../MM05D/Z.7F1/BW1 ¹⁾
	DR63L4/BR/TH.	MF../MM03D/Z.7F1	MQ../MM03D/Z.7F1
	DRE80S4/BE/TH.	MF../MM05D/Z.7F1 ¹⁾	MQ../MM05D/Z.7F1 ¹⁾
0.55	DRS71S4/TH.	MF../MM05D/Z.7F1/BW1	MQ../MM05D/Z.7F1/BW1
	DRE80S4/TH.	MF../MM07D/Z.7F1/BW1 ¹⁾	MQ../MM07D/Z.7F1/BW1 ¹⁾
	DRS71S4/BE/TH.	MF../MM05D/Z.7F1	MQ../MM05D/Z.7F1
	DRE80S4/BE/TH.	MF../MM07D/Z.7F1 ¹⁾	MQ../MM07D/Z.7F1 ¹⁾
0.75	DRS71M4/TH.	MF../MM07D/Z.7F1/BW1	MQ../MM07D/Z.7F1/BW1
	DRE80M4/TH.	MF../MM11D/Z.7F1/BW1 ¹⁾	MQ../MM11D/Z.7F1/BW1 ¹⁾
	DRS71M4/BE/TH.	MF../MM07D/Z.7F1	MQ../MM07D / Z.7F1
	DRE80M4/BE/TH.	MF../MM11D/Z.7F1 ¹⁾	MQ../MM11D / Z.7F1 ¹⁾
1.1	DRS80S4/TH.	MF../MM11D/Z.7F1/BW1	MQ../MM11D/Z.7F1/BW1
	DRE80M4/TH.	MF../MM15D/Z.7F1/BW1 ¹⁾	MQ../MM15D/Z.7F1/BW1 ¹⁾
	DRN80M4/TH.		
	DRS80S4/BE/TH.	MF../MM11D/Z.7F1	MQ../MM11D/Z.7F1
	DRE80M4/BE/TH.	MF../MM15D/Z.7F1 ¹⁾	MQ../MM15D/Z.7F1 ¹⁾
	DRN80M4/BE/TH.		
1.5	DRS80M4/TH.		
	DRE90M4/TH.	MF../MM15D/Z.7F1/BW1	MQ../MM15D/Z.7F1/BW1
	DRN90S4/TH.		
	DRS80M4/BE/TH.		
	DRE90M4/BE/TH.	MF../MM15D/Z.7F1	MQ../MM15D/Z.7F1
	DRN90S4/BE/TH.		

1) Combination with increased short-term torque

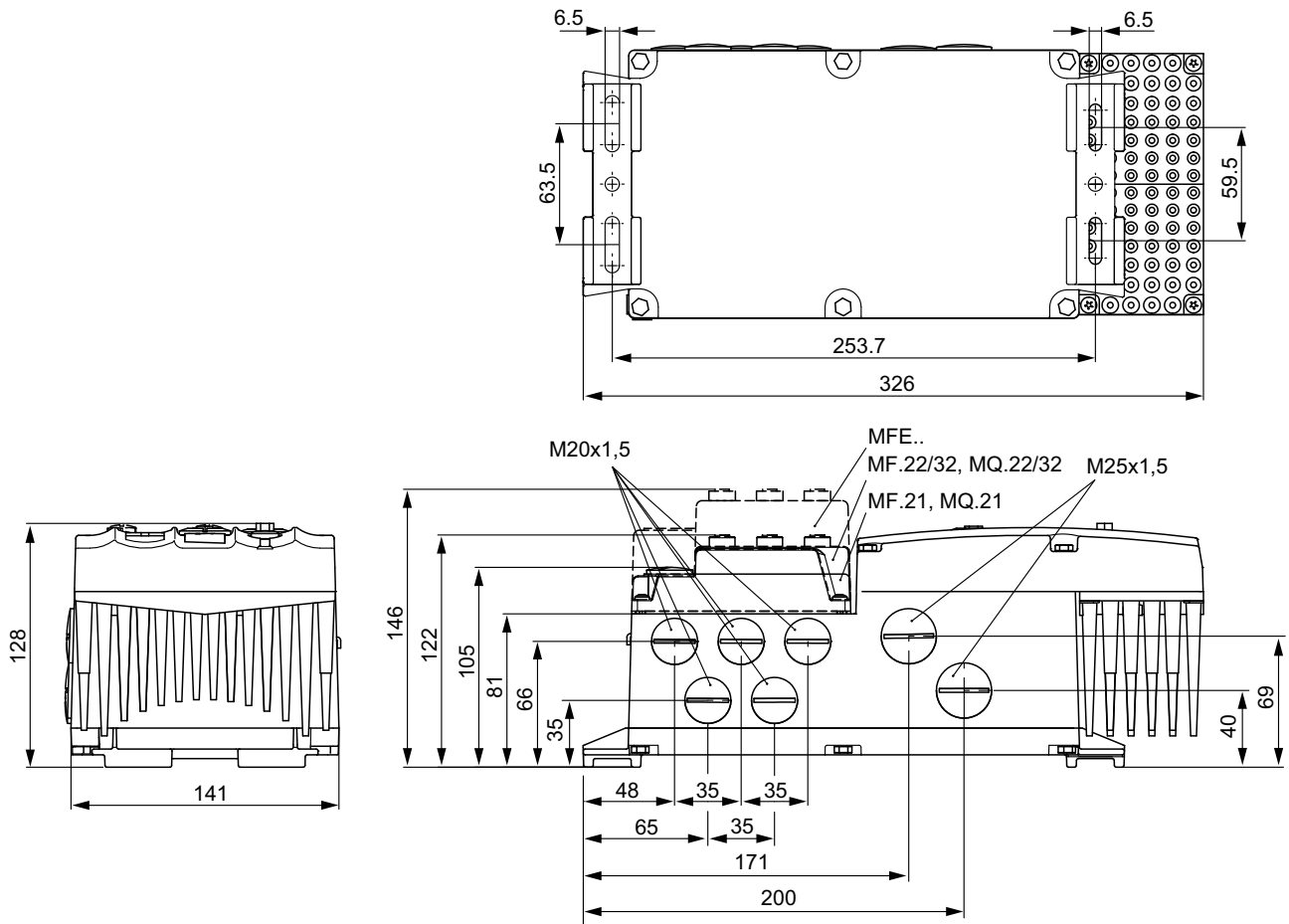
5.5.6 Hybrid cables for connecting Z.7 field distributors and motors

The following table shows the hybrid cables for connecting the motor to the field distributors MF../MM../Z.7. or MQ../MM../Z.7.:

Field distributor	Hybrid cable	Cable type	Drive
Z.7	Part number 01867423  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice	A	AC motors with cable gland 
	Part number: 05930766  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice	A	AC motors with ASB4 plug connector 
	Part number: 05932785 (人) Part number: 08163251 (△) 	A	AC motors with ISU4 plug connectors size DR63 
	Part number: 05937558 (人) Part number: 0816326X (△) 	A	AC motors with ISU4 plug connectors size DR.71 – 132 

5.5.7 Dimension drawing of field distributors MF../MM03 – MM15/Z.7., MQ../MM03 – MM15/Z.7.

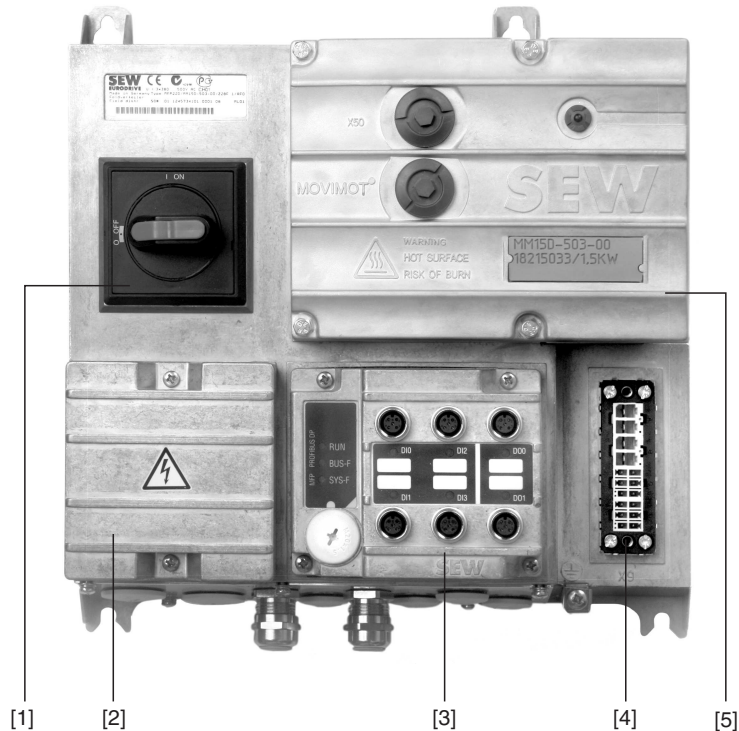
The following figure shows the dimensions of MF../MM03-MM15/Z.7., MQ../MM03-MM15/Z.7. field distributors:



18014400050036363

5.6 MF../MM../Z.8., MQ../MM../Z.8. field distributors

The following figure shows the MF../MM../Z.8., MQ../MM../Z.8. field distributor:



1482338315

- [1] Maintenance switch
- [2] Wiring space for line connection
- [3] MF../MQ.. fieldbus interface
- [4] Connection of prefabricated hybrid cable
- [5] MOVIMOT® inverter (here: size 1)

5.6.1 Unit properties

The MF../MM../Z.8., MQ../MM../Z.8. field distributors have the following functional characteristics:

- Communication interface with I/Os
- Separate wiring space for bus and power terminals
- Pluggable connection to MOVIMOT® (via hybrid cable)
- MOVIMOT® inverter integrated
- Maintenance switch (triple lock)
 - Made by ABB
 - Type OT16ET3HS3ST1
 - Color: black/red

5.6.2 Example for type designation MF../MM../Z.8., MQ../MM../Z.8.

The following table shows the type designation of MF../MM../Z.8., MQ../MM../Z.8. field distributors:

MFP 22D	Fieldbus interface	
	MFI..	= INTERBUS
	MFP../MQP..	= PROFIBUS
	MFE..	= PROFINET IO or EtherCAT®
/	MFD../MQD..	= DeviceNet™
MM22D -503-00	MOVIMOT® inverter	
	MM..D..	= MOVIMOT® inverter
/		
Z28F	Connection module for controlling MOVIMOT®	
	Z18F	= For INTERBUS
	Z28F	= For PROFIBUS, PROFINET IO or EtherCAT®
	Z38F	= For DeviceNet™
0	Connection type	
	0	= 
	1	= 
/		
AF0	Connection technology	
	AF0	= Metric cable entry
	AF1	= With micro-style connector for DeviceNet™
	AF2	= M12 plug connector for PROFIBUS
	AF3	= M12 plug connector for PROFIBUS and M12 plug connector for 24 V supply

The field distributor must be ordered with an integral braking resistor if the field distributor is used in conjunction with a drive without a mechanical holding brake.

Ordering of an integrated braking resistor

MF../MM../D/Z.8../BW../AF.



For the regenerative current-carrying capacity of the braking resistors, refer to chapter ""4Q operation with integrated BW.. braking resistor"" (→ 358).

5 Fieldbus interfaces and field distributors

MF../MM../Z.8., MQ../MM../Z.8. field distributors

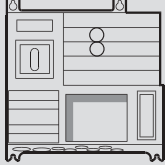
5.6.3 Possible combinations for MF../MM../Z.8.

The following table shows the possible combinations of the MF../MM../Z.8. field distributor with fieldbus interfaces:

				
		4 x I, 2 x O (terminals)	4 x I / 2 x O (M12)	6 x I (M12)
INTERBUS	↘	MFI21A/MM../D/Z18F0/AF0	MFI22A/MM../D/Z18F0/AF0	MFI32A/MM../D/Z18F0/AF0
	△	MFI21A/MM../D/Z18F1/AF0	MFI22A/MM../D/Z18F1/AF0	MFI32A/MM../D/Z18F1/AF0
PROFIBUS	↘	MFP21D/MM../D/Z28F0/AF0	MFP22D/MM../D/Z28F0/AF0	MFP32D/MM../D/Z28F0/AF0
	△	MFP21D/MM../D/Z28F1/AF0	MFP22D/MM../D/Z28F1/AF0	MFP32D/MM../D/Z28F1/AF0
	↘	MFP21D/MM../D/Z28F0/AF2	MFP22D/MM../D/Z28F0/AF2	MFP32D/MM../D/Z28F0/AF2
	△	MFP21D/MM../D/Z28F1/AF2	MFP22D/MM../D/Z28F1/AF2	MFP32D/MM../D/Z28F1/AF2
	↘	MFP21D/MM../D/Z28F0/AF3	MFP22D/MM../D/Z28F0/AF3	MFP32D/MM../D/Z28F0/AF3
	△	MFP21D/MM../D/Z28F1/AF3	MFP22D/MM../D/Z28F1/AF3	MFP32D/MM../D/Z28F1/AF3
PROFINET IO	↘	—	MFE52A/MM../D/Z28F0/AF0	
	△	—	MFE52A/MM../D/Z28F1/AF0	
EtherCAT®	↘	—	MFE72A/MM../D/Z28F0/AF0	
	△	—	MFE72A/MM../D/Z28F1/AF0	
DeviceNet™	↘	MFD21A/MM../D/Z38F0/AF1	MFD22A/MM../D/Z38F0/AF1	MFD32A/MM../D/Z38F0/AF1
	△	MFD21A/MM../D/Z38F1/AF1	MFD22A/MM../D/Z38F1/AF1	MFD32A/MM../D/Z38F1/AF1

5.6.4 Possible combinations for MQ../MM../Z.8.

The following table shows the possible combinations of the MQ../MM../Z.8. field distributor with fieldbus interfaces:

		4 x I, 2 x O (terminals)	4 x I / 2 x O (M12)	6 x I (M12)
PROFIBUS	↘	MQP21D/MM../Z28F0/ AF0	MQP22D/MM../Z28F0/ AF0	MQP32D/MM../Z28F0/ AF0
	△	MQP21D/MM../Z28F1/ AF0	MQP22D/MM../Z28F1/ AF0	MQP32D/MM../Z28F1/ AF0
	↘	MQP21D/MM../Z28F0/ AF2	MQP22D/MM../Z28F0/ AF2	MQP32D/MM../Z28F0/ AF2
	△	MQP21D/MM../Z28F1/ AF2	MQP22D/MM../Z28F1/ AF2	MQP32D/MM../Z28F1/ AF2
	↘	MQP21D/MM../Z28F0/ AF3	MQP22D/MM../Z28F0/ AF3	MQP32D/MM../Z28F0/ AF3
	△	MQP21D/MM../Z28F1/ AF3	MQP22D/MM../Z28F1/ AF3	MQP32D/MM../Z28F1/ AF3
DeviceNet™	↘	MQD21A/MM../Z38F0/ AF1	MQD22A/MM../Z38F0/ AF1	MQD32A/MM../Z38F0/ AF1
	△	MQD21A/MM../Z38F1/ AF1	MQD22A/MM../Z38F1/ AF1	MQD32A/MM../Z38F1/ AF1

5.6.5 Assignment of motors to MF../MM../Z.8., MQ../MM../Z.8. field distributors

Motor requirements

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications when ordering the drives assigned to the field distributors:

Characteristics	Requirements for the assigned AC motor		
Permitted motors	Only motors listed in the following chapters are approved: "Motor assignment 1400 min-1" (→ 260) and "Motor assignment 2900 min-1" (→ 262).		
Permitted nominal motor voltage	Depending on motor series:		
	Motor [type]	Nominal voltage [V]	Line frequency [Hz]
	DRS..	230/400	50
	DRE..	230/400	50
	DRS../DRE..	230/400	50
	DRN..	230/400	50
Permitted brakes	Depending on motor series:		
	Motor [type]	Standard brake [type]	Optional brake [type]
	DR63L4	BR03	–
	DRS71S4 DRE80S4	BE05	BE1
	DRS71M4 DRS80S4 DRE80M4 DRN80M4	BE1	BE05
	DRS80M4 DRE90M4 DRN90S4	BE2	BE1
	DRS90M4 DRE90L4 DRN90L4	BE2	BE1
	DRS90L4 DRE100M4 DRE100L4 DRN100LS4	BE5	BE2

Characteristics	Requirements for the assigned AC motor		
	DRS100M4 DRS100L4 DRS100LC4 DRE100LC4 DRN100L4	BE5	BE2
	DRE132S4	BE5	BE11
Preferred brake voltage	MM..D-503, size 1 (MM03.. – MM15..)	230 V	
	MM..D-503, size 2 (MM22.. – MM40..)	120 V	
	MM..D-233, size 1 + 2 (MM03.. – MM40..)		
Brake rectifier	Always order the assigned motor without brake rectifier .		
Permitted plug connectors	- ASB4 plug connector - ISU4 plug connector For additional information, refer to chapter ""Hybrid cables for connecting Z.8 field distributor and motors"" (→ 264).		
Permitted motor protection	SEW-EURODRIVE recommends to always order the motor with TH thermostat (bimetallic switch). Motor protection can also be implemented in the Expert mode of the MOVIMOT® inverter.		
Permitted encoder system	EI76 incremental encoder (can be evaluated via fieldbus interface with integrated MQ.. mini-controller).		

Motor assignment 1400 min⁻¹

Power [kW]	Motor (230/400 V, 50 Hz) 人	Field distributor	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.25	DR63L4/TH DRE80S4/TH.	MF../MM03D/Z.8F0/BW1/AF.. ¹⁾	MQ../MM03D / Z.8F 0 / BW1 / AF.. ¹⁾
	DR63L4/BR/TH. DRE80S4/BE/TH.	MF../MM03D/Z.8F0/AF.. ¹⁾	MQ../MM03D/Z.8F0/AF.. ¹⁾
0.37	DRS71S4/TH.	MF../MM03D/Z.8F0/BW1/AF..	MQ../MM03D/Z.8F0/BW1/AF..
	DRE80S4/TH.	MF../MM05D/Z.8F0/BW1/AF.. ¹⁾	MQ../MM05D/Z.8F0/BW1/AF.. ¹⁾
	DRS71S4/BE/TH.	MF../MM03D/Z.8F0/AF..	MQ../MM03D/Z.8F0/AF..
	DRE80S4/BE/TH.	MF../MM05D/Z.8F0/AF.. ¹⁾	MQ../MM05D/Z.8F0/AF.. ¹⁾
0.55	DRS71M4/TH.	MF../MM05D/Z.8F0/BW1/AF..	MQ../MM05D/Z.8F0/BW1/AF..
	DRE80M4/TH.	MF../MM07D/Z.8F0/BW1/AF.. ¹⁾	MQ../MM07D/Z.8F0/BW1/AF.. ¹⁾
	DRS71M4/BE/TH.	MF../MM05D/Z.8F0/AF..	MQ../MM05D/Z.8F0/AF..
	DRE80M4/BE/TH.	MF../MM07D/Z.8F0/AF.. ¹⁾	MQ../MM07D/Z.8F0/AF.. ¹⁾
0.75	DRS80S4/TH.	MF../MM07D/Z.8F0/BW1/AF..	MQ../MM07D/Z.8F0/BW1/AF..
	DRE80M4/TH.	MF../MM11D/Z.8F0/BW1/AF.. ¹⁾	MQ../MM11D/Z.8F0/BW1/AF.. ¹⁾
	DRN80M4/TH.		
	DRS80S4/BE/TH.	MF../MM07D/Z.8F0/AF..	MQ../MM07D/Z.8F0/AF..
	DRE80M4/BE/TH.	MF../MM11D/Z.8F0/AF.. ¹⁾	MQ../MM11D/Z.8F0/AF.. ¹⁾
	DRN80M4/BE/TH.		
1.1	DRS80M4/TH.	MF../MM11D/Z.8F0/BW1/AF..	MQ../MM11D/Z.8F0/BW1/AF..
	DRE90M4/TH.	MF../MM15D/Z.8F0/BW1/AF.. ¹⁾	MQ../MM15D/Z.8F0/BW1/AF.. ¹⁾
	DRN90S4/TH.		
	DRS80M4/BE/TH.	MF../MM11D/Z.8F0/AF..	MQ../MM11D/Z.8F0/AF..
	DRE90M4/BE/TH.	MF../MM15D/Z.8F0/AF.. ¹⁾	MQ../MM15D/Z.8F0/AF.. ¹⁾
	DRN90S4/BE/TH.		
1.5	DRS90M4/TH.	MF../MM15D/Z.8F0/BW1/AF..	MQ../MM15D/Z.8F0/BW1/AF..
	DRE90L4/TH.	MF../MM22D/Z.8F0/BW2/AF.. ¹⁾	MQ../MM22D/Z.8F0/BW2/AF.. ¹⁾
	DRN90L4/TH.		
	DRS90M4/BE/TH.	MF../MM15D/Z.8F0/AF..	MQ../MM15D/Z.8F0/AF..
	DRE90L4/BE/TH.	MF../MM22D/Z.8F0/AF.. ¹⁾	MQ../MM22D/Z.8F0/AF.. ¹⁾
	DRN90L4/BE/TH.		
2.2	DRS90L4/TH.	MF../MM22D/Z.8F0/BW2/AF..	MQ../MM22D/Z.8F0/BW2 /AF..
	DRE100M4/TH.	MF../MM30D/Z.8F0/BW2/AF.. ¹⁾	MQ../MM30D/Z.8F0/BW2/AF.. ¹⁾
	DRN100LS4/TH.		
	DRS90L4/BE/TH.	MF../MM22D/Z.8F0/AF..	MQ../MM22D/Z.8F0/AF..
	DRE100M4/BE/TH.	MF../MM30D/Z.8F0/AF.. ¹⁾	MQ../MM30D/Z.8F0/AF.. ¹⁾
	DRN100LS4/BE/TH.		

Power [kW]	Motor (230/400 V, 50 Hz) △	Field distributor	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
3.0	DRS100M4/TH.	MF../MM30D/Z.8F0/BW2/AF..	MQ../MM30D/Z.8F0/BW2/AF..
	DRE100LC4/TH.	MF../MM40D/Z.8F0/BW2/AF.. ¹⁾	MQ../MM40D/Z.8F0/BW2/AF.. ¹⁾
	DRN100L4/TH.		
	DRS100M4/BE/TH.	MF../MM30D/Z.8F0/AF..	MQ../MM30D/Z.8F0/AF..
	DRE100LC4/BE/TH.	MF../MM40D/Z.8F0/AF.. ¹⁾	MQ../MM40D/Z.8F0/AF.. ¹⁾
	DRN100L4/BE/TH.		
4.0	DRS100LC4/TH.	MF../MM40D/Z.8F0/BW2/AF..	MQ../MM40D/Z.8F0/BW2/AF..
	DRE132S4/TH.		
	DRN112M4/TH.		
	DRS100LC4/BE/TH.	MF../MM40D/Z.8F0/AF..	MQ../MM40D/Z.8F0/AF..
	DRE132S4/BE/TH.		
	DRN112S4/BE/TH.		

1) Combination with increased short-term torque

Motor assignment 2900 min⁻¹

Power [kW]	Motor (230/400 V, 50 Hz) △	Field distributor	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.37	DR63L4/TH	MF../MM03D/Z.8F1/BW1/AF..	MQ../MM03D/Z.8F1/BW1/AF..
	DRE80S4/TH.	MF../MM05D/Z.8F1/BW1/AF.. ¹⁾	MQ../MM05D/Z.8F1/BW1/AF.. ¹⁾
	DR63L4/BR/TH.	MF../MM03D/Z.8F1/AF..	MQ../MM03D/Z.8F1/AF..
	DRE80S4/BE/TH.	MF../MM05D/Z.8F1/AF.. ¹⁾	MQ../MM05D/Z.8F1/AF.. ¹⁾
0.55	DRS71S4/TH.	MF../MM05D/Z.8F1/BW1/AF..	MQ../MM05D/Z.8F1/BW1/AF..
	DRE80S4/TH.	MF../MM07D/Z.8F1/BW1/AF.. ¹⁾	MQ../MM07D/Z.8F1/BW1/AF.. ¹⁾
	DRS71S4/BE/TH.	MF../MM05D/Z.8F1/AF..	MQ../MM05D/Z.8F1/AF..
	DRE80S4/BE/TH.	MF../MM07D/Z.8F1/AF.. ¹⁾	MQ../MM07D/Z.8F1/AF.. ¹⁾
0.75	DRS71M4/TH.	MF../MM07D/Z.8F1/BW1/AF..	MQ../MM07D/Z.8F1/BW1/AF..
	DRE80M4/TH.	MF../MM11D/Z.8F1/BW1/AF.. ¹⁾	MQ../MM11D/Z.8F1/BW1/AF.. ¹⁾
	DRS71M4/BE/TH.	MF../MM07D/Z.8F1/AF..	MQ../MM07D/Z.8F1/AF..
	DRE80M4/BE/TH.	MF../MM11D/Z.8F1/AF.. ¹⁾	MQ../MM11D/Z.8F1/AF.. ¹⁾
1.1	DRS80S4/TH.	MF../MM11D/Z.8F1/BW1/AF..	MQ../MM11D/Z.8F1/BW1/AF..
	DRE80M4/TH.	MF../MM15D/Z.8F1/BW1/AF.. ¹⁾	MQ../MM15D/Z.8F1/BW1/AF.. ¹⁾
	DRN80M4/TH.		
	DRS80S4/BE/TH.	MF../MM11D/Z.8F1/AF..	MQ../MM11D/Z.8F1/AF..
	DRE80M4/BE/TH.	MF../MM15D/Z.8F1/AF.. ¹⁾	MQ../MM15D/Z.8F1/AF.. ¹⁾
	DRN80M4/BE/TH.		
1.5	DRS80M4/TH.	MF../MM15D/Z.8F1/BW1/AF..	MQ../MM15D/Z.8F1/BW1/AF..
	DRE90M4/TH.	MF../MM22D/Z.8F1/BW2/AF.. ¹⁾	MQ../MM22D/Z.8F1/BW2/AF.. ¹⁾
	DRN90S4/TH.		
	DRS80M4/BE/TH.	MF../MM15D/Z.8F1/AF..	MQ../MM15D/Z.8F1/AF..
	DRE90M4/BE/TH.	MF../MM22D/Z.8F1/AF.. ¹⁾	MQ../MM22D/Z.8F1/AF.. ¹⁾
	DRN90S4/BE/TH.		
2.2	DRS90M4/TH.	MF../MM22D/Z.8F1/BW2/AF..	MQ../MM22D/Z.8F1/BW2/AF..
	DRE90L4/TH.	MF../MM30D/Z.8F1/BW2/AF.. ¹⁾	MQ../MM30D/Z.8F1/BW2/AF.. ¹⁾
	DRN90L4/TH.		
	DRS90M4/BE/TH.	MF../MM22D/Z.8F1/AF..	MQ../MM22D/Z.8F1/AF..
	DRE90L4/BE/TH.	MF../MM30D/Z.8F1/AF.. ¹⁾	MQ../MM30D/Z.8F1/AF.. ¹⁾
	DRN90L4/BE/TH.		
3.0	DRS90L4/TH.	MF../MM30D/Z.8F1/BW2/AF..	MQ../MM30D/Z.8F1/BW2/AF..
	DRE100M4/TH.	MF../MM40D/Z.8F1/BW2/AF.. ¹⁾	MQ../MM40D/Z.8F1/BW2/AF.. ¹⁾
	DRN100LS4/TH.		
	DRS90L4/BE/TH.	MF../MM30D/Z.8F1/AF..	MQ../MM30D/Z.8F1/AF..
	DRE100M4/BE/TH.	MF../MM40D/Z.8F1/AF.. ¹⁾	MQ../MM40D/Z.8F1/AF.. ¹⁾
	DRN100LS4/BE/TH.		

Power [kW]	Motor (230/400 V, 50 Hz) △	Field distributor	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
4.0	DRS100M4/TH. DRE100LC4/TH. DRN100L4/TH.	MF../MM40D/Z.8F1/BW2/AF..	MQ../MM40D/Z.8F1/BW2/AF..
	DRS100M4/BE/TH. DRE100LC4/BE/TH. DRN100L4/BE/TH.	MF../MM40D/Z.8F1/AF..	MQ../MM40D/Z.8F1/AF..

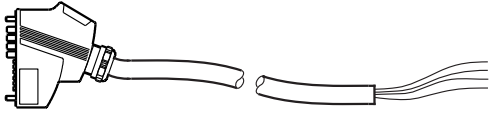
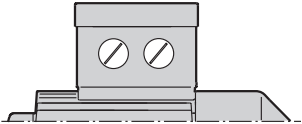
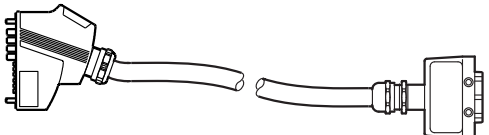
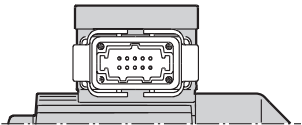
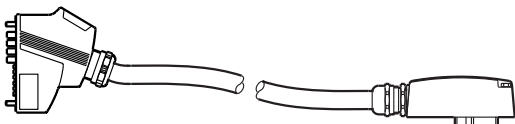
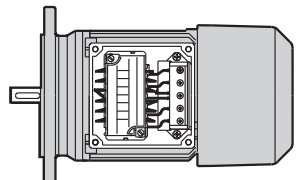
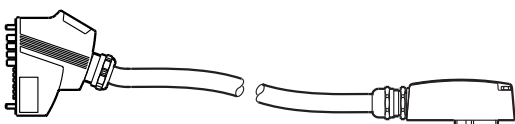
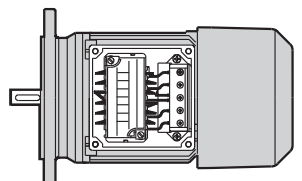
1) Combinations with increased short-term torque

5 Fieldbus interfaces and field distributors

MF../MM../Z.8., MQ../MM../Z.8. field distributors

5.6.6 Hybrid cables for connecting Z.8 field distributors and motors

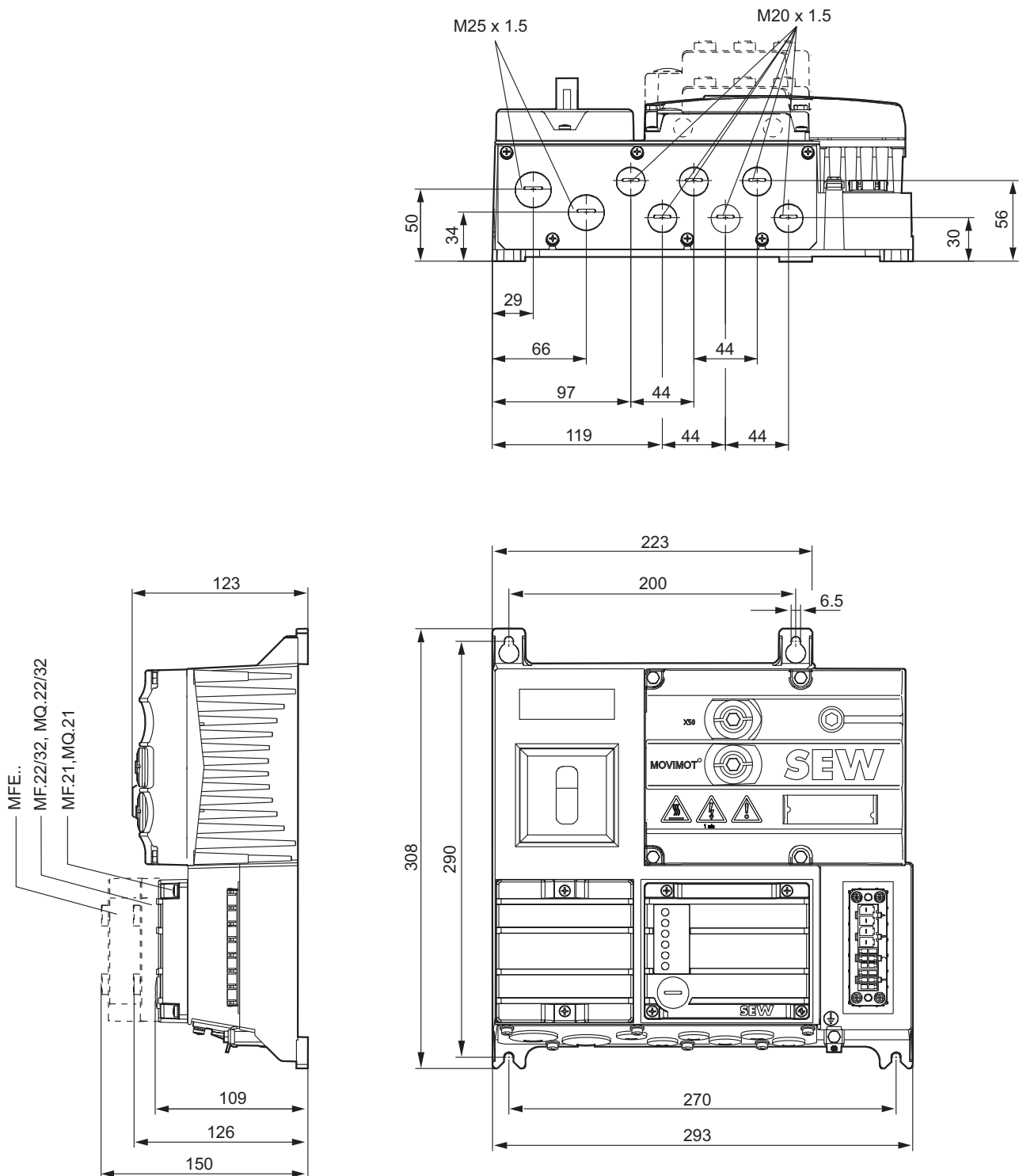
The following table shows the hybrid cables for connecting the motor to the field distributors MF../MM../Z.8. or MQ../MM../Z.8.:

Field distributor	Hybrid cable	Cable type	Drive
Z.8	Part number 01867423  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice	A	AC motors with cable gland 
	Part number: 05930766  Preferred type (preferred lengths 1.5/2/3/5 m) Preferred types with preferred lengths can usually be delivered at short notice	A	AC motors with ASB4 plug connector 
	Part number: 05932785 (∧) Part number: 08163251 (△) 	A	AC motors with ISU4 plug connectors size DR63 
	Part number: 05937558 (∧) Part number: 0816326X (△) 	A	AC motors with ISU4 plug connectors size DR.71 – 132 

21914796/EN – 09/2015

5.6.7 Dimension drawing of field distributors MF../MM03 – MM15/Z.8., MQ../MM03 – MM15/Z.8.

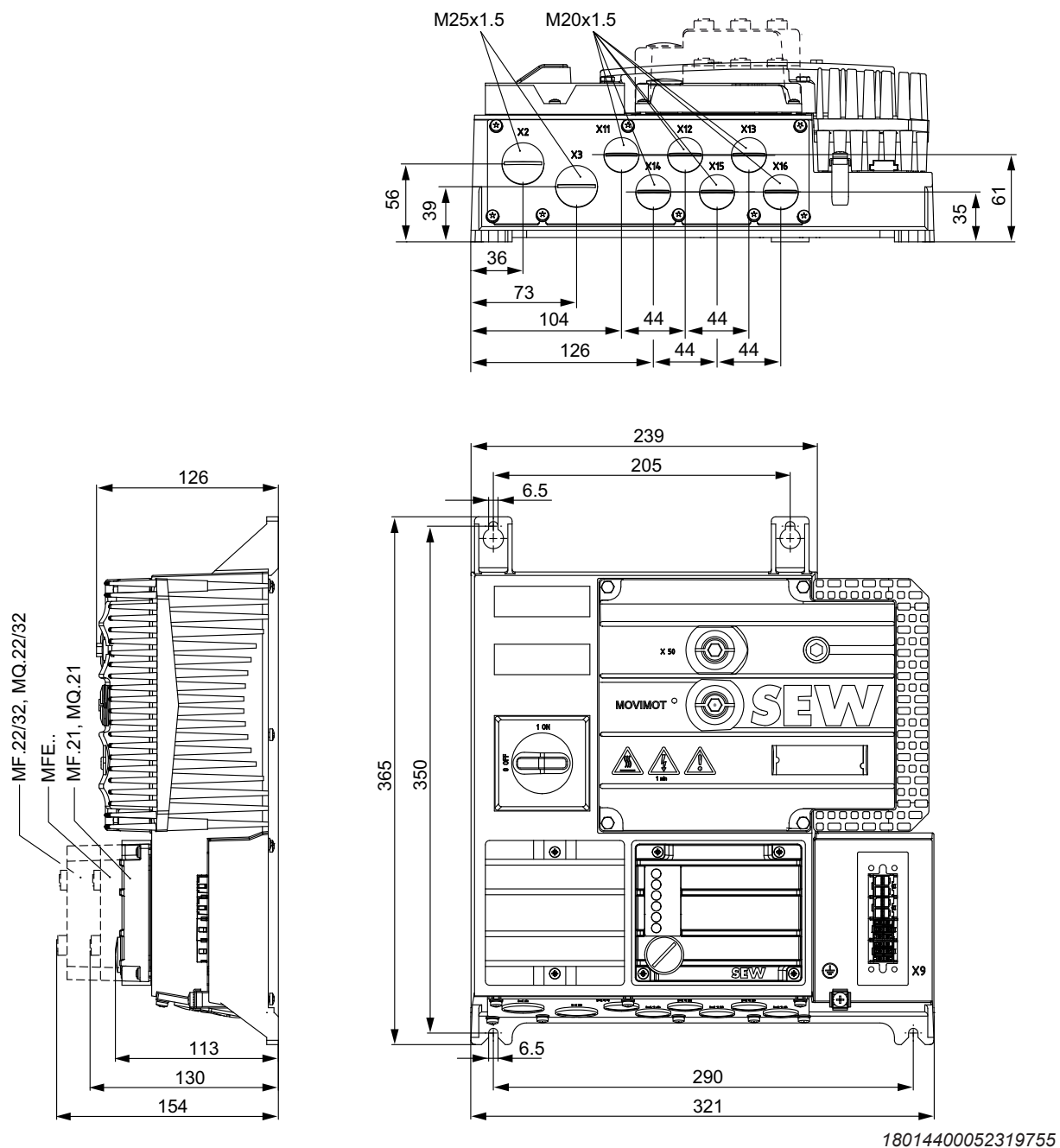
The following figure shows the dimensions of the field distributors MF../MM03 – MM15/Z.8., MQ../MM03 – MM15/Z.8.:



18014400052317835

5.6.8 Dimension drawing of field distributors MF../MM22 – MM30/Z.8., MQ../MM22 – MM30/Z.8.

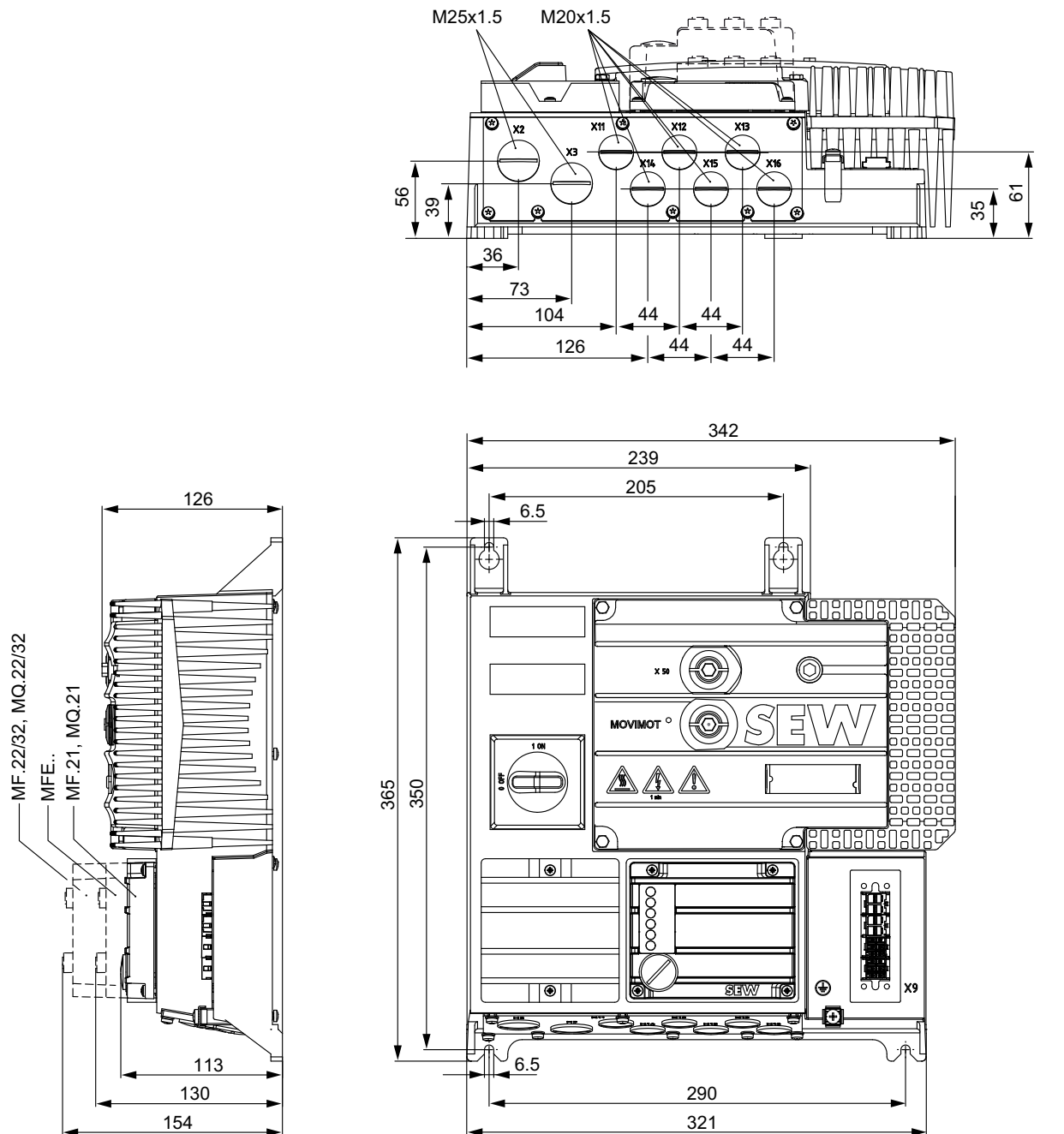
The following figure shows the dimensions of the field distributors MF../MM22 – MM30/Z.8., MQ../MM22 – MM30/Z.8.:



18014400052319755

5.6.9 MF../MM40/Z.8., MQ../MM40/Z.8. field distributors – dimension drawing

The following figure shows the dimensions of the field distributors MF../MM40/Z.8., MQ../MM40/Z.8.:



18014400195236363

5.7 Functional safety

5.7.1 Order information

INFORMATION



- The SafetyDrive design must be ordered explicitly.
- Additional order information: "SafetyDrive" must be added if functional safety (STO) is required and permitted for this combination.
- Use only those components in safety applications that were designed and delivered for this purpose by SEW-EURODRIVE and that are marked with the Functional Safety logo.

5.7.2 Permitted SafetyDrive designs

Only the following unit combinations with MOVIMOT® MM..D are permitted in applications with safe disconnection of the drive (STO) up to performance level d according to EN ISO 13849-1 and SIL 2 according to IEC 61800-5-2.

For additional information on the safety function and the safety-related requirements, refer to the "MOVIMOT® MM..D – Functional Safety" manual.

MOVIMOT® with MFZ.6. field distributor

Connection via a prefabricated cable. The following combinations are permitted:

MF.. or MQ..	Fieldbus interface	
	MFI21A, 22A, 32A	Only permitted with Z16F
	MQ21A, 22A, 32A	
	MFI23F, 33F	
	MFP21D, 22D, 32D	Only permitted with Z26F
	MQP21D, 22D, 32D	
	MFE52A	
	MFE72A	
	MFD21A, 22A, 32A	Only permitted with Z36F
	MQD21A, 22A, 32A	
/		
Z.6.	Connection module for controlling MOVIMOT®	
	Z16F, Z26F, Z36F	
/		
A..	Connection technology	
	AF0	Only permitted with Z16F, Z26F
	AF1	Only permitted with Z36F
	AF2, AF3	Only permitted with Z26F

MOVIMOT® frequency inverter integrated in the MFZ.7. field distributor

Connection of the AC motor via prefabricated cable. The following combinations are permitted:

MF.. or MQ..	Fieldbus interface MFI21A, 22A, 32A MQI21A, 22A, 32A MFI23F, 33F	Only permitted with Z17F
	MFP21D, 22D, 32D MQP21D, 22D, 32D MFE52A MFE72A	Only permitted with Z27F
	MFD21A, 22A, 32A MQD21A, 22A, 32A	Only permitted with Z37F
/		
MM...	MOVIMOT® inverter MM03D – MM15D	
/		
Z.7F	Connection module for controlling MOVIMOT® Z17F, Z27F, Z37F	

MOVIMOT® frequency inverter integrated in the MFZ.8. field distributor

Connection of the AC motor via prefabricated cable. The following combinations are permitted:

MF.. or MQ..	Fieldbus interface MFI21A, 22A, 32A	Only permitted with Z18F
	MFI21A, 22A, 32A	
	MFI23F, 33F	
	MFP21D, 22D, 32D	Only permitted with Z28F
	MQP21D, 22D, 32D	
	MFE52A	
	MFE72A	
	MFD21A, 22A, 32A	Only permitted with Z38F
	MQD21A, 22A, 32A	
/		
MM...	MOVIMOT® inverter MM03D – MM40D	
/		
Z.8F	Connection module Z18F, Z28F, Z38F	
/		
AF0	Connection technology	
	AF0	Only permitted with Z18F, Z28F
	AF1	Only permitted with Z38F, Z38G
	AF2, AF3	Only permitted with Z28F

6 MOVIMOT®

6.1 Description

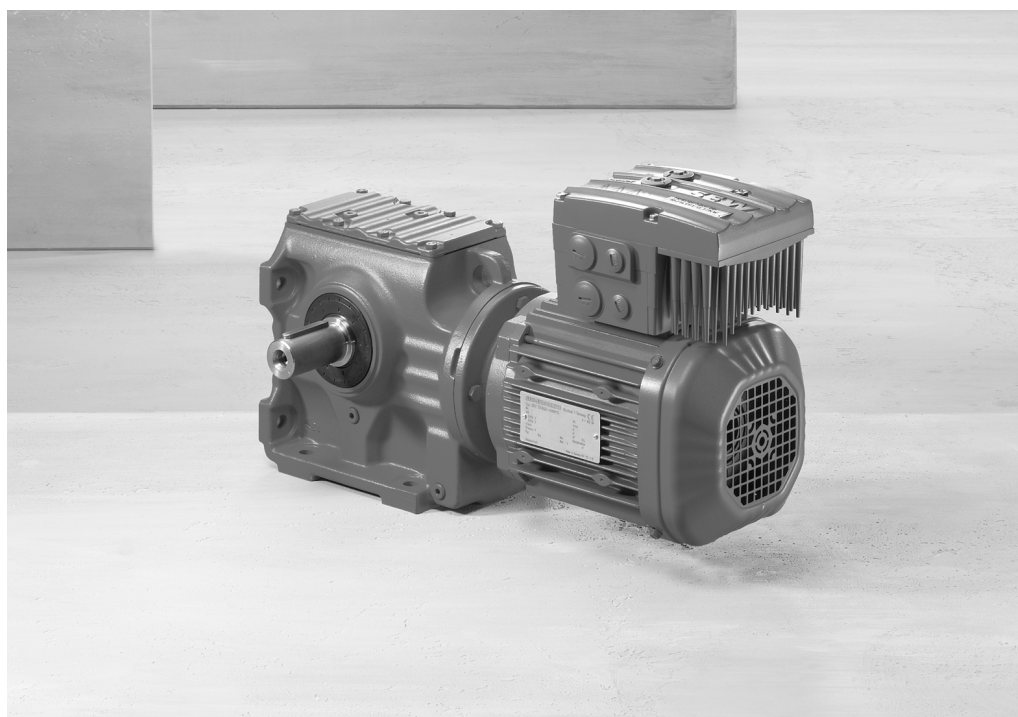
INFORMATION



This catalog provides a brief overview of MOVIMOT® drive units for a quick drive selection.

For detailed descriptions, project planning information and dimension drawings, refer to the "MOVIMOT® Gearmotors" catalog.

The following figure shows the MOVIMOT® size MM03 – MM15 as an example:



11908340235

MOVIMOT®, the combination of a DRS.., DRE.. or DRN.. AC (brake) motor and a digital frequency inverter, is available in the power range 0.37 – 4.0 kW. Especially decentralized drive tasks can be solved easily and economically.

You can use the MOVIMOT® drives to equip extensive plants with a modular system or flexibly integrate them in existing plants. MOVIMOT® is also the electronic replacement for pole-changing motors or mechanical variable-speed gear units.

MOVIMOT® is available as motor, brakemotor, gearmotor or geared brakemotor in many different standard variants and mounting positions.

6.1.1 MOVIMOT® unit features

- Frequency inverter with vector-oriented motor control
- Power range: 0.37 – 4.0 kW (0.37 – 2.2 kW)
- Voltage range: 3 x 380 – 500 V (3 x 200 – 240 V)
- Application-specific parameterization is possible
- Pluggable parameter memory for data backup (drive ID module)
- Comprehensive protection and monitoring functions
- Low-noise thanks to PWM clock frequency 16 kHz.
- Status LED for fast diagnostics
- Diagnostic interface with plug connector as a standard feature
- Diagnostics and manual operation using MOVITOOLS® MotionStudio
- 4Q operation as standard
- Integrated brake management:
 - For motors with mechanical brake, the brake coil is used as braking resistor.
 - For motors without brake, MOVIMOT® is supplied with internal braking resistor as standard.
- The units are controlled either via binary signals, via the serial interface RS485, or optionally with AS-Interface or one of the common fieldbus interfaces (PROFIBUS, PROFINET IO, INTERBUS, DeviceNet™, EtherCAT®).
- MOVIMOT® can be supplied with UL approval (UL listed) on request.

MOVIMOT® options (/MO)

MOVIMOT® can be supplemented by many different "options" (→ 289).

The type designation contains /MO no matter whether one or several of the following options are used.

Designation	Description
BEM	Brake control
URM	Voltage relay
MLU13A	Internal DC 24 V voltage supply (380 – 500 V)
MNF21A	Internal line filter option (MM03 – MM15)
MLU11A	DC 24 V voltage supply (380 – 500 V)
MLU21A	DC 24 V voltage supply (200 – 240 V)
MLG11A	Setpoint adjuster with DC 24 V voltage supply (380 – 500 V)
MLG21A	Setpoint adjuster with DC 24 V voltage supply (200 – 240 V)
MFP...	PROFIBUS interface
MFE...	PROFINET-IO or EtherCAT® interface
MFI...	INTERBUS interface
MFD...	DeviceNet™ interface

AS-Interface

MOVIMOT® drives are available with integrated AS-Interface. The following designs are available:

- MLK30A option (slave on AS-Interface)
- MLK31A option (double slave on AS-Interface)
for drives with several speed setpoints and ramps.

The AS-Interface slave is located on the connection board in the connection box.

6

MLK30A

Connected to the AS-Interface, the MLK30A slave works like a module with 4 inputs and 4 outputs.

The cyclic output bits control the MOVIMOT® inverter.

The input bits transmit the status of the drive and 2 additional sensor signals to the AS-Interface master.

The acyclic parameter bits are used to select speed scaling factors.

The MLK30A option is compatible with MOVIMOT® MM..C with integrated AS-Interface.

MLK31A

The MLK31A option works as a double slave on the AS-Interface according to AS-Interface specification 3.0.

The serial AS-Interface data transmission (analog profile) allows for MOVIMOT® parameters and display values to be written and read.

The MOVIMOT® inverter is controlled via the cyclic output bits. The coding of the data bits is specified in different function modes. The MOVIMOT® inverter interprets these bits as different control and status codes. With the acyclic parameter bits, you can switch between the function modes.

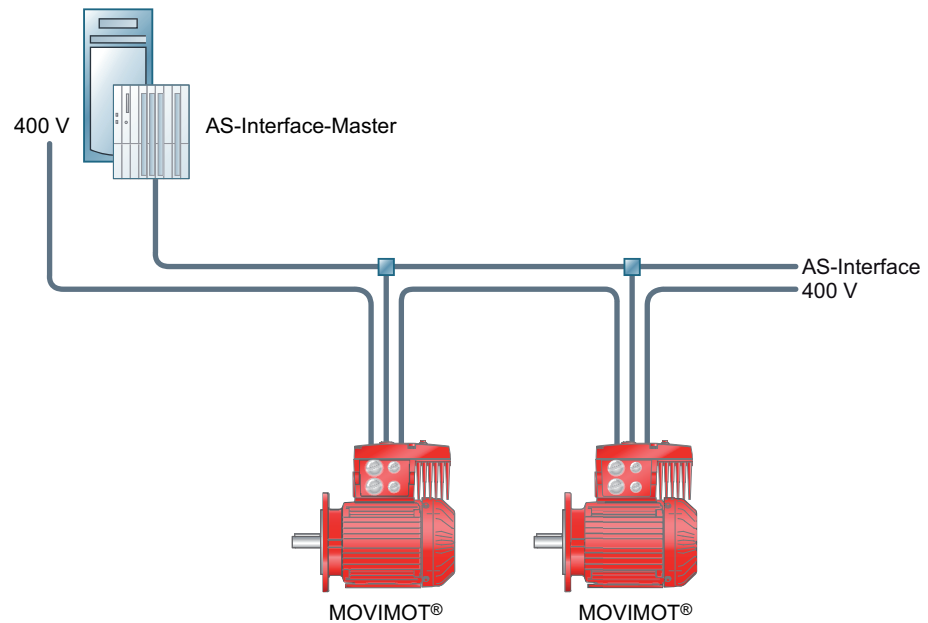
The input bits transmit the status of the drive and 2 additional sensor signals to the AS-Interface master.

6.1.2 Advantages of MOVIMOT®

- Small total volume
- Interference-free connection between inverter and motor
- Closed design with integrated protection functions
- Inverter cooling independent of the motor speed
- No space required in the control cabinet
- Optimally preset parameters for the expected applications
- Easy installation, startup and maintenance
- Easy to service for retrofitting and replacement

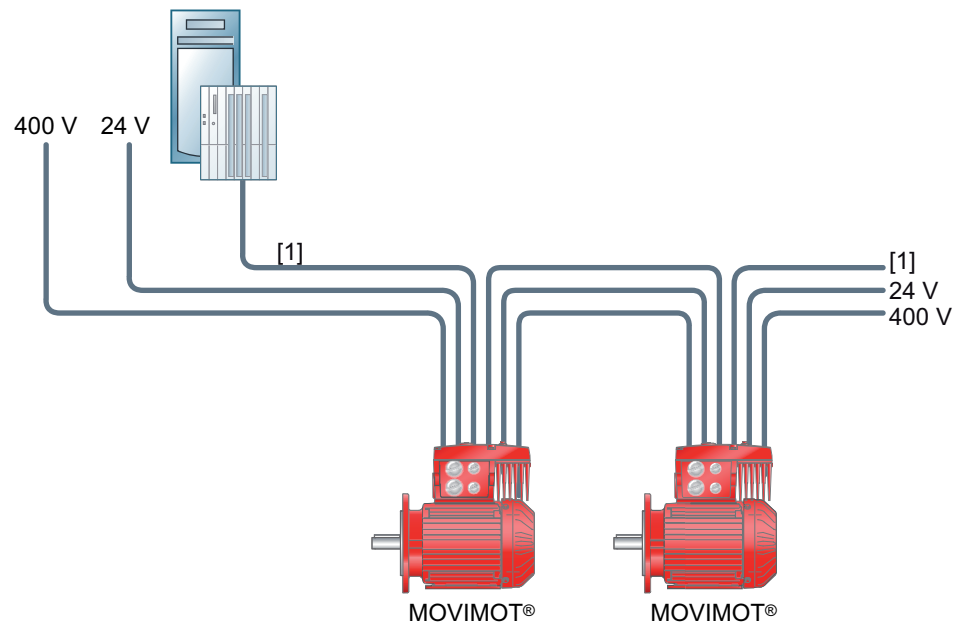
6.2 MOVIMOT® installation topology

The following figure shows the basic installation topology of the MOVIMOT® drive with AS-Interface (DC 24 V supply via AS-Interface):



5255090315

The following figure shows the basic installation topology of the MOVIMOT® drive:



9007204323709451

[1] Control: Binary (+ RS485)

6.3 Available MOVIMOT® motor combinations

6.3.1 Motor identification for MOVIMOT® (/MI)

Each MOVIMOT® contains a drive ID module for easy and fast startup. The drive ID module is included in the delivery of the MOVIMOT® motor or MOVIMOT® gearmotor.

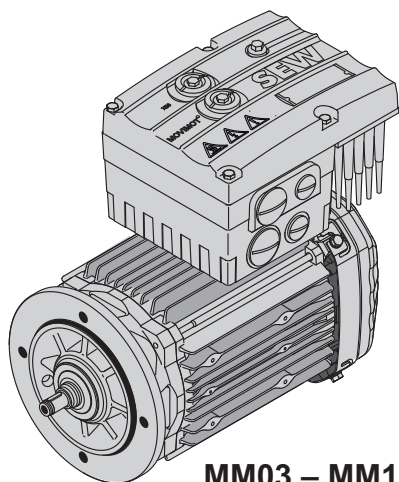
When a DR.. motor/brakemotor is ordered without MOVIMOT® inverter, a drive ID module suitable for the energy efficiency class can be included in the delivery. The drive ID module is attached in the standard terminal box of the DR. motor or DR...BE brakemotor. On the type designation of the DR.. motor/brakemotor, the drive ID module is indicated by /MI.

Assignment of the drive ID module

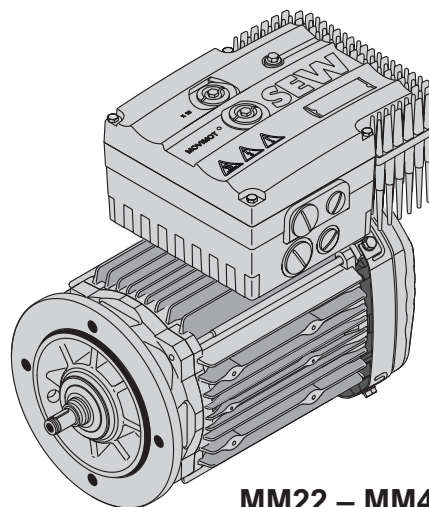
Type	Motor		Drive ID module		
	Line voltage [V]	Line frequency [Hz]	Designation	ID color	Part number
DRS	230/400	50	DRS/400/50	White	18214371
DRE	230/400	50	DRE/400/50	Orange	18214398
DRS	266/460	60	DRS/460/60 ¹⁾	Yellow	18214401
DRE	266/460	60	DRE/460/60 ¹⁾	Green	18214428
DRS/DRE	220/380	60	DRS/DRE/380/60 ¹⁾	Red	18234933
DRS/DRE	220 – 240/380 – 415 254 – 277/440 – 480	50	DRS/DRE/50/60	Purple	18214444
		60			
DRE...J	230/400	50	DRE...J/400/50	Orange	28203816
DRU...J	230/400	50	DRU...J/400/50	Gray	28203194
DRN	230/400	50	DRN/400/50	Light blue	28222040
DRN	266/460	60	DRN/460/60	Blue green	28222059
DRS/DRN	220 – 230/380 – 400 266/460	50	DRS/DRN/50/60	Pastel green	28222067
		60			

1) This drive ID module can also be combined with MOVIMOT® MM..D-233.

6.3.2 MOVIMOT® drives with DRN.. motors



MM03 – MM15



MM22 – MM40

9007200664175243

280 – 1400 min⁻¹ ∩ 3 x 380 – 500 V (400 V, 50 Hz)

IEC or UL

Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRN80M4/.../MM07	0.75	5.1	1.5	1400	1.9	0.99	24.7	26.2	10	15.6	19.6
DRN90S4/.../MM11	1.1	7.5	1.5	1400	2.4	0.99	54.0	58.7	20	21.6	25.6
DRN90L4/.../MM15	1.5	10.2	1.5	1400	3.5	0.99	67.2	71.9	20	24.6	28.6
DRN100LS4/.../MM22	2.2	15.0	1.5	1400	5.0	0.99	81.4	87.4	28	29.3	35.3
DRN100L4/.../MM30	3.0	20.5	1.5	1400	6.7	0.99	112	118	40	36.3	42.3
DRN112M4/.../MM40	4.0	27.3	1.5	1400	7.3	0.99	178	183	55	48.2	55.2

290 – 2900 min⁻¹ △ 3 x 380 – 500 V (400 V, 50 Hz)

IEC or UL

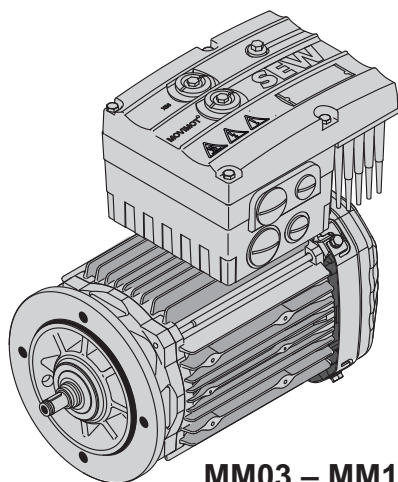
Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRN80M4/.../MM11	1.1	3.62	1.5	2900	2.4	0.99	24.7	26.2	10	15.6	19.6
DRN90S4/.../MM15	1.5	4.95	1.5	2900	3.5	0.99	54.0	58.7	20	21.6	25.6
DRN90L4/.../MM22	2.2	7.25	1.5	2900	5.0	0.99	67.2	71.9	20	25.3	29.3
DRN100LS4/.../MM30	3.0	9.9	1.5	2900	6.7	0.99	81.4	87.4	28	29.3	35.3
DRN100L4/.../MM40	4.0	13.2	1.5	2900	7.3	0.99	112	118	40	37.2	43.2

1) Mass of motor without brake

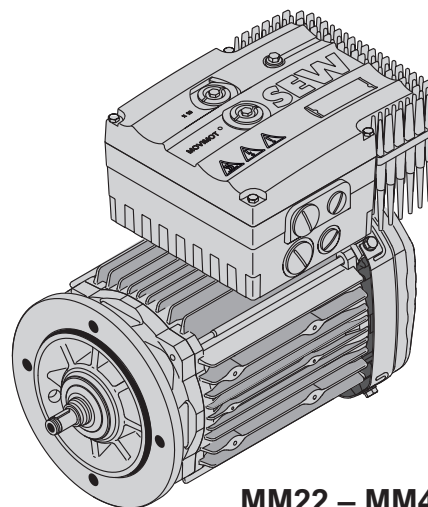
2) Mass of motor with brake

Thermal class F as standard

6.3.3 MOVIMOT® drives with DRN.. motors and increased short-term torque



MM03 – MM15



MM22 – MM40

9007200664175243

280 – 1400 min⁻¹ 3 x 380 – 500 V (400 V, 50 Hz)

IEC or UL

Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRN80M4/.../MM11	1.1	5.1	2.1	1400	1.9	0.99	24.7	26.2	10	15.6	19.6
DRN90S4/.../MM15	1.5	7.5	2.1	1400	2.4	0.99	54.0	58.7	20	21.6	25.6
DRN90L4/.../MM22	2.2	10.2	2.1	1400	3.5	0.99	67.2	71.9	20	25.3	29.3
DRN100LS4/.../MM30	3.0	15.0	2.1	1400	5.0	0.99	81.4	87.4	28	29.3	35.3
DRN100L4/.../MM40	4.0	20.5	2.1	1400	6.7	0.99	112	118	40	37.2	42.3

290 – 2900 min⁻¹ 3 x 380 – 500 V (400 V, 50 Hz)

IEC or UL

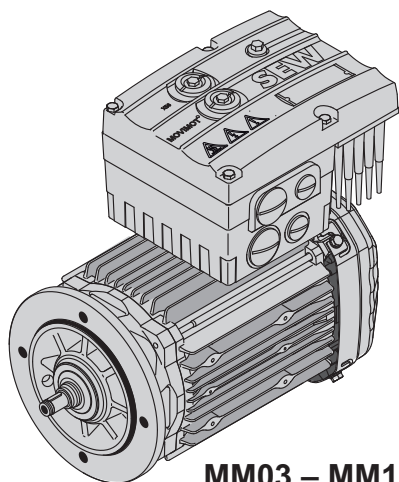
Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRN80M4/.../MM15	1.1	3.62	2.1	2900	2.4	0.99	24.7	26.2	10	15.6	19.6
DRN90S4/.../MM22	1.5	4.95	2.1	2900	3.5	0.99	54.0	58.7	20	22.3	26.3
DRN90L4/.../MM30	2.2	7.25	2.1	2900	5.0	0.99	67.2	71.9	20	25.3	29.3
DRN100LS4/.../MM40	3.0	9.9	2.1	2900	6.7	0.99	81.4	87.4	28	30.2	36.2

1) Mass of motor without brake

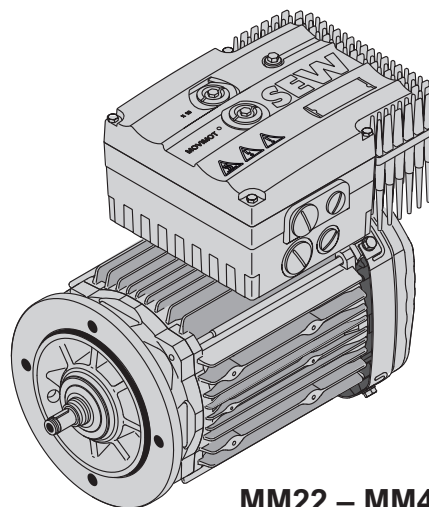
2) Mass of motor with brake

Thermal class F as standard

6.3.4 MOVIMOT® drives with DRE.. motors



MM03 – MM15



MM22 – MM40

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280 – 1400 min⁻¹ Δ 3 x 380 – 500 V (400 V)

IEC or UL

Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRE80S4 /../MM03	0.37	2.52	1.5	1400	1.3	0.99	14.9	16.4	5	12.7	15.7
DRE80M4 /../MM05	0.55	3.75	1.5	1400	1.6	0.99	21.5	23	10	15.5	18.5
DRE80M4 /../MM07	0.75	5.1	1.5	1400	1.9	0.99	21.5	23	10	15.5	18.5
DRE90M4 /../MM11	1.1	7.5	1.5	1400	2.4	0.99	35.5	40	20	19.6	24.2
DRE90L4 /../MM15	1.5	10.2	1.5	1400	3.5	0.99	43.5	48.5	20	22.6	27.2
DRE100M4 /../MM22	2.2	15	1.5	1400	5.0	0.99	56	62	28	28.3	34.2
DRE100LC4 /../MM30	3.0	20.5	1.5	1400	6.7	0.99	90	96	40	33.5	39.4
DRE132S4 /../MM40	4.0	27.3	1.5	1400	7.3	0.99	190	195	55	49.2	56.4

290 – 2900 min⁻¹ Δ 3 x 380 – 500 V (400 V)

IEC or UL

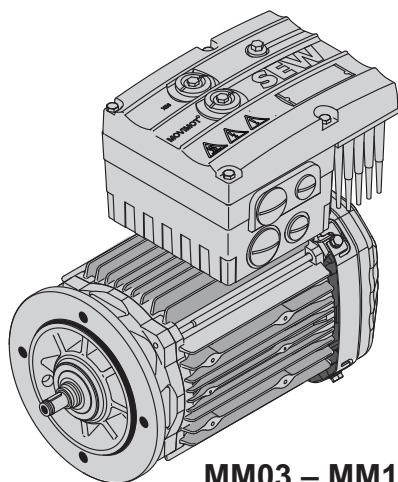
Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRE80S4 /../MM03	0.37	1.22	1.5	2900	1.3	0.99	14.9	16.4	5	12.7	15.7
DRE80S4 /../MM05	0.55	1.81	1.5	2900	1.6	0.99	14.9	16.4	5	12.7	15.7
DRE80M4 /../MM07	0.75	2.47	1.5	2900	1.9	0.99	21.5	23	10	15.5	18.5
DRE80M4 /../MM11	1.1	3.62	1.5	2900	2.4	0.99	21.5	23	10	15.5	18.5
DRE90M4 /../MM15	1.5	4.95	1.6	2900	3.5	0.99	35.5	40	20	19.6	24.2
DRE90L4 /../MM22	2.2	7.25	1.6	2900	5.0	0.99	43.5	48.5	20	23.7	28.2
DRE100M4 /../MM30	3.0	9.9	1.6	2900	6.7	0.99	56	62	28	28.3	34.2
DRE100LC4 /../MM40	4.0	13.2	1.6	2900	7.3	0.99	90	96	40	34.1	40.0

1) Mass of motor without brake

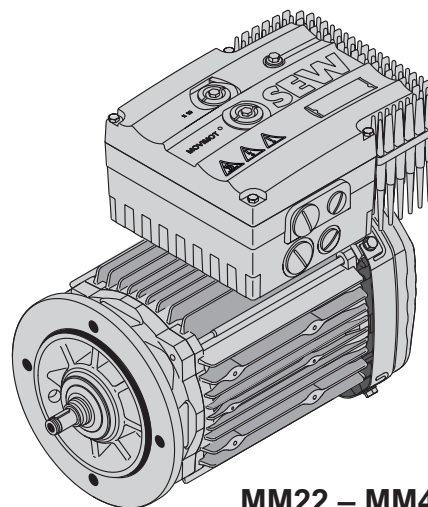
2) Mass of motor with brake

Thermal class F as standard

6.3.5 MOVIMOT® drives with DRE.. motors and increased short-term torque



MM03 – MM15



MM22 – MM40

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280 – 1400 min⁻¹ ∩ 3 x 380 – 500 V (400 V)

IEC or UL

Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRE80S4 /.../MM05	0.37	2.52	2.1	1400	1.3	0.99	14.9	16.4	5	12.7	15.7
DRE80M4 /.../MM07	0.55	3.75	2.1	1400	1.6	0.99	21.5	23	10	15.5	18.5
DRE80M4 /.../MM11	0.75	5.1	2.1	1400	1.9	0.99	21.5	23	10	15.5	18.5
DRE90M4 /.../MM15	1.1	7.5	2.1	1400	2.4	0.99	35.5	40	20	19.6	24.2
DRE90L4 /.../MM22	1.5	10.2	2.1	1400	3.5	0.99	43.5	48.5	20	23.7	28.3
DRE100M4 /.../MM30	2.2	15.0	2.1	1400	5.0	0.99	56	62	28	28.3	34.2
DRE100LC4 /.../MM40	3.0	20.5	2.1	1400	6.7	0.99	90	96	40	34.1	40.0

290 – 2900 min⁻¹ △ 3 x 380 – 500 V (400 V)

IEC or UL

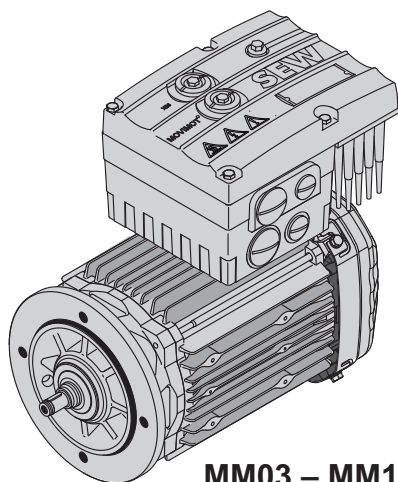
Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRE80S4 /.../MM05	0.37	1.22	2.2	2900	1.3	0.99	14.9	16.4	5	12.7	15.7
DRE80S4 /.../MM07	0.55	1.81	2.2	2900	1.6	0.99	14.9	16.4	5	12.7	15.7
DRE80M4 /.../MM11	0.75	2.47	2.2	2900	1.9	0.99	21.5	23	10	15.5	18.5
DRE80M4 /.../MM15	1.1	3.62	2.2	2900	2.4	0.99	21.5	23	10	15.5	18.5
DRE90M4 /.../MM22	1.5	4.95	2.2	2900	3.5	0.99	35.5	40	20	20.7	25.3
DRE90L4 /.../MM30	2.2	7.25	2.2	2900	5.0	0.99	43.5	48.5	20	23.7	28.3
DRE100M4 /.../MM40	3.0	9.9	2.2	2900	6.7	0.99	56	62	28	28.9	34.8

1) Mass of motor without brake

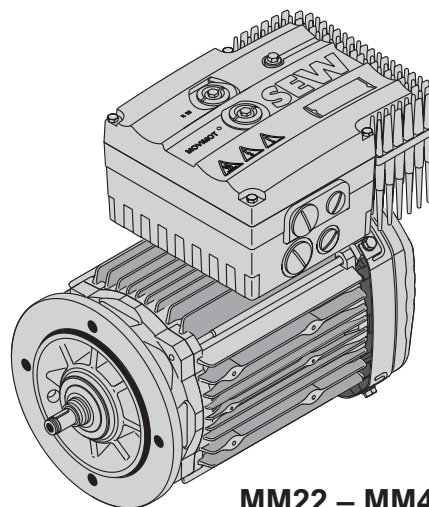
2) Mass of motor with brake

Thermal class F as standard

6.3.6 MOVIMOT® drives with DRS.. motors



MM03 – MM15



MM22 – MM40

9007200664175243

280 – 1400 min⁻¹ Δ 3 x 380 – 500 V (400 V)

IEC or UL

Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRS71S4 /../MM03	0.37	2.52	1.5	1400	1.3	0.99	4.9	6.2	5	9.0	11.4
DRS71M4 /../MM05	0.55	3.75	1.5	1400	1.6	0.99	7.1	8.4	10	10.3	12.9
DRS80S4 /../MM07	0.75	5.1	1.5	1400	1.9	0.99	14.9	16.4	10	12.7	15.7
DRS80M4 /../MM11	1.1	7.5	1.5	1400	2.4	0.99	21.5	26	14	15.5	19.2
DRS90M4 /../MM15	1.5	10.2	1.5	1400	3.5	0.99	35.5	40	20	19.6	24.2
DRS90L4 /../MM22	2.2	15.0	1.5	1400	5.0	0.99	43.5	49.5	40	23.7	29.6
DRS100M4 /../MM30	3.0	20.5	1.5	1400	6.7	0.99	56	62	40	28.3	34.2
DRS100LC4 /../MM40	4.0	27.3	1.5	1400	7.3	0.99	90	96	50	34.1	40.0

290 – 2900 min⁻¹ Δ 3 x 380 – 500 V (400 V)

IEC or UL

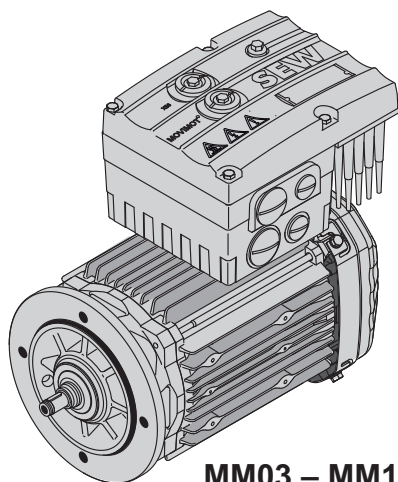
Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ¹⁾ [kg]	m ²⁾ [kg]
							Without brake	With brake			
DRS71S4 /../MM05	0.55	1.81	2.0	2900	1.6	0.99	4.9	6.2	5	9.0	11.4
DRS71M4 /../MM07	0.75	2.47	2.0	2900	1.9	0.99	7.1	8.4	10	10.3	12.9
DRS80S4 /../MM11	1.1	3.62	2.0	2900	2.4	0.99	14.9	16.4	10	12.7	15.7
DRS80M4 /../MM15	1.5	4.95	1.6	2900	3.5	0.99	21.5	26	14	15.5	19.2
DRS90M4 /../MM22	2.2	7.25	1.6	2900	5.0	0.99	35.5	40	20	20.7	25.3
DRS90L4 /../MM30	3.0	9.9	1.6	2900	6.7	0.99	43.5	49.5	40	23.7	29.6
DRS100M4 /../MM40	4.0	13.2	1.6	2900	7.3	0.99	56	62	40	28.9	34.8

1) Mass of motor without brake

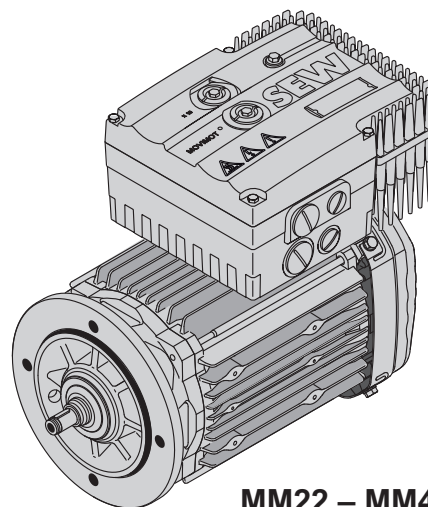
2) Mass of motor with brake

Thermal class F as standard

6.3.7 MOVIMOT® drives with DRS.. motors and increased short-term torque



MM03 – MM15



MM22 – MM40

9007200664175243

280 – 1400 min⁻¹ 3 x 380 – 500 V (400 V)

IEC or UL

Type	P _n [kW]	M _n [Nm]	M _a /M _n f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ²⁾ [kg]	m ³⁾ [kg]
							Without brake	With brake			
DRS71S4 /../MM05	0.37	2.52	2.1	1400	1.3	0.99	4.9	6.2	5	9.0	11.4
DRS71M4 /../MM07	0.55	3.75	2.1	1400	1.6	0.99	7.1	8.4	10	10.3	12.9
DRS80S4 /../MM11	0.75	5.1	2.1	1400	1.9	0.99	14.9	16.4	10	12.7	15.7
DRS80M4 /../MM15	1.1	7.5	2.1	1400	2.4	0.99	21.5	26	14	15.5	19.2
DRS90M4 /../MM22	1.5	10.2	2.1	1400	3.5	0.99	35.5	40	20	20.7	25.3
DRS90L4 /../MM30	2.2	15.0	2.1	1400	5.0	0.99	43.5	49.5	40	23.7	29.6
DRS100M4 /../MM40	3.0	20.5	2.0	1400	6.7	0.99	56	62	40	28.9	34.8

290 – 2900 min⁻¹ 3 x 380 – 500 V (400 V)

IEC or UL

Type	P _n [kW]	M _n [Nm]	M _a /M _n ¹⁾ f > 5 Hz	n _n [min ⁻¹]	I _{n1} [A]	cosφ	J _{mot} [10 ⁻⁴ kgm ²]		M _{Bmax} [Nm]	m ²⁾ [kg]	m ³⁾ [kg]
							Without brake	With brake			
DRS71S4 /../MM07	0.55	1.81	2.4	2900	1.6	0.99	4.9	6.2	5	9.0	11.4
DRS71M4 /../MM11	0.75	2.47	2.4	2900	1.9	0.99	7.1	8.4	10	10.3	12.9
DRS80S4 /../MM15	1.1	3.62	2.4	2900	2.4	0.99	14.9	16.4	10	12.7	15.7
DRS80M4 /../MM22	1.5	4.95	2.2	2900	3.5	0.99	21.5	26	14	16.6	20.3
DRS90M4 /../MM30	2.2	7.25	2.2	2900	5.0	0.99	35.5	40	20	20.7	25.3
DRS90L4 /../MM40	3.0	9.9	2.0	2900	6.7	0.99	43.5	49.5	40	24.3	30.2

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

2) Mass of motor without brake

3) Mass of motor with brake

Thermal class F as standard

6.4 Functional safety

6.4.1 Order information

INFORMATION



- The SafetyDrive design must be ordered explicitly. (Order note: "– SafetyDrive").
- In safety applications, only components may be used that were supplied by SEW-EURODRIVE in this design and that are marked with the FS logo for functional safety.

6.4.2 Permitted SafetyDrive designs

Only the following unit combinations with MOVIMOT® MM..D are permitted in applications with safe disconnection of the drive (STO) up to performance level d according to EN ISO 13849-1 and SIL 2 according to IEC 61800-5-2:

Permitted designs	MOVIMOT® type
MOVIMOT® with binary control (control via terminals)	D../MM.. – SafetyDrive MM..D-503-00 – SafetyDrive
MOVIMOT® with MBG11A option	
MOVIMOT® with MWA 21A option	
MOVIMOT® with MOVIFIT® MC	
MOVIMOT® with Z.6, Z.7 or Z.8 field distributor"" (→ 268)	

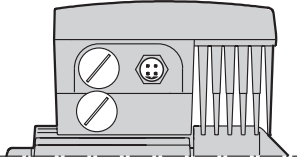
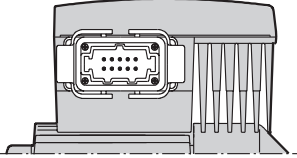
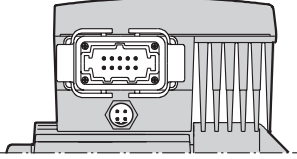
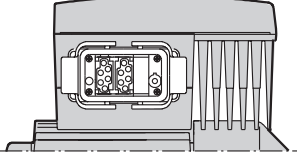
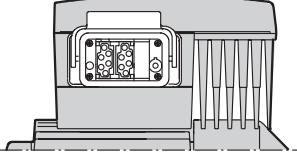
For additional information on the safety function and the safety-related requirements, refer to the "MOVIMOT® MM..DD – Functional Safety" manual.

6.5 Connection technology

6.5.1 Overview of MOVIMOT® standard design connection technology

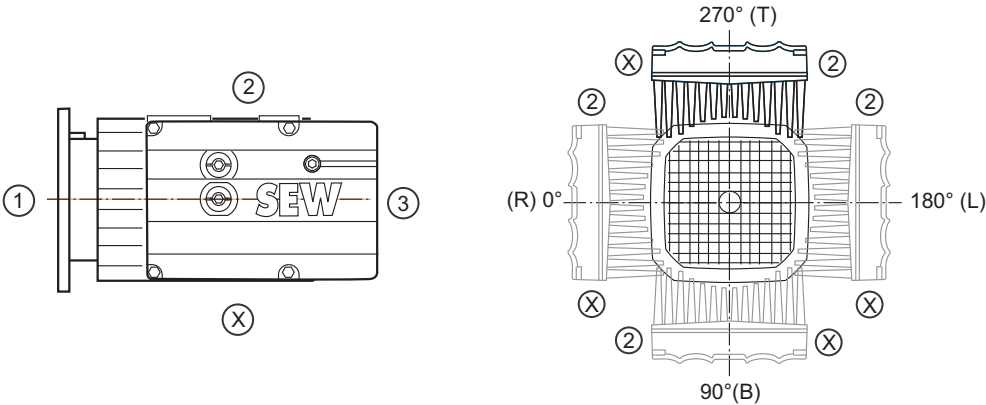
MOVIMOT® MM..D is supplied without plug connector if not specified otherwise in the order.

The following table shows the available plug connector variants:

Order designation	Function	Manufacturer's designation
MM../AVT1 	RS485	Round plug connector M12 x 1
MM../ASA3 	Power rating	Harting Han® 10 ES pin insert (built-on housing with 2 clips)
MM../ASA3/AVT1 	- Power rating - RS485	Harting Han® 10 ES pin insert (built-on housing with 2 clips) + Round plug connector M12 x 1
MM../AMA6 	Power/RS485	Harting HAN Modular® pin insert (built-on housing with 2 clips)
MM../AMD6 	Power/RS485	Harting HAN® Modular pin insert (built-on housing with 1 clip)

Possible plug connector positions (MOVIMOT® standard design)

The following positions are possible for plug connectors:



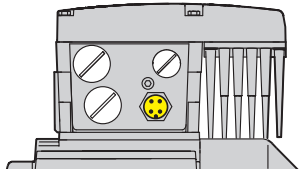
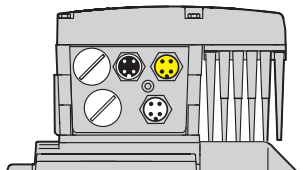
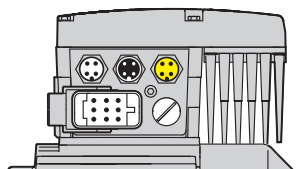
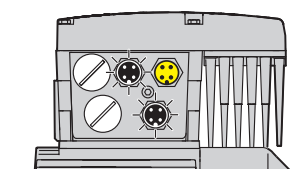
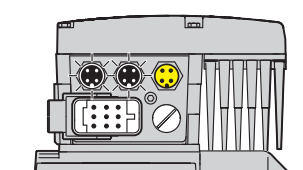
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Plug connector	Possible positions
AVT1	X (standard)
	2
ASA3	X (standard)
	2
ASA3/AVT1	ASA3 = X (standard) + AVT1 = X (standard)
	ASA3 = 2 + AVT1 = 2
AMA6	X (standard)
AMD6	2

6.5.2 Overview of connection technology – MOVIMOT® with integrated AS-Interface

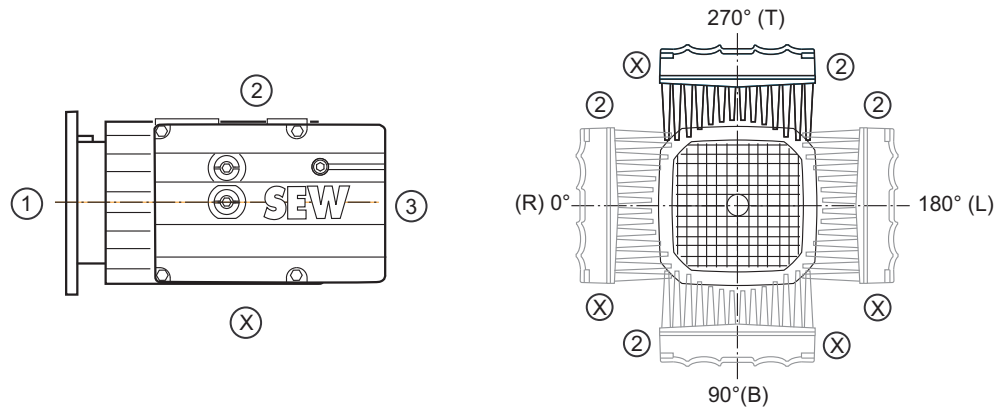
MOVIMOT® MM..D with integrated AS-Interface is supplied with AVSK plug connector (for AS-Interface) if not specified otherwise in the order.

The following table shows the available plug connector variants:

Order designation	Function	Manufacturer's designation
MM../AVSK 	AS-Interface	1 x round plug connector M12 x 1
MM../AZSK 	- AS-Interface - AUX PWR - Sensor connection	3 x round plug connector M12 x 1
MM../AND3/AZSK 	- Power rating - AS-Interface - AUX PWR - Sensor connection	Harting Han® Q8/0 pin insert (built-on housing with 1 clip) + 3 x round plug connector M12 x 1
MM../AZZK 	- AS-Interface/AUX-PWR - Sensor connection - Sensor connection	3 x round plug connector M12 x 1
MM../AND3/AZZK 	- Power rating - AS-Interface/AUX-PWR - Sensor connection - Sensor connection	Harting Han® Q8/0 pin insert (built-on housing with 1 clip) + 3 x round plug connector M12 x 1

Possible plug connector positions (MOVIMOT® with integrated AS-Interface)

Positions "X" or "2" are possible for plug connectors. The plug connectors are always located on one connection side. Combined plug connector positions are not possible.



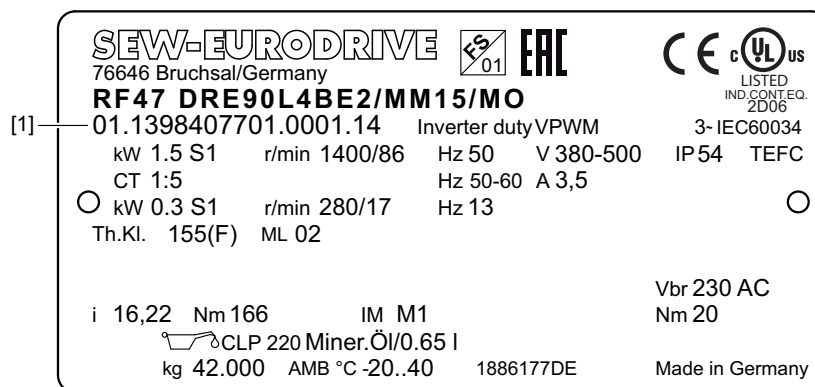
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6.6 Sample type designation

6.6.1 Standard design

Nameplate

The following figure gives an example of a MOVIMOT® drive nameplate. The nameplate is attached to the motor.



18014399029659147

[1] Part number

Type designation

The following table shows an example of the type designation of the MOVIMOT® drive RF47 DRE90L4BE2/MM15/MO:

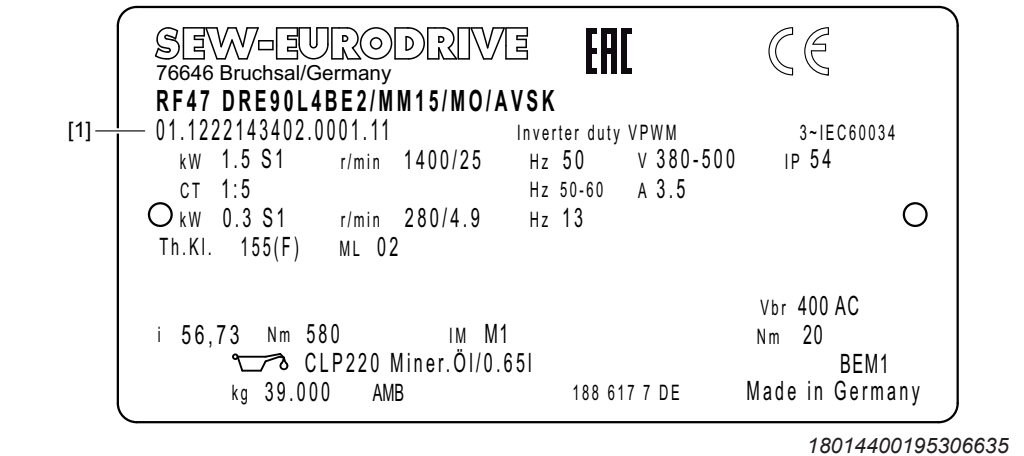
RF	Gear unit series
47	Gear unit size
DRE	Motor series (DRS., DRE., DRN..)
90L	Motor size
J	Rotor C = copper rotor J = LSPM rotor
4	Number of motor poles
BE2	Additional feature motor (brake)
/	
MM15	MOVIMOT® inverter
/	
MO	Additional feature: inverter ¹⁾

1) The nameplate only displays options installed at the factory.

6.6.2 MOVIMOT® with integrated AS-interface

Nameplate

The following figure gives an example of a MOVIMOT® drive nameplate. The nameplate is on the motor.



[1] Part number

Type designation

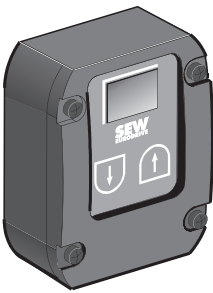
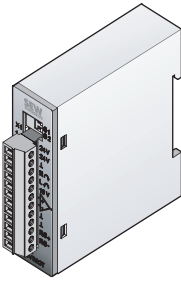
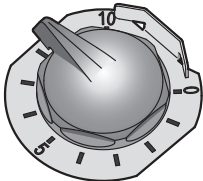
The following table shows an example of the type designation of the MOVIMOT® drive **RF47 DRE90L4BE2 /MM15/MO/AVSK**:

RF	Gear unit series
47	Gear unit size
DRE	Motor series (DRS., DRE., DRN..)
90L	Motor size
J	Rotor C = copper rotor J = LSPM rotor
4	Number of motor poles
BE2	Additional feature motor (brake)
/	
MM15	MOVIMOT® inverter
/	
MO	Additional feature: inverter ¹⁾ (e.g. MLK30A)
/	
AVSK	Plug connector for AS-Interface

1) The nameplate only displays options installed at the factory.

6.7 Options

The following tables show the options for MOVIMOT® MM..D.

Option	Figure	Description
DC 24 V supply MLU11A (input voltage AC 380 – 500 V) part number: 08233837 MLU21A (input voltage AC 200 – 240 V) part number: 0823387X		The MLU.1A option is mounted with a MOVIMOT® cable gland. The option provides the DC 24 V voltage supply for the MOVIMOT® inverter, including one option with a maximum power consumption of 70 mA (MBG11A, MWA21A). An external 24 V auxiliary voltage is not required.
Setpoint adjuster with DC 24 V supply MLG11A (input voltage AC 380 – 500 V) part number: 08233845 MLG21A (input voltage AC 200 – 240 V) part number: 08233888		The MLG.1A option is mounted with a MOVIMOT® cable gland. The option allows to set the input speed in the range of -100 % – +100 % f_{max} (potentiometer f1). An external 24 V auxiliary voltage is not required.
Setpoint adjuster MBG11A part number: 08225478		The MBG11A setpoint adjuster has 2 keys and a display. The keys allow for remote speed control in the range of -100 % – +100 % f_{max} (potentiometer f1). Up to 31 MOVIMOT® drives can be controlled simultaneously (broadcasting).
Setpoint converter MWA21A part number: 08230064		The MWA21A setpoint converter converts an analog setpoint and control signals into an RS485 protocol. This allows to control of the MOVIMOT® drive from the control cabinet remotely. Up to 31 MOVIMOT® drives can be controlled simultaneously (broadcasting).
Rotary button MBK11A (for MOVIMOT® MMD03 – MMD15..) Part number: 28230035 MBK12A (for MOVIMOT® MMD22 – MMD40..) part number: 28230043		The drive speed can be set in the range of 0 – 100 % using the adjusting knob. The MBK.. adjusting knob is mounted onto the setpoint potentiometer f1 of the MOVIMOT® inverter instead of the screw plug. NOTICE The MOVIMOT® inverter with adjusting knob has the degree of protection IP 54.

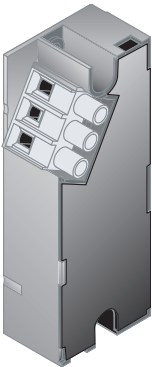
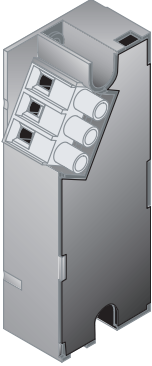
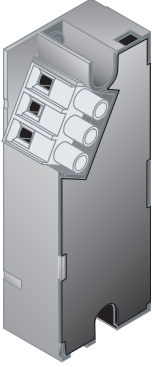
6.7.1 Options integrated in connection box

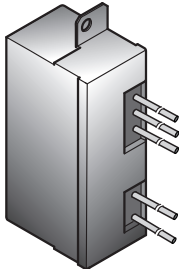
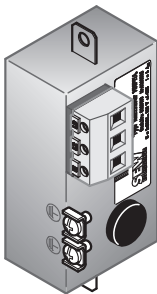
INFORMATION



The following table shows the options for MOVIMOT® MM..D that are installed in the connection box:

- The options BEM, BES, URM, MLU13A and MNF21A are integrated in the MOVIMOT® connection box.
- The MLU13A and MNF21A options can only be ordered in combination with the modular connection box.
- The modular connection box is assigned depending on the ordered option and the MOVIMOT® size.

Option	Figure	Description
BEM brake control Part number: 08296111		The BEM brake rectifier serves to control the brake of the MOVIMOT® drive. The brake is controlled by means of parameter setting or activating additional function 7 or 9. The BEM brake control implements fast release and application of the mechanical brake. NOTICE: The brake coil must correspond to the connection voltage.
BES brake control Part number: 08298475		The BES brake rectifier serves to control the DC 24 V brake (not standard) of the MOVIMOT® drive. The brake is controlled by means of parameter setting or activating additional function 7 or 9. The BES brake control implements normal release and fast application of the mechanical brake. NOTICE: The brake coil must be designed as DC 24 V coil.
URM voltage relay Part number: 08276013		The URM voltage relay implements rapid application of the mechanical brake. NOTICE: The brake coil must correspond to the MOVIMOT® standard (AC 120 V or AC 230 V).

Option	Figure	Description
Internal DC 24 V voltage supply MLU13A Part number: 18205968		The MLU13A option is installed in the modular connection box of the MOVIMOT® drive as standard. The option provides the DC 24 V voltage supply for the MOVIMOT® inverter, including one option with a maximum power consumption of 70 mA (MBG11A, MWA21A). An external 24 V auxiliary voltage is not required. Note that the height of the terminal box is higher for MOVIMOT® MM03 to MM15 by 18 mm.
MNF21A internal line filter Part number: 08042659		The MNF21A option is mounted in the connection box of the MOVIMOT® (MM03 – MM15). The option allows for implementing a drive system that complies with category C1 according to EN 61800-3 with respect to interference emission. The option requires the modular connection box with increased dimensions. Note that the height of the terminal box is higher for MOVIMOT® MM03 to MM15 by 18 mm.

6.7.2 Factory-installed external options

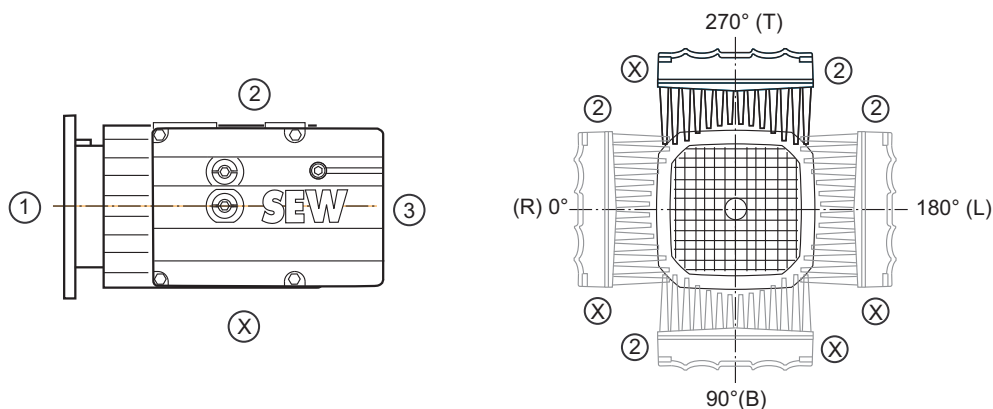
On request, the following options can be installed at the connection box at the factory (mounted, wired, and ready for operation):

- Local DC 24 V supply (MLU.1A)
- Local setpoint adjuster with DC 24 V supply (MLG.1A)
- PROFIBUS fieldbus interface (MFP../MQP..)
- PROFINET IO fieldbus interface (MFE52..)
- EtherCAT® fieldbus interface (MFE72..)
- INTERBUS fieldbus interface (MFI..)
- DeviceNet™ fieldbus interface (MFD../MQD..)
- Hybrid cable for connection between MF../Z.3. or MF../.6. field distributor and MOVIMOT® (KPF6, 1 – 5 m)

Important order information

The external options can be installed in the following positions as standard:

- Position "2"
- Position "X" (normal)



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6.8 Braking resistors

6.8.1 Assignment of internal braking resistors

The following table shows the assignments of internal braking resistors to MOVIMOT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).

MOVIMOT® type	Braking resistor	Part number
MM03D-503-00 – MM15D-503-00 MM03D-233-00 – MM07D-233-00	BW1	08228973 ¹⁾
MM22D-503-00 – MM40D-503-00 MM11D-233-00 – MM22D-233-00	BW2	08231362 ¹⁾

1) 2 screws M4 x 8 included in the delivery.

6.8.2 Assignment of external braking resistors

The following table shows the assignments of external braking resistors to MOVIMOT®. For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with brake and external braking resistor" (→ 360).

MOVIMOT® type	Braking resistor	Part number	Protective grid
MM03D-503-00 – MM15D-503-00 MM03D-233-00 – MM07D-233-00	BW200-003/K-1.5	08282919	0813152X
	BW200-005/K-1.5	08282838	–
	BW150-006/T	17969565	–
MM22D-503-00 – MM40D-503-00 MM11D-233-00 – MM22D-233-00	BW100-003/K-1.5	08282935	0813152X
	BW100-005/K-1.5	08282862	–
	BW068-006/T	17970008	–
	BW068-012/T	17970016	–

6.9 Brake coil assignment

The following table shows the assignments of the brake coil to the respective motor. For the regenerative current-carrying capacity of the brake coils, refer to chapter "4Q operation with motors with mechanical brake" (→ 359).

Motor	Brake coil assignment	
	Standard brake	Optional brake
DR63L4	BR03	–
DRS71S4 DRE80S4	BE05	BE1
DRS71M4 DRS80S4 DRE80M4 DRN80M4	BE1	BE05
DRS80M4 DRE90M4 DRN90S4	BE2	BE1
DRS90M4 DRE90L4 DRN90L4	BE2	BE1
DRS90L4 DRE100M4 DRE100L4 DRN100LS4	BE5	BE2
DRS100M4 DRS100L4 DRS100LC4 DRE100LC4 DRN100L4	BE5	BE2
DRE132S4 DRN112M4	BE5	BE11

7 MOVIMOT® mounting close to the motor (remote)

7.1 Description

The following figure shows the MOVIMOT® design for mounting close to the motor (left: size MM03 to MM15, right: size MM22 to MM40):



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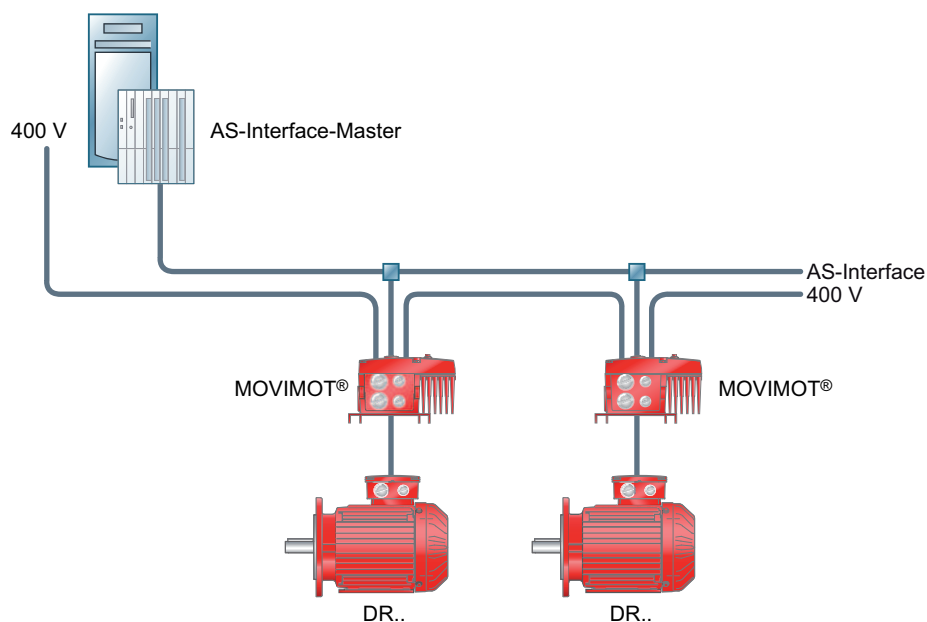
- The P2.A option is used to mount the MOVIMOT® inverter in close proximity to the motor (i.e. separate from the motor).
- The inverter is connected to the "assigned motor" (→ 301) using a prefabricated "hybrid cable" (→ 304).
- MOVIMOT® with option P2.A is with IP65 degree of protection.

7 MOVIMOT® mounting close to the motor (remote)

Installation topology of MOVIMOT®, mounting close to the motor

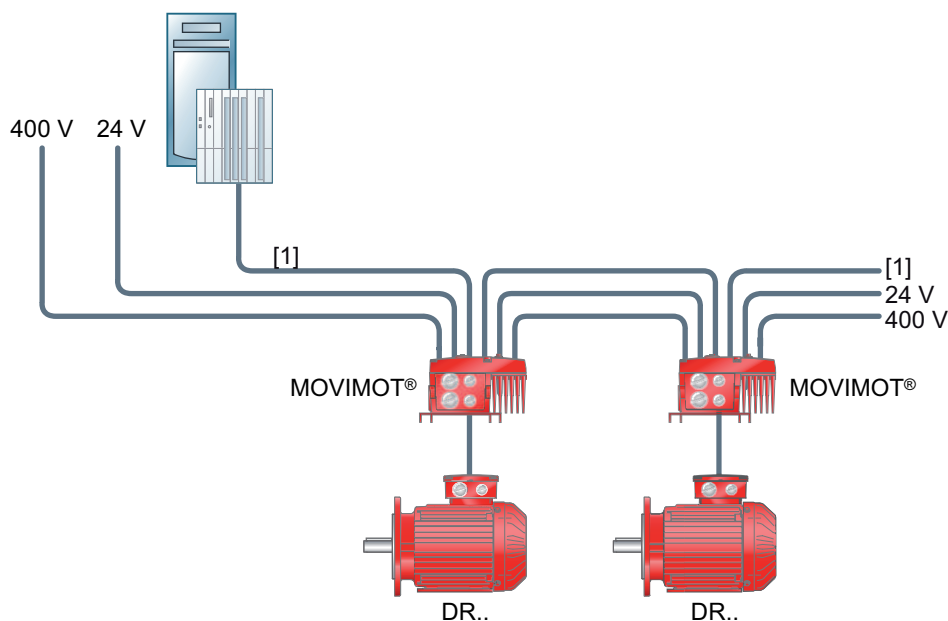
7.2 Installation topology of MOVIMOT®, mounting close to the motor

The following figure shows the basic installation topology of the MOVIMOT® drive with AS-Interface when mounted close to the motor (DC 24 V supply via AS-Interface):



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The following figure shows the basic installation topology of the MOVIMOT® drive when mounted close to the motor:



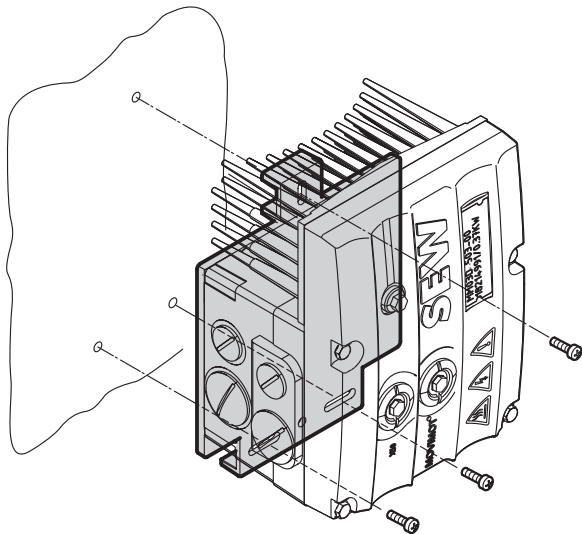
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[1] Control: Binary (+ RS485)

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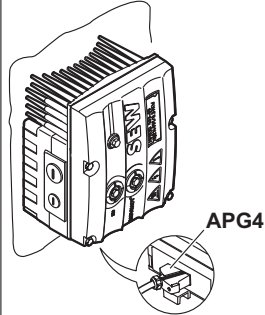
7.3 Available variants

The following figure shows an example of the P21A option for MOVIMOT® sizes MM03 to MM15:

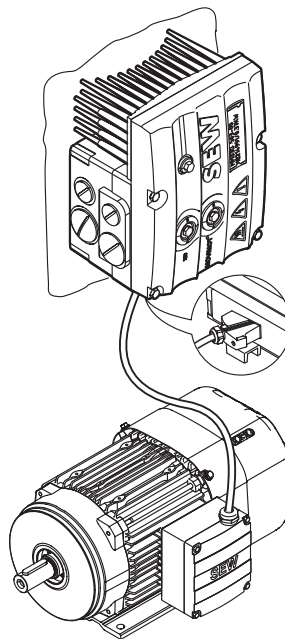


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The following designs are available:

Connection to motor	MOVIMOT® size	1)	MOVIMOT® stand-ard design	MOVIMOT® with in-tegrated AS-inter-face
	MM03 to MM15	↘	MM..D-503-00/0/ P21A/ RO1A/APG4	MM..D-503-00/0/ P21A/ RR3A/AVSK/ APG4/MLK
		△	MM..D-503-00/1/ P21A/ RO1A/APG4	MM..D-503-00/1/ P21A/ RR3A/AVSK/ APG4/MLK
	MM22 to MM40	↘	MM..D-503-00/0/ P22A/ RO2A/APG4	MM..D-503-00/0/ P22A/ RR4A/AVSK/ APG4/MLK
		△	MM..D-503-00/1/ P22A/ RO2A/APG4	MM..D-503-00/1/ P22A/ RR4A/AVSK/ APG4/MLK

1) Connection type of connected motor

7.4 Type designation of MOVIMOT® MM..D, mounting close to the motor

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7.4.1 Type designation

The following table shows the type designation for the MOVIMOT® inverter **MM15D-503-00/0/P21/RO1A/PG4** with mounting close to the motor:

MM15D-503-00	MOVIMOT® inverter
/	
0	Connection type 0 = Δ 1 = Δ
/	
P21A	Adapter for mounting close to the motor
/	
RO1A	Connection box design
/	
APG4	Plug connector for connection to motor

7.4.2 Ordering of an integrated braking resistorMM22D-503-00/0/**BW..**/P22A/RO2A/PG4

MM03 – MM15: **BW1**
MM22 – MM40: **BW2**

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For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 358).

7.5 Motor assignment

7.5.1 Motor requirements

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications when ordering the drives assigned to the MOVIMOT® drive (design for mounting close to the motor):

Characteristics	Requirements for the assigned AC motor		
Permitted motors	Only motors listed in the following chapters are approved: "Motor assignment 1400 min-1" (→ 301) and "Motor assignment 2900 min-1" (→ 302).		
Approved nominal voltage	Depending on motor series:		
	Motor [type]	Nominal voltage [V]	Line frequency [Hz]
	DRS..	230/400	50
	DRE..	230/400	50
	DRS../DRE..	230/400	50
	DRN..	230/400	50
Permitted brakes	Depending on motor series:		
	Motor [type]	Standard brake [type]	Optional brake [type]
	DR63L4	BR03	–
	DRS71S4 DRE80S4	BE05	BE1
	DRS71M4 DRS80S4 DRE80M4 DRN80M4	BE1	BE05
	DRS80M4 DRE90M4 DRN90S4	BE2	BE1
	DRS90M4 DRE90L4 DRN90L4	BE2	BE1
	DRS90L4 DRE100M4 DRE100L4 DRN100LS4	BE5	BE2

7 MOVIMOT® mounting close to the motor (remote)

Motor assignment

Characteristics	Requirements for the assigned AC motor		
	DRS100M4 DRS100L4 DRS100LC4 DRE100LC4 DRN100L4	BE5	BE2
	DRE132S4 DRN112M4	BE5	BE11
Preferred brake voltage	MM..D-503, BG 1 (MM03.. – MM15..)		230 V
	MM..D-503, BG 2 (MM22.. – MM40..)		120 V
Brake rectifier	Always order the assigned motor without brake rectifier .		
Permitted plug connectors	MM../P2.A/RO.A/APG4: • ASB4 plug connector • ISU4 plug connector See chapter "Hybrid cables" (→ 304) for additional information.		
Permitted motor protection	SEW-EURODRIVE recommends to always order the motor with TH thermostat (bimetallic switch). Motor protection can also be implemented in the Expert mode of the MOVIMOT® inverter.		
Permitted encoder system	EI76 incremental encoder (can be evaluated only via fieldbus interface with integrated MQ.. minicontroller).		

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7.5.2 Motor assignment 1400 min⁻¹

Power [kW]	Motor (230/400 V, 50 Hz) 人	MOVIMOT® with option P.2A
0.25	DR63L4/TH. DRE80S4/TH.	MM03D-503-00/0/BW1/P21A.. ¹⁾
	DR63L4/BE/TH. DRE80S4/BE/TH.	MM03D-503-00/0/P21A.. ¹⁾
0.37	DRS71S4/TH.	MM03D-503-00/0/BW1/P21A..
	DRE80S4/TH.	MM05D-503-00/0/BW1/P21A.. ¹⁾
	DRS71S4/BE/TH.	MM03D-503-00/0/P21A..
	DRE80S4/BE/TH.	MM05D-503-00/0/P21A.. ¹⁾
0.55	DRS71M4/TH.	MM05D-503-00/0/BW1/P21A..
	DRE80M4/TH.	MM07D-503-00/0/BW1/P21A.. ¹⁾
	DRS71M4/BE/TH.	MM05D-503-00/0/P21A..
	DRE80M4/BE/TH.	MM07D-503-00/0/P21A.. ¹⁾
0.75	DRS80S4/TH.	MM07D-503-00/0/BW1/P21A..
	DRE80M4/TH.	MM11D-503-00/0/BW1/P21A.. ¹⁾
	DRN80M4/TH.	
	DRS80S4/BE/TH.	MM07D-503-00/0/P21A..
1.1	DRE80M4/BE/TH.	MM11D-503-00/0/P21A.. ¹⁾
	DRN80M4/BE/TH.	
	DRS80M4/TH.	MM11D-503-00/0/BW1/P21A..
	DRE90M4/TH.	MM15D-503-00/0/BW1/P21A.. ¹⁾
1.5	DRN90S4/TH.	
	DRS80M4/BE/TH.	MM11D-503-00/0/P21A..
	DRE90M4/BE/TH.	MM15D-503-00/0/P21A.. ¹⁾
	DRN90S4/BE/TH.	
2.2	DRS90M4/TH.	MM15D-503-00/0/BW1/P21A..
	DRE90L4/TH.	MM22D-503-00/0/BW2/P22A.. ¹⁾
	DRN90L4/TH.	
	DRS90M4/BE/TH.	MM15D-503-00/0/P21A..
2.2	DRE90L4/BE/TH.	MM22D-503-00/0/P22A.. ¹⁾
	DRN90L4/BE/TH.	
	DRS90L4/TH.	MM22D-503-00/0/BW2/P22A..
	DRE100M4/TH.	MM30D-503-00/0/BW2/P22A.. ¹⁾
2.2	DRN100LS4/TH.	
	DRS90L4/BE/TH.	MM22D-503-00/0/P22A..
	DRE100M4/BE/TH.	MM30D-503-00/0/P22A.. ¹⁾
	DRN100LS4/BE/TH.	

7 MOVIMOT® mounting close to the motor (remote)

Motor assignment

Power [kW]	Motor (230/400 V, 50 Hz) 人	MOVIMOT® with option P.2A
3.0	DRS100M4/TH.	MM30D-503-00/0/BW2/P22A..
	DRE100LC4/TH.	MM40D-503-00/0/BW2/P22A.. ¹⁾
	DRN100L4/TH.	
	DRS100M4/BE/TH.	MM30D-503-00/0/P22A..
	DRE100LC4/BE/TH.	MM40D-503-00/0/P22A.. ¹⁾
	DRN100L4/BE/TH.	
4.0	DRS100LC4/TH.	MM40D-503-00/0/BW2/P22A..
	DRE132S4/TH.	
	DRN112M4/TH.	
	DRE100LC4/BE/TH.	MM40D-503-00/0/P22A..
	DRE132S4/BE/TH.	
	DRN112M4/BE/TH.	

1) Combination with increased short-term torque

7.5.3 Motor assignment 2900 min⁻¹

Power [kW]	Motor (230/400 V, 50 Hz) Δ	MOVIMOT® with option P2A
0.37	DR63L4/TH	MM03D-503-00/1/BW1/P21A..
	DRE80S4/TH	MM05D-503-00/1/BW1/P21A.. ¹⁾
	DR63L4/BR/TH.	MM03D-503-00/1/P21A..
	DRE80S4/BR/TH.	MM05D-503-00/1/P21A.. ¹⁾
0.55	DRS71S4/TH.	MM05D-503-00/1/BW1/P21A..
	DRE80S4/TH.	MM07D-503-00/1/BW1/P21A.. ¹⁾
	DRS71S4/BE/TH.	MM05D-503-00/1/P21A..
	DRE80S4/BE/TH.	MM07D-503-00/1/P21A.. ¹⁾
0.75	DRS71M4/TH.	MM07D-503-00/1/BW1/P21A..
	DRE80M4/TH.	MM11D-503-00/1/BW1/P21A.. ¹⁾
	DRS71M4/BE/TH.	MM07D-503-00/1/P21A..
	DRE80M4/BE/TH.	MM11D-503-00/1/P21A.. ¹⁾
1.1	DRS80S4/TH.	MM11D-503-00/1/BW1/P21A..
	DRE80M4/TH.	MM15D-503-00/1/BW1/P21A.. ¹⁾
	DRN80M4/TH.	
	DRS80S4/BE/TH.	MM11D-503-00/1/P21A..
	DRE80M4/BE/TH.	MM15D-503-00/1/P21A.. ¹⁾
	DRN80M4/BE/TH.	

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Power [kW]	Motor (230/400 V, 50 Hz) ^Δ	MOVIMOT® with option P2A
1.5	DRS80M4/TH.	MM15D-503-00/1/BW1/P21A..
	DRE90M4/TH.	MM22D-503-00/1/BW2/P22A.. ¹⁾
	DRN90S4/TH.	
	DRS80M4/BE/TH.	MM15D-503-00/1/P21A..
	DRE90M4/BE/TH.	MM22D-503-00/1/P22A.. ¹⁾
	DRN90S4/BE/TH.	
2.2	DRS90M4/TH.	MM22D-503-00/1/BW2/P22A..
	DRE90L4/TH.	MM30D-503-00/1/BW2/P22A.. ¹⁾
	DRN90L4/TH.	
	DRS90M4/BE/TH.	MM22D-503-00/1/P22A..
	DRE90L4/BE/TH.	MM30D-503-00/1/P22A.. ¹⁾
	DRN90L4/BE/TH.	
3.0	DRS90L4/TH.	MM30D-503-00/1/BW2/P22A..
	DRE100M4/TH.	MM40D-503-00/1/BW2/P22A.. ¹⁾
	DRN100LS4/TH.	
	DRS90S4/BE/TH.	MM30D-503-00/1/P22A..
	DRE100M4/BE/TH.	MM40D-503-00/1/P22A.. ¹⁾
	DRN100LS4/BE/TH.	
4.0	DRS100M4/TH.	
	DRE100LC4/TH.	MM40D-503-00/1/BW2/P22A..
	DRN100L4/TH.	
	DRS100M4/BE/TH.	
	DRE100LC4/BE/TH.	MM40D-503-00/1/P22A..
	DRN100L4/BE/TH.	

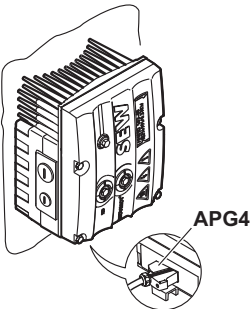
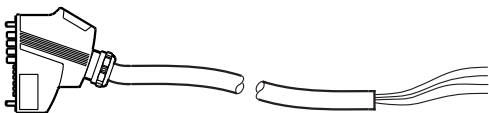
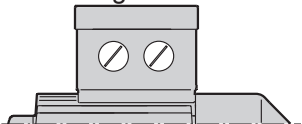
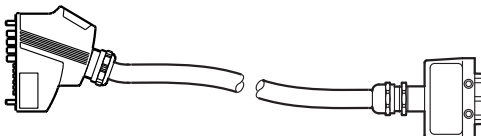
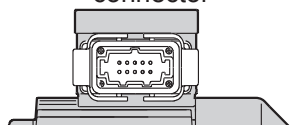
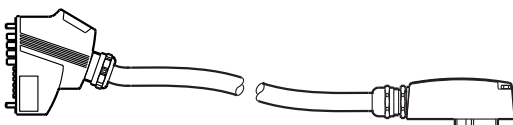
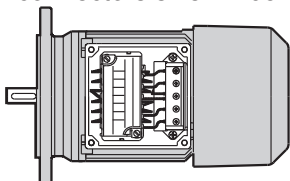
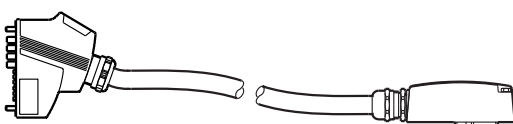
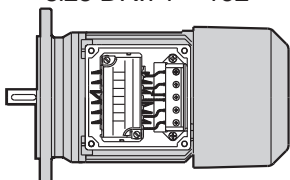
1) Combination with increased short-term torque

7 MOVIMOT® mounting close to the motor (remote)

Hybrid cables

7.6 Hybrid cables

7.6.1 Connection between MOVIMOT® and motor when mounted close to the motor

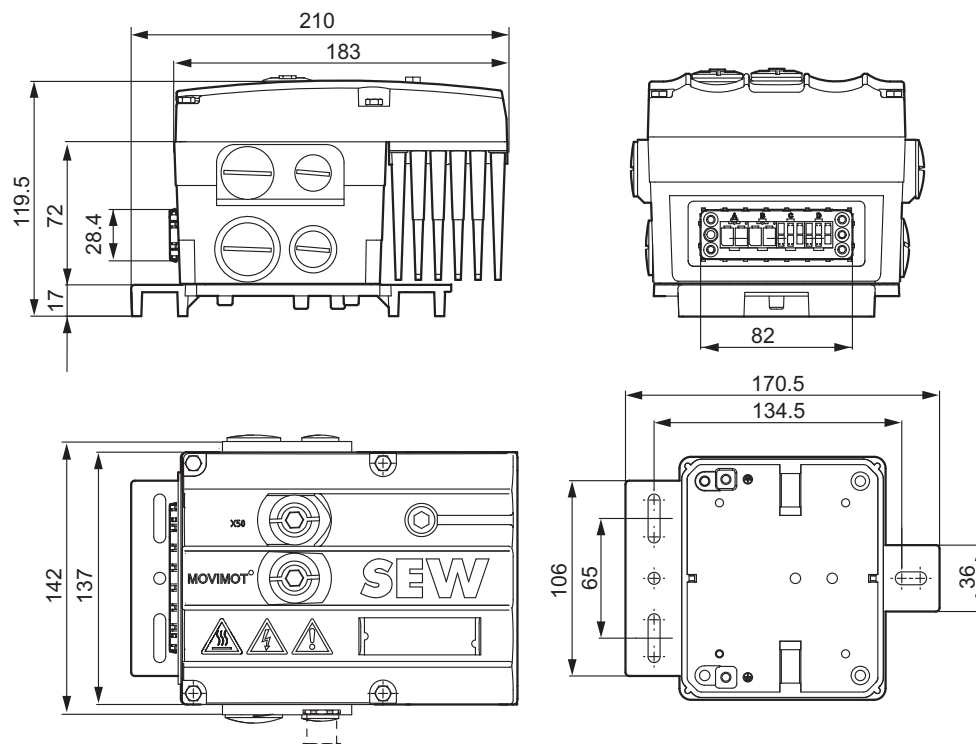
MOVIMOT® inverter	Hybrid cables	Drive
MM../P2.A/RO.A/ APG4 	Part number DR.71 – DR.100: 01867423 Part number DR.112 – DR.132: 18116620 	AC motors with cable glands 
	Part number: 05930766 	AC motors with ASB4 plug connector 
	Part number: 05932785 (∧) Part number: 08163251 (△) 	AC motors with ISU4 plug connectors size DR63 
	Part number: 05937558 (∧) Part number: 0816326X (△) 	AC motors with ISU4 plug connectors size DR.71 – 132 

21914796/EN – 09/2015

7.7 Dimension drawings

7.7.1 Dimension drawing of MM03 to MM15 with option P21A (APG4 plug connector)

The following figure shows the dimensions of MM03 to MM15 with option P21A (APG4 plug connector):



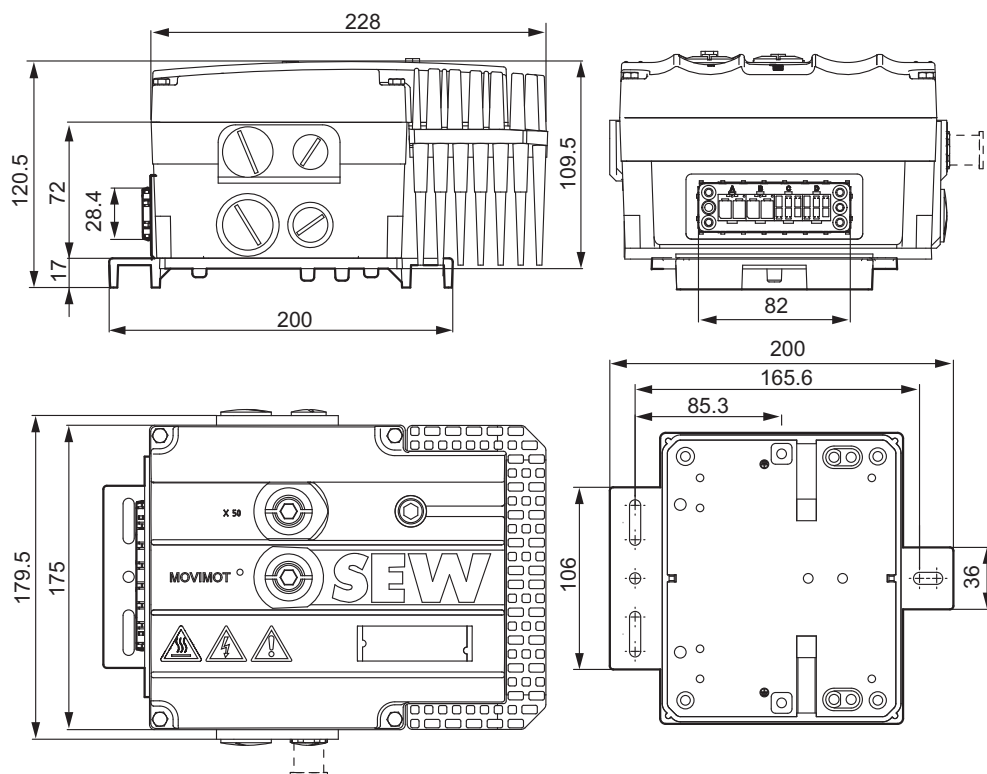
9007200786029707

7 MOVIMOT® mounting close to the motor (remote)

Dimension drawings

7.7.2 Dimension drawing of MM22 to MM30 with option P22A (APG4 plug connector)

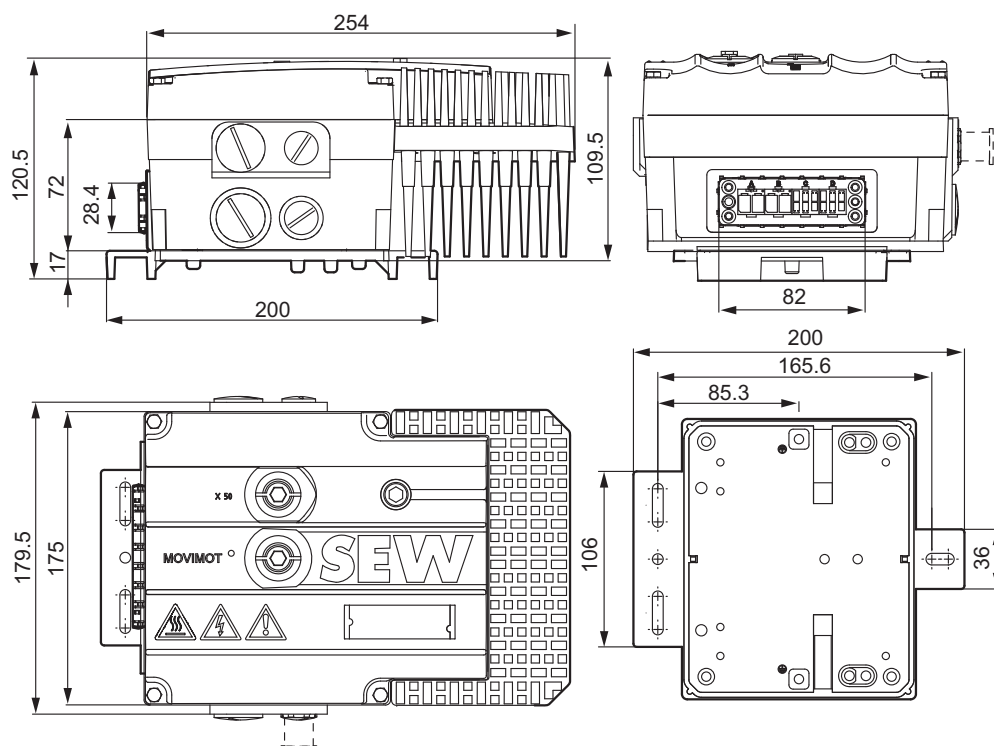
The following figure shows the dimensions of MM22 to MM30 with option P22A (APG4 plug connector):



9007200786059147

7.7.3 MM40 dimension drawing with option P22A (APG4 plug connector)

The following figure shows the dimensions of MM40 with option P22A (APG4 plug connector):



9007200940484875

8 Explosion-proof MOVIMOT® drives

8.1 Description

MOVIMOT® can also be delivered as explosion-proof drive.

The following figure shows a MOVIMOT® drive in size MM03 – MM15, and a fieldbus interface for use in potentially explosive areas:



14090975627

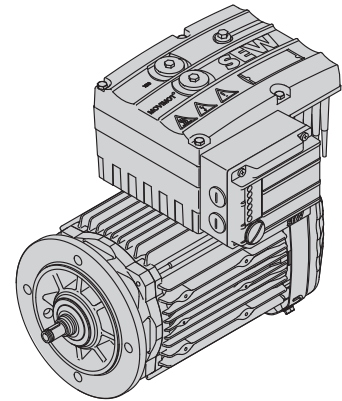
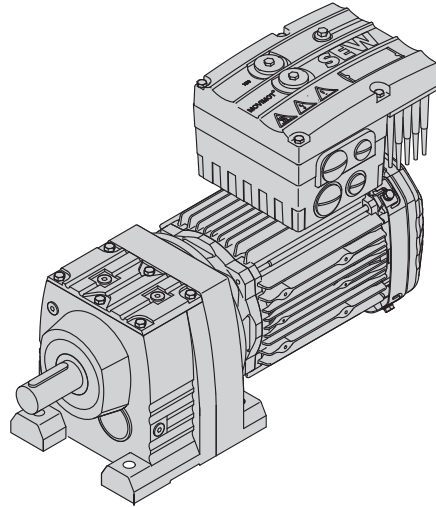
Explosion-proof MOVIMOT® drives are approved for use in potentially explosive areas of category 3D (zone 22) in compliance with standard EN 6079-0.

The following information must be adhered to:

- The requirements of the type examination certificate and/or the delivered documentation must be adhered to.
- Note the specifications on the nameplate.
- The MOVIMOT® inverter must be installed on the motor. Mounting the inverter close to the motor is not permitted.
- There may be no aggressive substances in the vicinity that could damage the painting and seals.
- The MOVIMOT® drive must not be operated in areas/applications that cause strong electrical charge on the motor housing.

8.2 Available MOVIMOT® motor combinations

8.2.1 MOVIMOT® MM..D in category 3D



3800507019

1400 min⁻¹ 3 x 400 – 500 V (400 V)

Type	P _n [kW]	M _n [Nm]	M _s /M _n [Nm]	n _n [min ⁻¹]	I _{n1} [A]	cos φ	Brake	M _{Bmax} [Nm]
EDRS71S4../MM03/3D	0.25	1.7	1.8	1400	1.0	0.99	BE05	5
EDRS71M4../MM05/3D	0.37	2.5	1.8	1400	1.3	0.99	BE1	10
EDRS80S4../MM07/3D	0.55	3.75	1.8	1400	1.6	0.99	BE2	20
EDRE80M4../MM11/3D	0.75	5.1	1.8	1400	1.9	0.99	BE2	20
EDRE90M4../MM15/3D	1.1	7.5	1.8	1400	2.4	0.99	BE2	20
EDRE90L4../MM22/3D	1.5	10.2	1.8	1400	3.5	0.99	BE2	20
EDRE100L4../MM30/3D	2.2	15	1.8	1400	5.0	0.99	BE5	55
EDRE112M4../MM40/3D	3.0	20.5	1.8	1400	6.7	0.99	BE5	55

2900 min⁻¹ Δ 3 x 400 – 500 V (400 V)

Type	P _n [kW]	M _n [Nm]	M _s /M _n [Nm]	n _n [min ⁻¹]	I _{n1} [A]	cos φ	Brake	M _{Bmax} [Nm]
EDRS71S4../MM05/3D	0.37	1.2	1.8	2900	1.3	0.99	BE05	5
EDRS71M4../MM07/3D	0.55	1.8	1.8	2900	1.6	0.99	BE1	10
EDRS80S4../MM11/3D	0.75	2.5	1.8	2900	1.9	0.99	BE2	20
EDRE80M4../MM15/3D	1.1	3.6	1.8	2900	2.4	0.99	BE2	20
EDRE90M4../MM22/3D	1.5	4.9	1.8	2900	3.5	0.99	BE2	20
EDRE90L4../MM30/3D	2.2	7.2	1.8	2900	5.0	0.99	BE2	20
EDRE100L4../MM40/3D	3.0	9.9	1.8	2900	6.7	0.99	BE5	55

8.3 Sample type designation

8.3.1 Type designation of MOVIMOT® drives

Type designation

The following table shows an example of the type designation of the MOVIMOT® drive **RF47EDRE90M4 BE2/MM22/3D/MO**

RF	Gear unit series
47	Gear unit size
E	Code letter for explosion protection of the motor
DRE	Motor series (DRS.., DRE..)
90M	Motor size
4	Number of motor poles
BE2	Optional design motor (brake)
/	
MM22	MOVIMOT® inverter
/	
3D	Category 3D (explosion protection)
/	
MO	Additional feature: inverter ¹⁾

1) The nameplate only displays options installed at the factory.

8.3.2 MOVIMOT® inverter type designation

Type designation

The following table shows an example of the type designation of the MOVIMOT® inverter **MM15D-503-04/3D**:

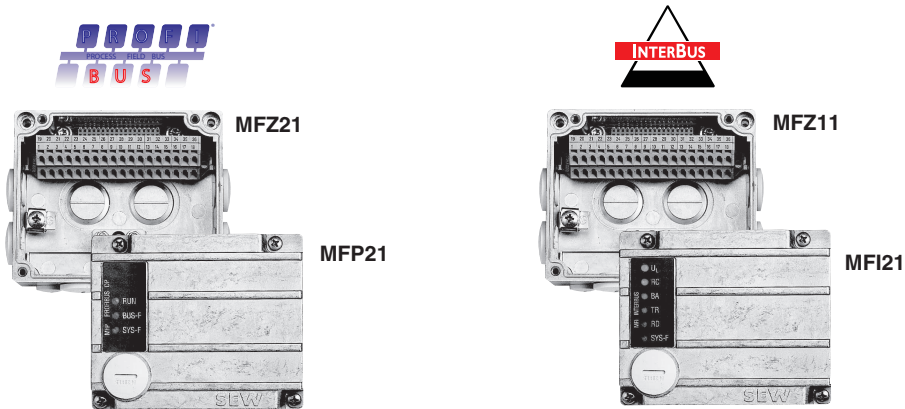
MM	Unit series	MM = MOVIMOT®
15	Inverter size	15 = 1.5 kW
D	Version D	
-		
50	Connection voltage	50 = AC 380 – 500 V
3	Connection type	3 = 3-phase
-		
04	Design	04 = Special design 04
/		
3D	Category 3D (explosion protection)	

8.4 Options

The following explosion-proof options for MOVIMOT® drives are approved for use in potentially explosive areas of category 3D (zone 22) according to EN 60079-0.

8.4.1 Fieldbus interface in category 3D

The following figure shows the available fieldbus interfaces in category 3D:



3794106763

Available variants

PROFIBUS variants

Fieldbus interface + module terminal box	MFZ21D/Z21D/3D
Part number	08236801
Connection technology sensors/actuators	Terminals
Digital inputs	4
Digital outputs	2

INTERBUS variants

Fieldbus interface + module terminal box	MFI21A/Z11A/3D
Part number	0823681X
Connection technology sensors/actuators	Terminals
Digital inputs	4
Digital outputs	2

Type designation of fieldbus interfaces

Type designation

The following table shows the type designation of the fieldbus interface **MFP21D/Z21D/3D**:

MFF	Fieldbus interface
	MFI.. = INTERBUS
	MFP.. = PROFIBUS
21	Connections
	21 = 4 x I, 2 x O (connection via terminals)
D	Variant
/	
Z21	Connection module
	Z11 = For INTERBUS
	Z21 = for PROFIBUS
D	Variant
/	
3D	Category 3D (explosion protection)

8.4.2 Setpoint converter MLA12A in category 3D

The following figure shows the setpoint converter MLA12A in category 3D:



Setpoint converter	MLA12A
Part number	08232342

The setpoint converter MLA12A in category 3D is available mounted to the MOVIMOT® connection box only.

9 MOVI-SWITCH®

9.1 Description

INFORMATION



This catalog provides a brief overview of MOVI-SWITCH® drive units for a quick drive selection.

For detailed descriptions, project planning notes and dimension drawings, refer to the gearmotor catalogs.

The figure below shows the following MOVI-SWITCH® designs:

- MOVI-SWITCH® 1E (back left)
- MOVI-SWITCH® 1EM (back right)
- MOVI-SWITCH® 2S (front):



18014400016805131

MOVI-SWITCH® is a gearmotor with integrated switching and protection function.

There are 3 different MOVI-SWITCH® designs, for operation with one direction of rotation (MOVI-SWITCH® 1E and MOVI-SWITCH® 1EM) and for operation in direction of rotation reversal (MOVI-SWITCH® 2S).

9.1.1 Device properties of MOVI-SWITCH® 1EM

- MOVI-SWITCH® 1EM is a gearmotor of the DT56 or DR63 series with an integrated electronic on/off switch for one direction of rotation and integrated full motor protection.
- Switching the star point with power semiconductors connects or disconnects the current flow to the motor.
- MOVI-SWITCH® 1EM is available in two designs:
 - **B0**: Binary control
 - **K0**: With integrated AS-Interface
- The various operating states are indicated by a status LED.
- MOVI-SWITCH® 1EM is also available with a brake.

9.1.2 Unit properties of MOVI-SWITCH® 1E

- MOVI-SWITCH® 1E is a gearmotor with an integrated electronic on/off switch for one direction of rotation and integrated full motor protection.
- Switching the star point with power semiconductors connects or disconnects the current flow to the motor.
- The BGW brake control integrated as standard ensures short response times (brake voltage = motor voltage/ $\sqrt{3}$, alternatively motor voltage)

9.1.3 Device properties of MOVI-SWITCH® 2S

- MOVI-SWITCH® 2S is a gearmotor with an integrated on/off switch for two directions of rotation and integrated full motor protection.
- The direction of rotation is reversed by a reversing contactor combination with a long service life.
- MOVI-SWITCH® 2S is available in two designs:
 - **CB0**: Binary control
 - **CK0**: With integrated AS-Interface
- Supply system monitoring, brake control as well as switching and protection functions are implemented in the controller.
- The various operating states are indicated by a status LED.
- With the CB0 design (binary control), the connection assignment for clockwise direction of rotation (CW) is compatible to MOVI-SWITCH® 1E.
- With the CK0 design (with integrated AS-Interface), the connection assignment is compatible with MOVIMOT® using an integrated AS-Interface.

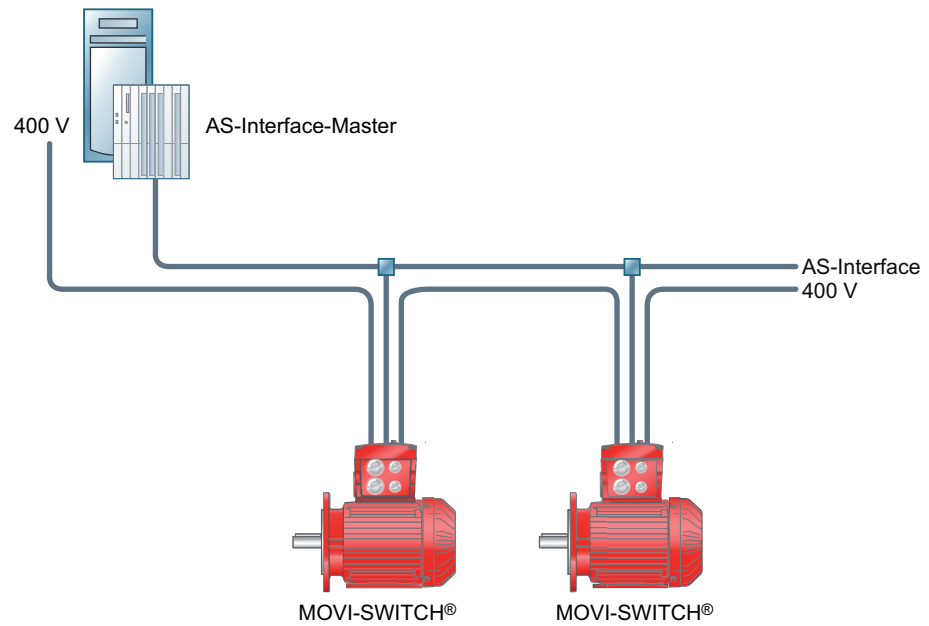
9.1.4 Advantages of MOVI-SWITCH®

MOVI-SWITCH® offers the following advantages:

- The circuit breaker and protection functions are completely integrated, saving control cabinet space and cabling.
- Integrated mechatronic solution, robust and compact.
- AC motors and AC brakemotors with identical connection configuration, this ensures easy installation.

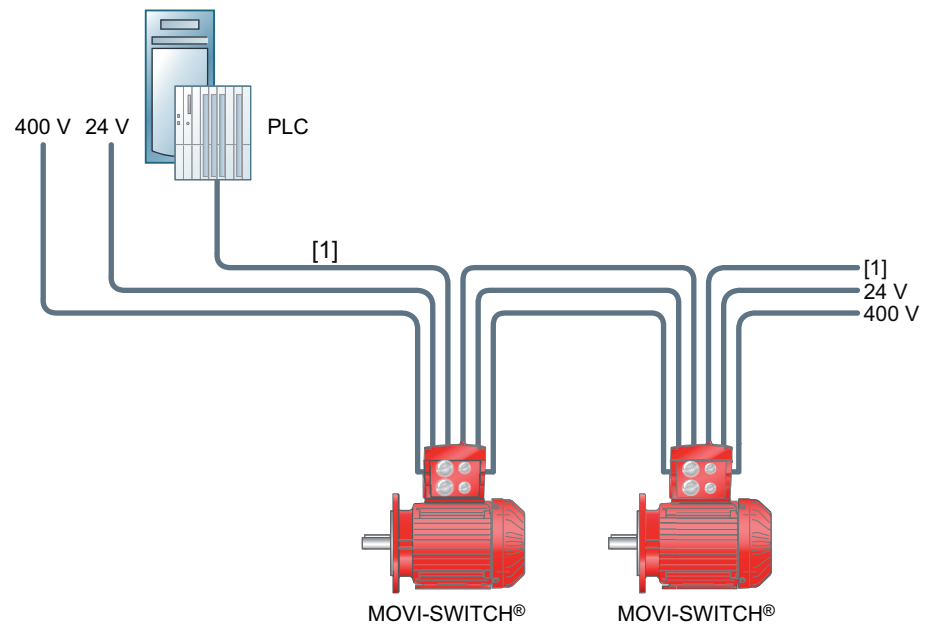
9.2 Installation topology of MOVI-SWITCH®

The following figure shows the basic installation topology of the MOVI-SWITCH® drive with AS-Interface (DC 24 V supply via AS-Interface):



5255164043

The following figure shows the basic installation topology of MOVI-SWITCH® drives:



5069105163

[1] Control: Binary

9.3 Available MOVI-SWITCH® motor combinations

9.3.1 Combination options

MOVI-SWITCH® AC motors and brakemotors can be combined with all suitable gear unit types, mounting positions and designs in accordance with the selection tables for gearmotors.

Note the following points when ordering AC (brake) motors or gearmotors with MOVI-SWITCH®:

- Voltage for winding in star connection only.
- Brake voltage (with brakemotors only)
- Position of the terminal box preferably 270°. Contact SEW-EURODRIVE for other positions.

9.3.2 MOVI-SWITCH® 1EM with DT56/DR63 AC motor: 1500 min⁻¹ – S1 (50 Hz)

TYPE	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 400 V [A]	cosφ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾	J _{Mot} [10 ⁻⁴ kgm ²]
DT56M4/MSW	0.09	0.66	1300	0.29	0.31	0.68	–	2.6	2.1 1.8	³⁾	1.1
DT56L4/MSW	0.12	0.88	1300	0.42	0.46	0.68	–	2.6	2.2 1.9	³⁾	1.1
DR63S4/MSW	0.12	0.83	1380	0.39	0.39	0.69	–	3.3	2.4 2.2	6.9	3.6
DR63M4/MSW	0.18	1.3	1320	0.55	0.55	0.78	–	2.9	1.8 1.7	6.9	3.6
DR63L4/MSW	0.25	1.8	1300	0.68	0.73	0.81	–	2.8	1.8 1.7	7.5	4.4

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motors without brake

3) Only in combination with helical gear units R07, RF07, R07F or Spiroplan® gear units DT56L4 0.12 W10, WF10, WA10, WAF10

9.3.3 MOVI-SWITCH® 1E with DRN.. AC motor: 1500 min⁻¹ – S1 (50 Hz) IE3

TYPE	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 400 V [A]	cosφ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾ ³⁾	J _{Mot} [10 ⁻⁴ kgm ²] ²⁾ ³⁾
DRN80M4/MSW	0.75	4.95	1440	1.75	–	0.74	82.9 82.9	6.7	3.1 2.7	14 18	24.7 26.2
DRN90S4/MSW	1.1	7.2	1455	2.55	–	0.73	85.0 84.5	6.9	2.7 2.1	20 24	54.0 57.7
DRN90L4/MSW	1.5	9.8	1461	3.4	–	0.74	86.1 85.6	7.5	2.7 2.0	23 27	67.2 71.9
DRN100LS4/MSW	2.2	14.5	1450	4.75	–	0.76	87.5 86.9	7.1	2.9 2.2	27 33	81.4 87.4
DRN100L4/MSW	3.0	19.7	1456	6.4	–	0.76	88.3 87.8	8.2	3.4 2.3	34 40	112 118

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motor without brake

3) Applies for foot-mounted motor with brake

9.3.4 MOVI-SWITCH® 1E with DRE.. AC motor: 1500 min⁻¹ – S1 (50 Hz) IE2

TYPE	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 400 V [A]	cosφ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾	J _{Mot} [10 ⁻⁴ kgm ²]
DRE80S4/MSW	0.37	2.45	1435	0.87	–	0.77	78.5 78.8	4.9	2.6 2.1	12.0	14.9
DRE80M4/MSW	0.55	3.63	1445	1.27	–	0.76	82.0 82.3	6.7	3.1 2.2	14.8	21.5
DRE80M4/MSW	0.75	5.0	1435	1.68	1.75	0.79	81.3 81.0	6.2	2.8 2.1	14.8	21.5
DRE90M4/MSW	1.1	7.4	1420	2.45	2.55	0.79	83.5 82.4	5.9	2.8 2.3	18.9	35.5
DRE90L4/MSW	1.5	10	1430	3.35	3.45	0.77	84.7 84.0	6.6	3.2 2.8	21.9	43.5
DRE100M4/MSW	2.2	14.7	1425	4.6	4.7	0.80	86.7 85.4	6.4	3.3 2.7	26.5	56
DRE100LC4/MSW	3	19.7	1455	6.2	6.3	0.81	87.1 86.3	7.5	2.7 2.4	31.7	90
DRE112M4/MSW	3	19.7	1455	6	6.2	0.82	87.4 86.5	7.3	2.4 2	41.8	146

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motors without brake

9.3.5 MOVI-SWITCH® 1E with DRS.. AC motor: 1500 min⁻¹ – S1 (50 Hz) IE1

TYPE	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 400 V [A]	cosφ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾	J _{Mot} [10 ⁻⁴ kgm ²]
DRS71S4/MSW	0.37	2.55	1380	1.14	1.24	0.70	65.3 66.6	3.5	1.8 1.8	8.3	4.9
DRS71M4/MSW	0.55	3.8	1380	1.55	1.62	0.72	71.9 70.6	3.6	2.1 2.1	9.6	7.1

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motors without brake

9.3.6 MOVI-SWITCH® 2S with DRN.. AC motor: 1500 min⁻¹ – S1 (50 Hz) IE3

TYPE	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 400 V [A]	cosφ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾ ³⁾	J _{Mot} [10 ⁻⁴ kgm ²] ²⁾ ³⁾
DRN80M4/MSW	0.75	4.95	1440	1.75	–	0.74	82.9 82.9	6.7	3.1 2.7	15 19	24.7 26.2
DRN90S4/MSW	1.1	7.2	1455	2.55	–	0.73	85.0 84.5	6.9	2.7 2.1	21 25	54.0 57.7
DRN90L4/MSW	1.5	9.8	1461	3.4	–	0.74	86.1 85.6	7.5	2.7 2.0	24 28	67.2 71.9
DRN100LS4/MSW	2.2	14.5	1450	4.75	–	0.76	87.5 86.9	7.1	2.9 2.2	27 34	81.4 87.4
DRN100L4/MSW	3.0	19.7	1456	6.4	–	0.76	88.3 87.8	8.2	3.4 2.3	34 41	112 118

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motor without brake

3) Applies for foot-mounted motor with brake

9.3.7 MOVI-SWITCH® 2S with DRE.. AC motor: 1500 min⁻¹ – S1 (50 Hz) IE2

TYPE	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 400 V [A]	cosφ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾	J _{Mot} [10 ⁻⁴ kgm ²]
DRE80S4/MSW/C.0	0.37	2.45	1435	0.87	–	0.77	78.5 78.8	4.9	2.6 2.1	13.1	14.9
DRE80M4/MSW/C.0	0.55	3.63	1445	1.27	–	0.76	82.0 82.3	6.7	3.1 2.2	15.9	21.5
DRE80M4/MSW/C.0	0.75	5.0	1435	1.68	1.75	0.79	82.3 81.0	6.2	2.8 2.1	15.9	21.5
DRE90M4/MSW/C.0	1.1	7.4	1420	2.45	2.55	0.79	83.5 82.4	5.9	2.8 2.3	20.0	35.5
DRE90L4/MSW/C.0	1.5	10	1430	3.35	3.45	0.77	84.7 84.0	6.6	3.2 2.8	23.0	43.5
DRE100M4/MSW/C.0	2.2	14.7	1425	4.6	4.7	0.80	86.7 85.4	6.4	3.3 2.7	27.6	56
DRE100LC4/MSW/C.0	3	19.7	1455	6.2	6.3	0.81	87.1 86.3	7.5	2.7 2.4	32.8	90
DRE112M4/MSW/C.0	3	19.7	1455	6	6.2	0.83	87.4 86.5	7.3	2.4 2	43.1	146

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motors without brake

9.3.8 MOVI-SWITCH® 2S with DRS.. AC motor: 1500 min⁻¹ – S1 (50 Hz) IE1

TYPE	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 400 V [A]	cosφ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾	J _{Mot} [10 ⁻⁴ kgm ²]
DRS71S4/MSW/C.0	0.37	2.55	1380	1.14	1.24	0.70	65.3 66.6	3.5	1.8 1.8	9.4	4.9
DRS71M4/MSW/C.0	0.55	3.8	1380	1.55	1.62	0.72	71.9 70.6	3.6	2.1 2.1	10.7	7.1

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

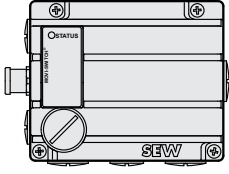
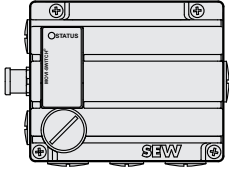
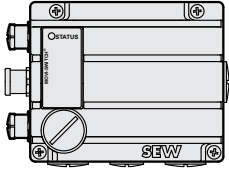
2) Applies for foot-mounted motors without brake

9.4 Connection technology

9.4.1 Connection technology of MOVI-SWITCH® 1EM

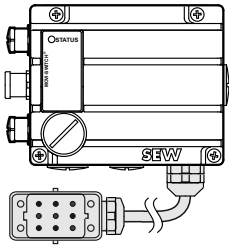
Overview

The following table shows the available plug connectors. For other types, contact SEW-EURODRIVE.

Order designation	Function	Manufacturer's designation
MSW../B0/AVS1 	Binary control	1 x round plug connector M12 x 1
MSW../K0/AVSK 	Control via AS-Interface	1 x round plug connector M12 x 1
MSW../K0/AZZK 	Control via AS-Interface Sensor connection Sensor connection	3 x round plug connector M12 x 1

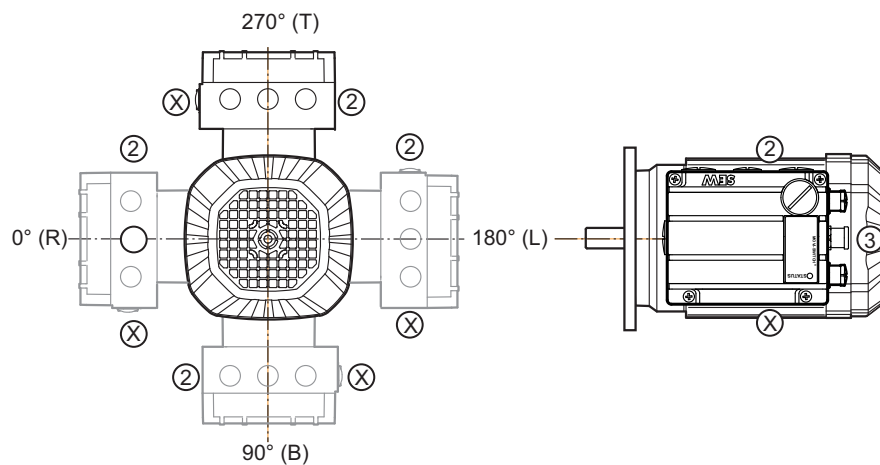
Optional power plug connector

The following table shows the optional power plug connector:

Order designation	Function	Manufacturer's designation
MSW.../KND3 	AC 400 V supply	Cable with Harting Han® plug connector Q8/0 male

Possible plug connector positions

The following positions are possible for plug connectors:



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AVSK or AVS1		
Position Connection box	Position Line connection M20	Position AVSK or AVS1
0°	X	3 or 1 or X
90°	X	3 or 1 or X
270°	X	3 or 1 or X
180°	X	3 or 1 or X
0°	2	3 or 1 or X
90°	2	3 or 1 or X
270°	2	3 or 1 or X
180°	2	3 or 1 or X

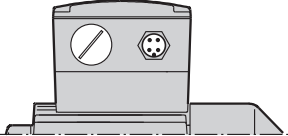
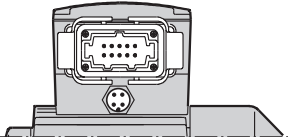
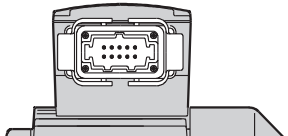
AZZK		
Position Connection box	Position Line connection M20	Position AZZK
0°	X	1
90°	X	1
270°	X	1
180°	X	3
0°	2	3
90°	2	3
270°	2	3
180°	2	1

9.4.2 Connection technology of MOVI-SWITCH® 1E

Overview

MOVI-SWITCH® 1E is supplied with AVS1 plug connector for control signals if not specified otherwise in the order.

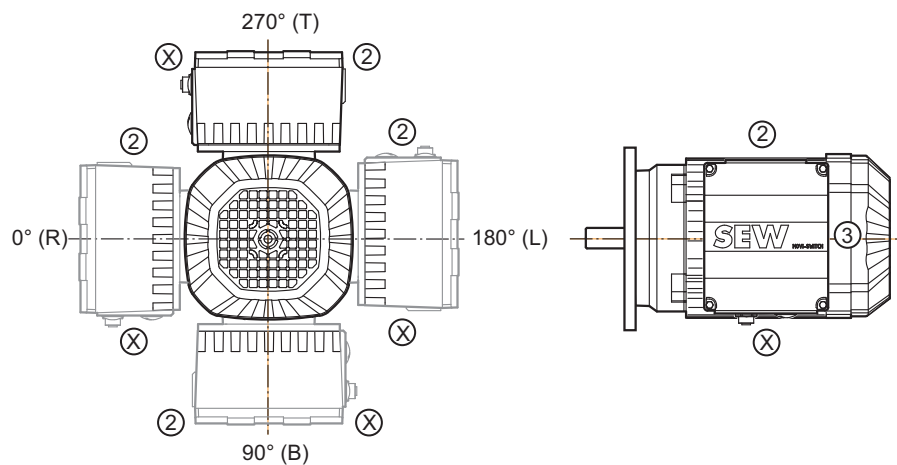
The plug connectors listed in the following table are available as standard:

Order designation	Function	Manufacturer's designation
MSW../AVS1 	Control signals	1 x round plug connector M12 x 1
MSW../AVS1/ASA3 	Control signals Power rating	1 x round plug connector M12 x 1 + Harting Han® 10 ES pin insert (built-on housing with 2 clips)
MSW../ASAW 	Connection to field distributor Z.3W or Z.6W	Harting Han® 10 ES pin insert (built-on housing with 2 clips)

For other types, contact SEW-EURODRIVE.

Possible plug connector positions

The following positions are possible for ASA3 and AVS1 plug connectors:



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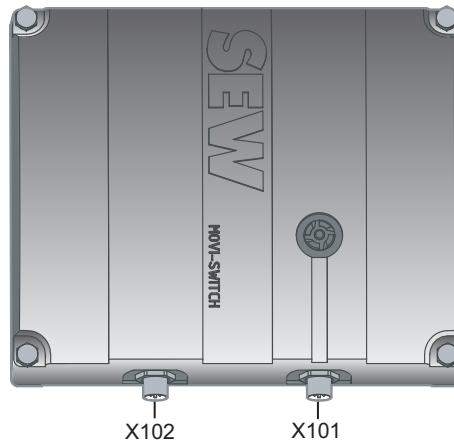
Plug connector	Possible positions
AVS1	X (standard)
	2
	3
ASA3 ASAW	X (standard)
	2
	3
AVS1/ASA3	ASA3 = X (standard) + AVS1 = X (standard)
	ASA3 = 2 + AVS1 = 2
	ASA3 = 3 + AVS1 = 3
	ASA3 = X (standard) + AVS1 = 2
	ASA3 = 2 + AVS1 = X (standard)

9.4.3 Connection technology of MOVI-SWITCH® 2S

Connection technology of CB0 design (binary control)

As standard, MOVI-SWITCH® 2S is equipped with 2 plug connectors for connecting control signals and 24 V supply. The plug connectors are integrated in the control unit, see the following figure.

Order designation of the standard design: MSW/CB0/RA2A.



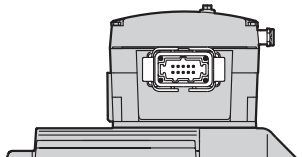
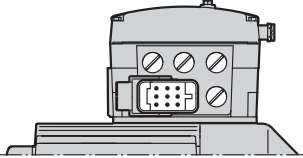
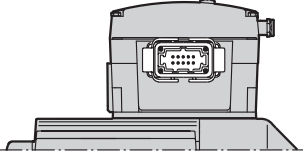
1474000267

X102 = DC 24 V supply voltage + control signal (M12 plug connector, A-coding, male)

X101 = DC 24 V supply voltage + feedback (M12 plug connector, A-coding, male)

Optional plug connectors

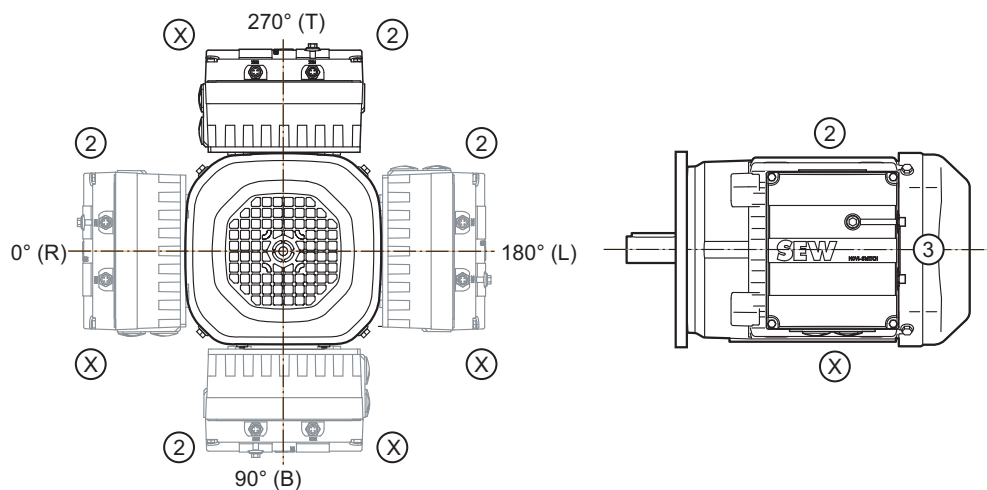
The following table shows the plug connectors in the connection box that are available as option for MOVI-SWITCH® 2S (CB0 design).

Order designation	Function	Manufacturer's designation
MSW/CB0/ASA3 	Power rating	Harting Han® 10 ES pin insert (built-on housing with 2 clips)
MSW/CB0/AND3 	Power rating	Harting Han® Q8/0 pin insert (built-on housing with 1 clip)
MSW/CB0/ASAW 	Connection to field distributor Z.3W or Z.6W	Harting Han® 10 ES pin insert (built-on housing with 2 clips)

For other types, contact SEW-EURODRIVE.

Possible plug connector positions

The positions shown in the following figure are possible for plug connectors. Some positions might not be possible for certain gear unit types and mounting positions (contact SEW-EURODRIVE).

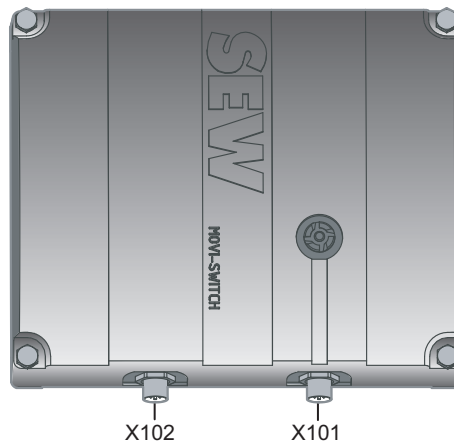


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Connection technology of CK0 design (with integrated AS-Interface)

MOVI-SWITCH® 2S is equipped with 2 plug connectors for AS-Interface and digital inputs as standard. The plug connectors are integrated in the control unit, see the following figure.

Order designation of the standard design: MSW/CK0/RA2A.



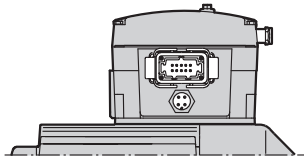
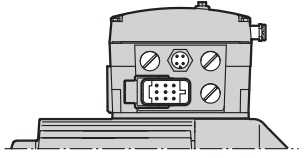
1474000267

X102 = DC 24 V supply voltage + AS-Interface (M12 plug connector, A-coding, male)

X101 = DC 24 V supply voltage + digital inputs (M12 plug connector, A-coding, female)

Optional plug connectors

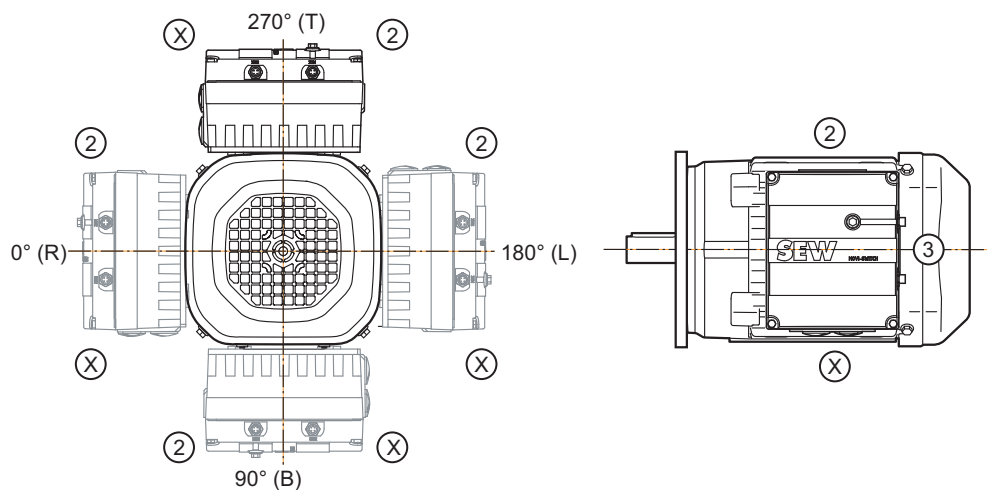
The following table shows the optional plug connectors in the connection box that are available for MOVI-SWITCH® 2S (CK0 design).

Order designation	Function	Manufacturer's designation
MSW/CK0/ASA3/AVS0 	Power + AUX PWR	Harting Han® 10 ES pin insert (built-on housing with 2 clips) +1 x round plug connector M12 x 1
MSW/CK0/AND3/AVS0 	Power + AUX PWR	Harting Han® Q8/0 pin insert (built-on housing with 1 clip) +1 x round plug connector M12 x 1

For other types, contact SEW-EURODRIVE.

Possible plug connector positions

The positions shown in the following figure are possible for plug connectors. Some positions might not be possible for certain gear unit types and mounting positions (contact SEW-EURODRIVE).



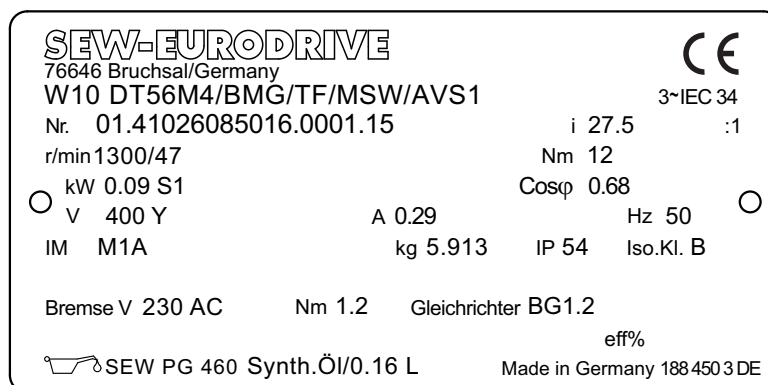
9007200725688331

9.5 Sample type designation

9.5.1 Type designation of MOVI-SWITCH® 1EM

Nameplate

The following illustration gives an example of a nameplate of a MOVI-SWITCH® 1EM drive:



18014401258872843

Type designation

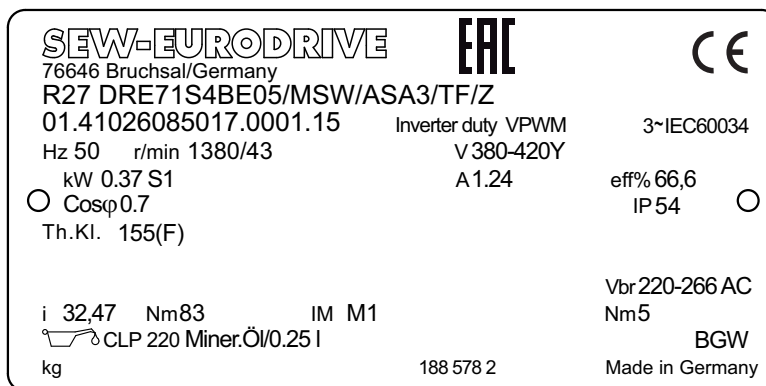
The following table shows the type designation of the MOVI-SWITCH® 1EM drive **W10DT54M4/BMG/TF/MSW/AVS1** as an example:

W	Gear unit series
10	Gear unit size
DT	Motor series (DT..., DR...)
56M	Motor size
4	Number of motor poles
/	
BMG	Mechanical brake option
/	
TF	Thermistor (standard)
/	
MSW	MOVI-SWITCH® motor starter
/	
AVS1	Optional M12 plug connector for control signals

9.5.2 Type designation of MOVI-SWITCH® 1E

Nameplate

The following illustration gives an example of a nameplate of a MOVI-SWITCH® 1E drive:



9007200275137035

Type designation

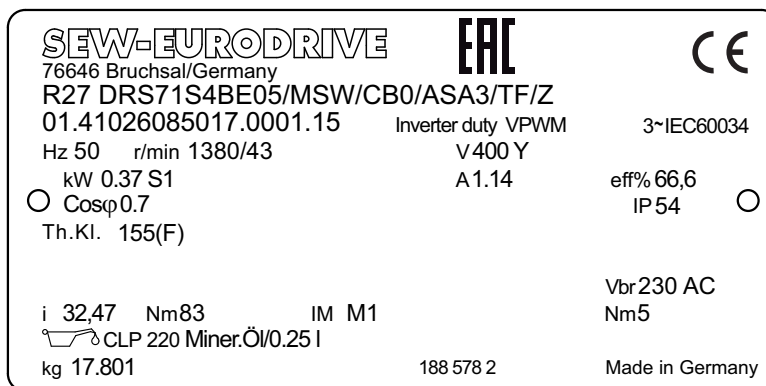
The following table shows the type designation of the MOVI-SWITCH® 1E drive **R27DRE71S4BE05/MSW/ASA3/TF/Z** as an example:

R	Gear unit series
27	Gear unit size
DRE	Motor series (DRS., DRE., DRN..)
71S	Motor size
4	Number of motor poles
BE05	Optional design motor (brake)
/	
MSW	MOVI-SWITCH® motor starter
/	
ASA3	Plug connector option
/	
TF	Thermistor (standard)
/	
Z	Motor option flywheel fan

9.5.3 Type designation of MOVI-SWITCH® 2S

Nameplate

The following illustration gives an example of a nameplate of a MOVI-SWITCH® 2S drive:



9007200276393355

Type designation

The following table shows the type designation of the MOVI-SWITCH® 2S drive **R27DRS71S4/BE05/MSW/CB0/ASA3/TF/Z** as an example:

R	Gear unit series
27	Gear unit size
DRS	Motor series (DRS., DRE., DRN..)
71S	Motor size
4	Number of motor poles
/	
BE05	Optional design motor (brake)
/	
MSW	MOVI-SWITCH® motor starter
/	
C	Control
B	Signal type B = Binary K = AS-Interface
0	Design 0 = Standard
/	
ASA3	Plug connector option
/	
TF	Thermistor (standard)
/	
Z	Motor option flywheel fan

10 Mounting MOVI-SWITCH® 2S close to the motor

10.1 Description

The following figure shows the MOVI-SWITCH® design for mounting close to the motor:

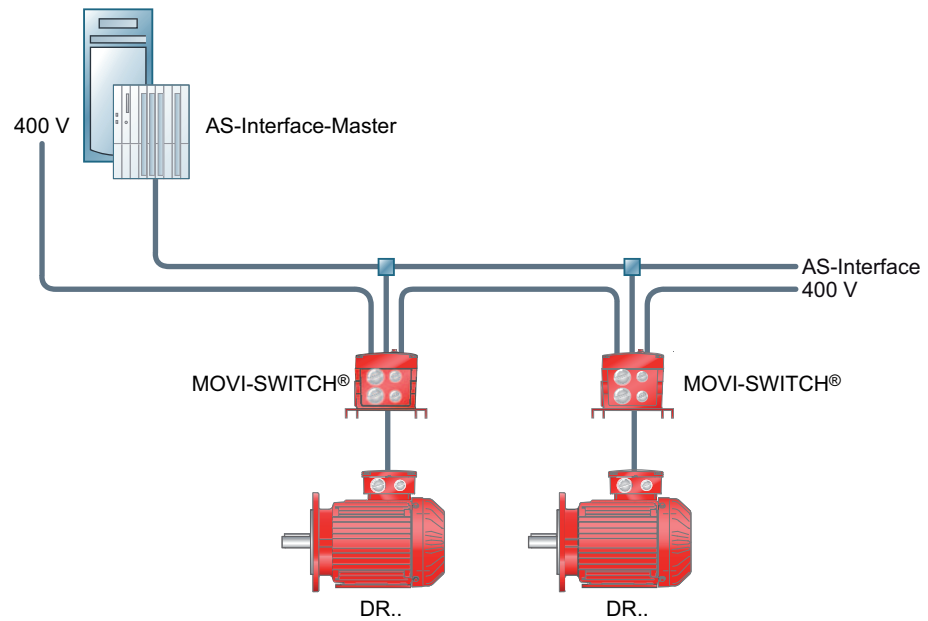


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- The P22A option allows for mounting the MOVI-SWITCH® close to the motor.
- The inverter is connected to the motor using a pre-fabricated "hybrid cable" (→ 336).
- **With brakemotors, the brake voltage must correspond to the voltage of the phase voltage (e.g. 400 V line voltage = 400 V brake coil).**
- MOVI-SWITCH® with P22A option is supplied in IP65 degree of protection.

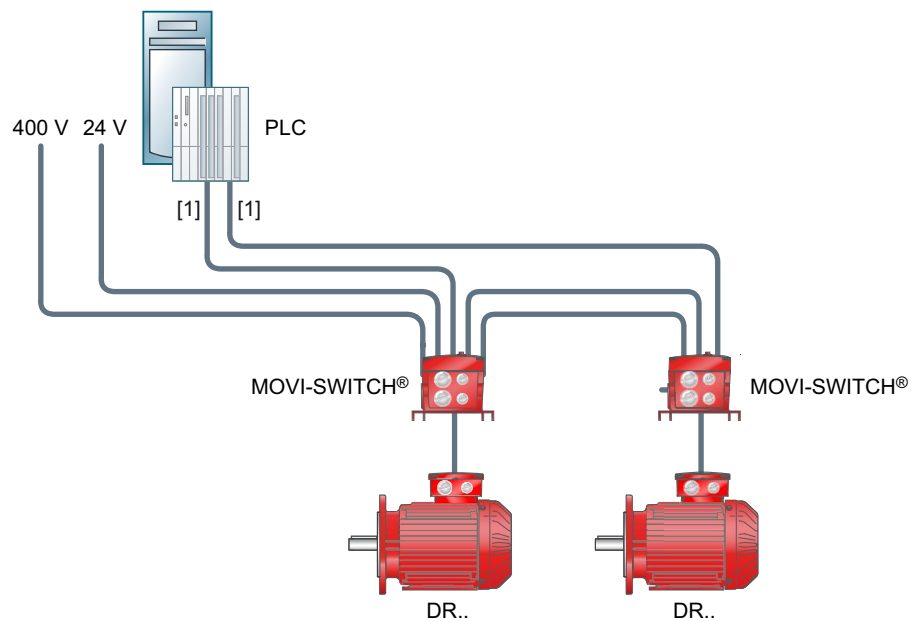
10.2 Installation topology of MOVI-SWITCH®, mounted close to the motor

The following figure shows the basic installation topology of the MOVI-SWITCH® drive with AS-Interface when mounted close to the motor (DC 24 V supply via AS-Interface):



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The following figure shows the basic installation topology of the MOVI-SWITCH® drive when mounted close to the motor:

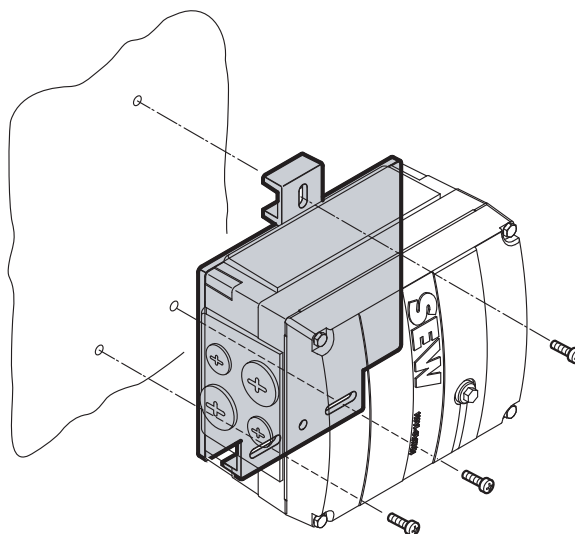


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[1] Control: Binary

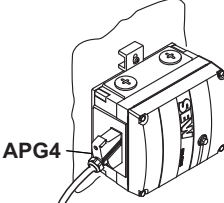
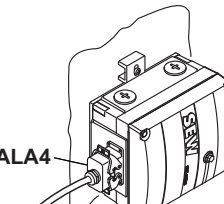
10.3 Available designs

The following figure shows option P22A for mounting the MOVI-SWITCH® 2S close to the motor:



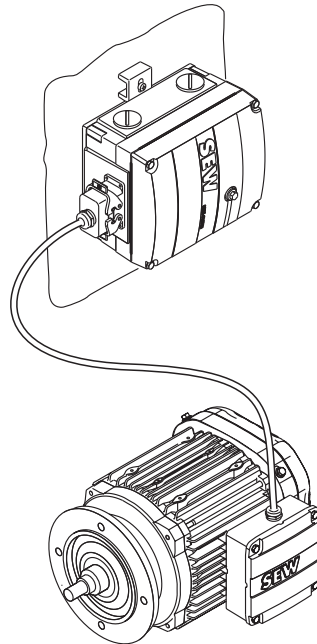
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The following designs are available. They can be combined with all the motors listed in chapter "Motor assignment" (→ 334).

Connection to motor	MOVI-SWITCH® binary control	MOVI-SWITCH® with integrated AS-Interface
APG4 	MSW-2S-07A/CB0/ P22A/RI2A/APG4	MSW-2S-07A/CK0/ P22A/RI2A/APG4
ALA4 	MSW-2S-07A/CB0/ P22A/RI2A/ALA4	MSW-2S-07A/CK0/ P22A/RI2A/ALA4

10.4 Type designation of MOVI-SWITCH® 2S, mounting close to the motor

The following illustration shows an example of MOVI-SWITCH® 2S installed close to the motor:



10

1475556235

10.4.1 Type designation

The following table shows the type designation of the MOVI-SWITCH® motor starter **MSW-2S-07A/CB0/P22A/RI2A/ALA4** when mounted close to the motor:

MSW-2S-07A	MOVI-SWITCH® motor starter	
/		
C	Control	
B	Signal type	B = Binary control K = Control via AS-Interface
0	Design	0 = Standard
/		
P22A	Adapter for mounting close to the motor	
/		
RI2A	Connection box design	
/		
ALA4	Plug connector for connection to the motor	

10.5 Motor assignment

10.5.1 Motor requirements

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications when ordering the drives assigned to MOVI-SWITCH® drive (design for mounting close to the motor):

Characteristics	Requirements for the assigned AC motor
Permitted motors	Only motors listed in the chapters "DRE../DRN...: 1500 min-1 ..." (→ 335) and "DRS...: 1500 min-1 ..." (→ 335) are permitted.
Permitted nominal motor voltage	AC 380 to 500 V
Permitted brakes	No restrictions
Permitted brake voltage	With brakemotors, the brake voltage must correspond to the voltage of the phase voltage. (e.g. 400 V line voltage = 400 V brake coil).
Brake rectifier	Always order the assigned motor without brake rectifier .
Permitted plug connectors	MSW-2S../C.0/P22A/RI2A/APG4: • ASB4 plug connector • APG4 plug connector • ISU4 plug connector MSW-2S../C.0/P22A/RI2A/ALA4: • ASB4 plug connector See chapter "Hybrid cables" (→ 336) for additional information.
Permitted motor protection	Always order the assigned motor with TF temperature sensor (PTC thermistor or PTC resistor).

10.5.2 DRE../DRN..: 1500 min⁻¹ – S1 (50 Hz) IE2/IE3

Motor type DRE../DRN..	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 420 V [A]	cos φ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾	J _{Mot} [10 ⁻⁴ kgm ²]
DRE80S4	0.37	2.45	1435	0.87	–	0.77	78.5 78.8	4.9	2.6 2.1	11.5	14.9
DRE80M4	0.55	3.63	1445	1.27	–	0.76	82.0 82.3	6.7	3.1 2.2	14.3	21.5
DRE80M4	0.75	5.0	1435	1.68	1.75	0.79	81.3	6.2	2.8	14.3	21.5
DRN80M4							81.0		2.1		
DRE90M4	1.1	7.4	1420	2.45	2.55	0.79	83.5	5.9	2.8	18.4	35.5
DRN90S4							82.4		2.3		
DRE90L4	1.5	10	1430	3.35	3.45	0.77	84.7	6.6	3.2	21.4	43.5
DRN90L4							84.0		2.8		
DRE100M4	2.2	14.7	1425	4.6	4.7	0.80	86.7	6.4	3.3	26.0	56
DRN100LS4							85.4		2.7		
DRE100LC4	3	19.7	1455	6.2	6.3	0.81	87.1	7.5	2.7	31.2	90
DRN100L4							86.3		2.4		
DRE112M4	3	19.7	1455	6	6.2	0.83	87.4 86.5	7.3	2.4 2.0	41.3	146

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motors without brake

10.5.3 DRS..: 1500 min⁻¹ – S1 (50 Hz) IE1

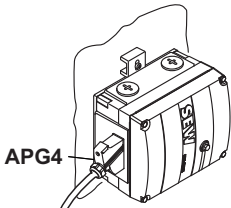
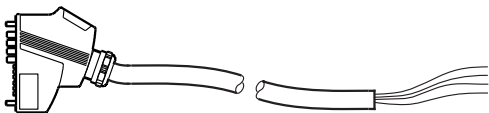
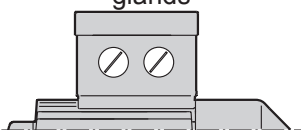
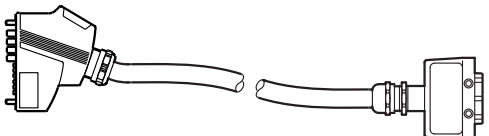
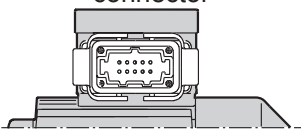
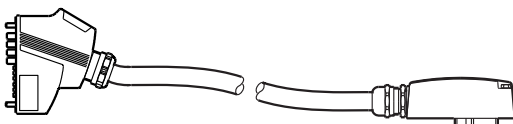
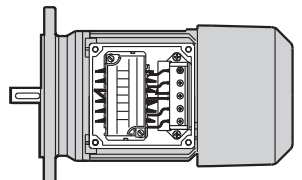
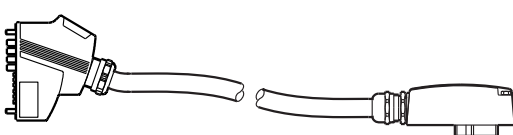
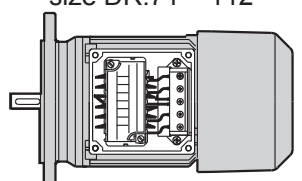
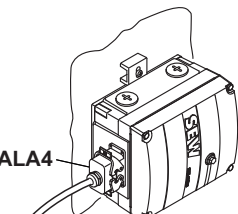
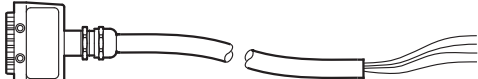
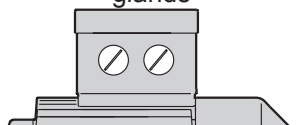
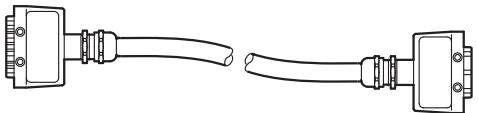
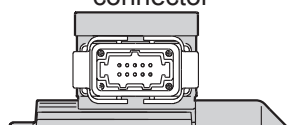
Motor type DRS	P _N [kW]	M _N [Nm]	n _N [min ⁻¹]	I _N 400 V [A]	I _N 380 – 420 V [A]	cos φ	η _{75%} η _{100%} [%] ¹⁾	I _A /I _N	M _A /M _N M _H /M _N	m [kg] ²⁾	J _{Mot} [10 ⁻⁴ kgm ²]
DRS71S4	0.37	2.55	1380	1.14	1.24	0.70	65.3 66.6	3.5	1.8 1.8	7.8	4.9
DRS71M4	0.55	3.8	1380	1.55	1.62	0.72	71.9 70.6	3.6	2.1 2.1	9.1	7.1

1) Efficiency levels according to IEC 60034-2-1 Ed.1 (2007) / PLL from Residual Losses

2) Applies for foot-mounted motors without brake

10.6 Hybrid cables

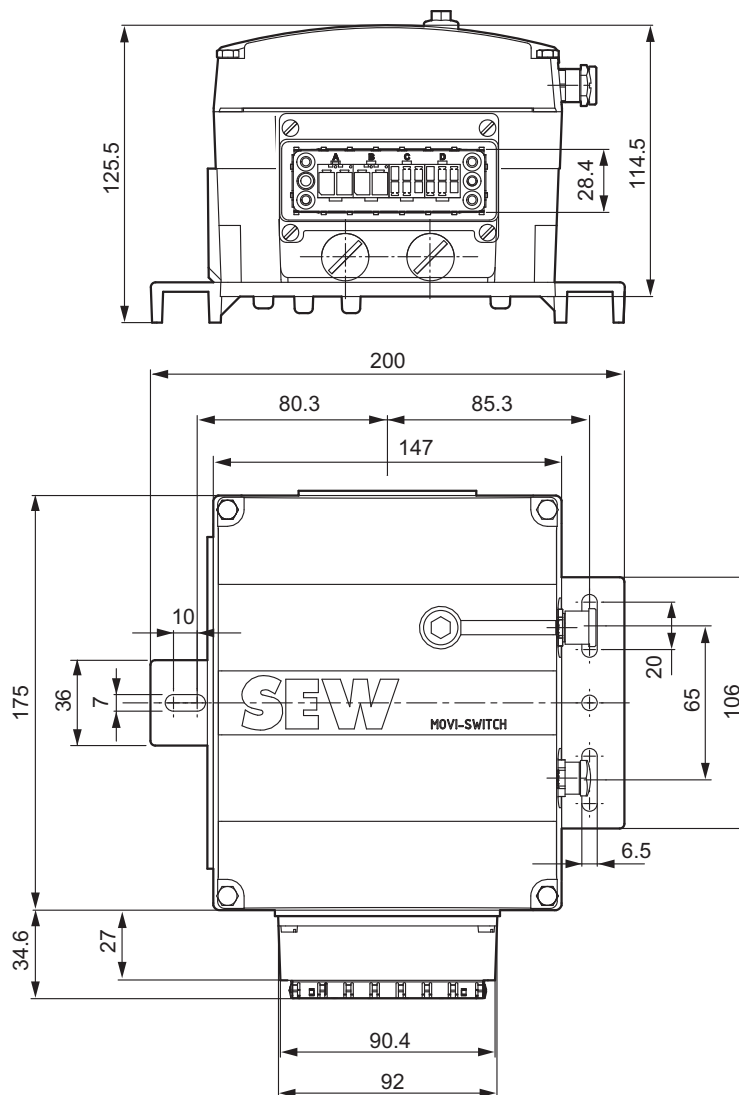
10.6.1 Connection between MOVI-SWITCH® and motor when mounted close to the motor

MOVI-SWITCH®	Hybrid cables	Drive
MSW-2S../C.0/ P22A/RI2A/APG4 	Part number 08178879 	AC motors with cable glands 
	Part number: 08178895 	AC motors with ASB4 plug connector 
	Part number: 0 5932785 (人) 	AC motors with ISU4 plug connectors size DR63 
	Part number: 05937558 (人) 	AC motors with ISU4 plug connectors size DR.71 – 112 
MSW-2S../C.0/ P22A/RI2A/ALA4 	Part number 08178860 	AC motors with cable glands 
	Part number: 08178887 	AC motors with ASB4 plug connector 

10.7 Dimension drawings

10.7.1 Dimension drawing of MOVI-SWITCH® 2S with option P22A (APG4 plug connector)

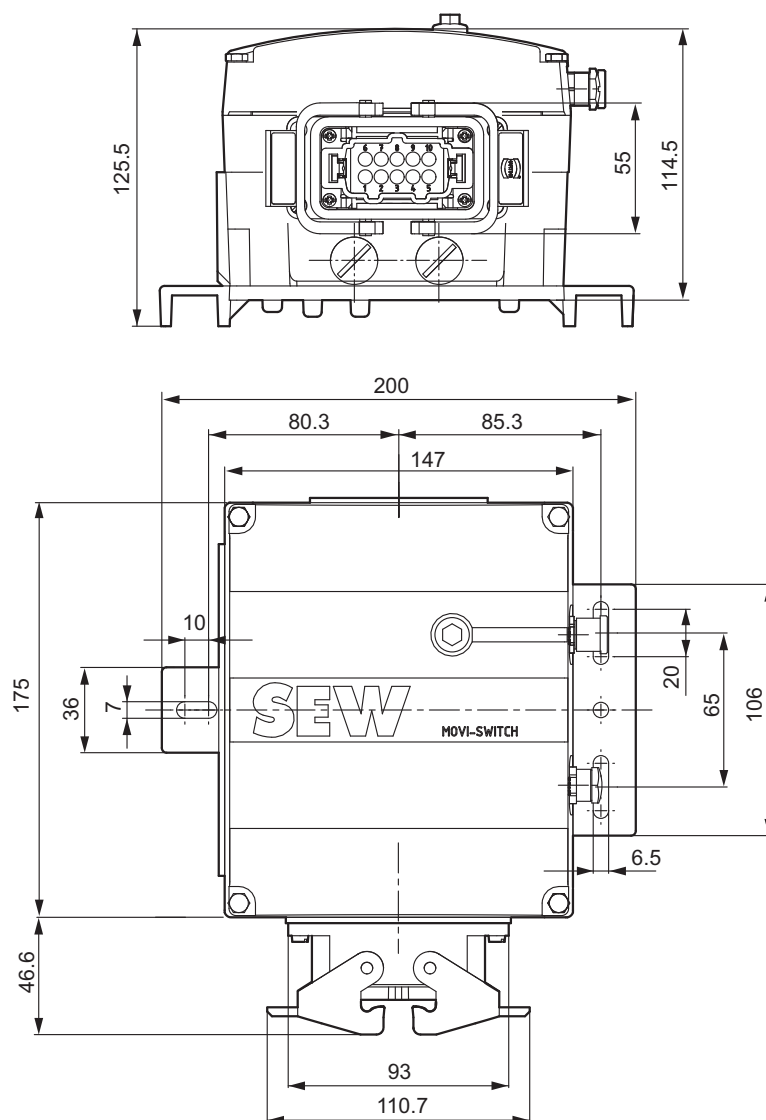
The following figure shows the dimensions of MOVI-SWITCH® 2S with option P22A (APG4 plug connector):



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10.7.2 Dimension drawing of MOVI-SWITCH® 2S with option P22A (ALA4 plug connector)

The following figure shows the dimensions of MOVI-SWITCH® 2S with option P22A (ALA4 plug connector):



1477172235

11 Options for diagnostics, startup and manual operation

INFORMATION

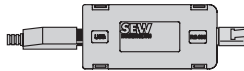


This chapter provides an overview of options regarding diagnostics, startup and manual operation for decentralized components from SEW-EURODRIVE.

For additional information on the functionality, refer to the MOVIMOT®, MOVIFIT® operating instructions, or to the manuals for the fieldbus interfaces and field distributors.

11.1 Overview

Option	Description	Type	Part no.	Compatible with
Keypad	The MFG11A keypad is plugged onto a MFZ.. connection module (not included in the delivery) instead of a fieldbus interface for manual control of a MOVIMOT® drive.	MFG11A 	8235597	- Field distributor - MFZ.. connection module (not included in the delivery)
Keypad	Features: - Illuminated text display, various languages can be set - Keypad with 21 keys - Can be connected via extension cable DKG60B (5 m) - Degree of protection IP40 (EN 60529) Functions (examples): - Visualization of process values and status displays - Representation of process output and input data - Indicates error status and error reset - Manual control and operation - Status displays of digital inputs/outputs - Parameters can be displayed and set - Data backup and transfer of parameter sets	DBG60B-01 (DE/EN/FR/IT/ES/PT/NL) DBG60B-02 (DE/EN/FR/FI/SV/DA/TR) DBG60B-03 (DE/EN/FR/RU/PL/CS) DBG60B-04 (DE/EN/FR/ZH) 	18204031 18204058 18204066 18208509	- MOVIMOT® - MOVIFIT® - Fieldbus interfaces MF../MQ..

Option	Description	Type	Part no.	Compatible with
Extension cables	Extension cable for DBG60B (length 5 m)	DKG60B	08175837	DBG60B
Interface adapter USB to RS485	Option USB11A enables a PC or laptop with a USB interface to be connected to MOVIFIT®, MOVIMOT® or MF../MQ.. fieldbus interfaces. The USB11A interface adapter supports USB1.1 and USB2.0. Scope of delivery: - USB11A interface adapter - USB connection cable to connect USB11A - PC - Serial interface cable with 2 RJ10 plugs for connecting MOVIFIT®, MOVIMOT® or MF../MQ.. fieldbus interfaces to USB11A - CD-ROM with drivers and MOVITOOLS® MotionStudio.	USB11A 	08248311	- MOVIMOT® - MOVIFIT® - Fieldbus interfaces MF../MQ..

12 Hybrid cables

INFORMATION



This chapter shows the technical data of the hybrid cables available at SEW-EURODRIVE.

For assignment of hybrid cables to the products, refer to the respective chapters.

12.1 Description

The following figure shows examples of hybrid cables from SEW-EURODRIVE:



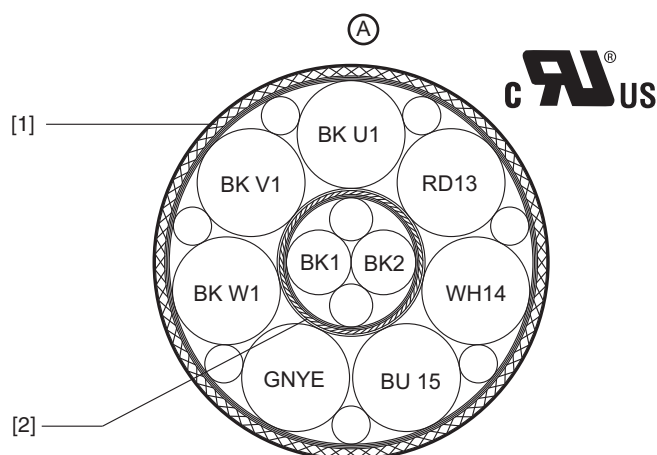
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Hybrid cables from SEW-EURODRIVE...

- Connect MOVIPRO® to AC motors
- Connect MOVIFIT® to AC motors or MOVIMOT®
- Connect field distributors to AC motors or MOVIMOT®
- Connect MOVIMOT® or MOVI-SWITCH® 2S units mounted in close to the motor to AC motors (in combination with option P2.A)
- Combine the energy transfer, control voltage and communication in one cable jacket
- Ensure optimum EMC shielding and cable impedances
- Are supplied as pre-fabricated cables with plug connectors.

12.2 Hybrid cable type „A“

12.2.1 Mechanical design



839041931

[1] Overall shield

[2] Shield

Cable type	A
	8179530
• Supply cores:	7 x 1.5 mm ²
• Control core pair:	2 x 0.75 mm ²
• Conductor insulation:	TPE-E (Polyester)
• Conductor:	Bare E-Cu litz wire, extra fine wires with individual wire 0.1 mm
• Shield:	E-Cu wire, tinned
• Overall diameter:	Max. 15.9 mm
• Color of outer cable jacket:	Black
• Outer cable jacket insulation:	TPE-U (Polyurethane)

12.2.2 Electrical properties

• Conductor resistance for 1.5 mm ² (at 20 °C):	max. 13 Ω/km
• Conductor resistance for 0.75 mm ² (at 20 °C):	max. 26 Ω/km
• Operating voltage for 1.5 mm ² conductor:	Max. 600 V according to CRIUS
• Operating voltage for 0.75 mm ² conductor:	Max. 600 V according to CRIUS
• Insulation resistance at 20 °C:	min. 20 MΩ x km

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12.2.3 Mechanical properties

- Suitable for cable carriers
 - Bending cycles > 2.5 million
 - Travel speed ≤ 3 m/s
- Bending radius in the cable carrier: 10 x diameter
 for fixed routing: 5 x diameter
- Torsional strength (e.g. rotary table applications)
 - Torsion ±180° for a cable length of > 1 m
 - Torsional cycles > 100.000

INFORMATION



You will have to check the mechanical marginal conditions if you encounter reversed bending and high torsional load for a length of < 3 m. Please contact SEW-EURODRIVE in such cases.

12

12.2.4 Thermal properties

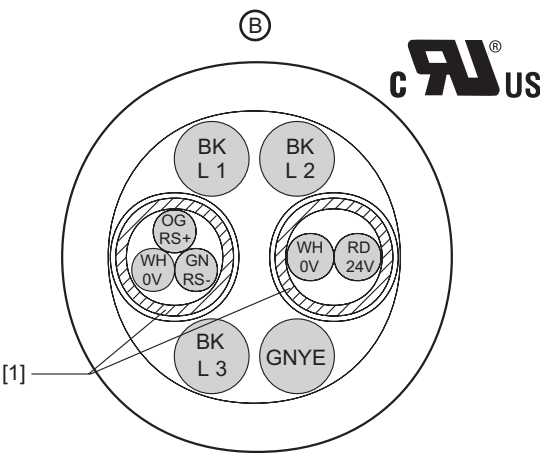
- Processing and operation: -30 °C – +90 °C (load capacity according to DIN VDE 0298-4)
-30 – +80 °C according to  US
- Transport and storage: -40 °C – +90 °C (load capacity according to DIN VDE 0298-4)
-30 – +80 °C according to  US
- Flame retardant according to UL1581 Vertical Wiring Flame Test (VW-1)
- Flame retardant according to CSA C22.2 Vertical Flame Test (FT-1)

12.2.5 Chemical properties

- Oil-resistant according to DIN VDE 0472 part 803 method B
- General fuel resistance (such as diesel, gasoline) according to DIN ISO 6722 parts 1 and 2
- General resistance to acids, alkalis, cleaning agents
- General resistance against dusts (e.g. bauxite, magnesite)
- Insulation and cable jacket material is halogen free according to DIN VDE 0472 part 815
- Within the specified temperature range, free from substances interfering with wetting agents (silicone-free)

12.3 Hybrid cable type "B" and "B/2,5"

12.3.1 Mechanical design



1031705739

Cable type	B	B/2.5
	8145172	13284363
• Supply cores:	4 x 1.5 mm ²	4 x 2.5 mm ²
• Control core pair:	2 x 0.75 mm ²	2 x 0.75 mm ²
• Control core group:	3 x 0.75 mm ²	3 x 0.75 mm ²
• Conductor insulation:	TPE-E (Polyester)	TPE-E (Polyester)
• Conductor:	Bare E-Cu litz wire, extra fine wires with individual wire 0.1 mm	
• Shield:	E-Cu wire, tinned	E-Cu wire, tinned
• Overall diameter:	13.2 – 13.8 mm	14.4 – 15.2 mm
• Color of outer cable jacket:	Black	Black
• Outer cable jacket insulation:	TPE-U (Polyurethane)	TPE-U (Polyurethane)

12.3.2 Electrical properties

Cable type	B	B/2,5
• Conductor resistance for 1.5/2.5 mm ² (at 20° C):	Max. 13 Ω/km	Max. 8 Ω/km
• Conductor resistance for 0.75 mm ² (at 20° C):	Max. 26 Ω/km	Max. 26 Ω/km
• Operating voltage for 1.5/2.5 mm ² conductor:	Max. 600 V according to 	Max. 600 V according to 
• Operating voltage for 0.75 mm ² conductor:	Max. 600 V according to 	Max. 600 V according to 
• Insulation resistance at 20° C:	Min. 20 MΩ x km	Min. 20 MΩ x km

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12.3.3 Mechanical properties

- Suitable for cable carriers
 - Bending cycles > 2.5 million
 - Travel speed ≤ 3 m/s
- Bending radius
 - in the cable carrier: 10 x diameter
 - for fixed installation: 5 x diameter
- Torsional strength (e.g. rotary table applications)
 - Torsion ± 180° for a cable length of > 1 m
 - Torsional cycles > 100 000

INFORMATION



You will have to check the mechanical marginal conditions if you encounter reversed bending and high torsional load for a length of < 3 m. Please contact SEW-EURODRIVE in such cases.

12

12.3.4 Thermal properties

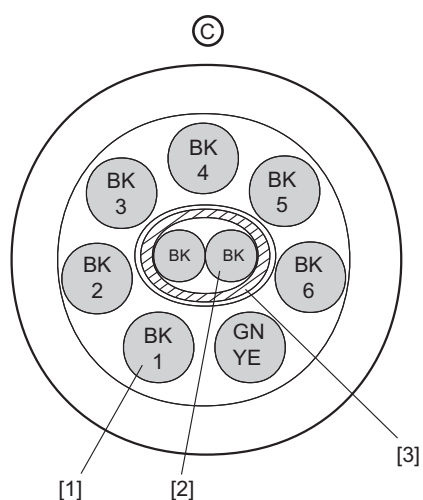
- Processing and operation: -30 to +90 °C (current-carrying capacity according to DIN VDE 0298-4)
-30 to +80 °C according to  US
- Transport and storage: -40 to +90 °C (current-carrying capacity according to DIN VDE 0298-4)
-30 to +80 °C according to  US
- Flame-retardant according to UL1581 Vertical Wiring Flame Test (VW-1)
- Flame-retardant according to CSA C22.2 Vertical Flame Test (FT-1)

12.3.5 Chemical properties

Cable type	B	B/2,5
• Oil resistant:	In accordance with VDE 0472 part 803, method B	In accordance with VDE 0282 part 10 HD 22.10 S1
• General fuel resistance (such as diesel, gasoline) according to DIN ISO 6722 parts 1 and 2		
• General resistance to acids, alkalis, cleaning agents		
• General resistance against dusts (e.g. bauxite, magnesite)		
• Insulation and cable jacket material is halogen free in accordance with VDE 0472 part 815		
• Within the specified temperature range, free from paint-wetting impairment substances (silicone free)		

12.4 Hybrid cable type "C"

12.4.1 Mechanical design



1484841483

- [1] Cores 2.5 mm²
- [2] Cores 0.75 mm²
- [3] Shield

Cable type

C

0152072

- Supply cores: 7 x 2.5 mm²
- Control cores: 2 x 0.75 mm²
- Insulation: PVC
- Conductor: Fine wires to VDE0295 class 5, copper strand conductor
- Shield: Aluminum-laminated foil and tin-plated Cu wires
- Overall diameter: approx. 15.2 mm
- Color of outer cable jacket: Gray

12.4.2 Electrical properties

- Conductor resistance for 2.5 mm²: 8.5 Ω/km
- Conductor resistance for 0.75 mm²: 26 Ω/km
- Operating voltage for 2.5 mm² cores: 600 V/1000 V
- Operating voltage for 0.75 mm² cores: AC 48 V
- Insulation resistance: 20 MΩ x km

12.4.3 Mechanical properties

- Bending radius In the cable carrier: 20 x diameter
 For fixed routing: 6 x diameter

12

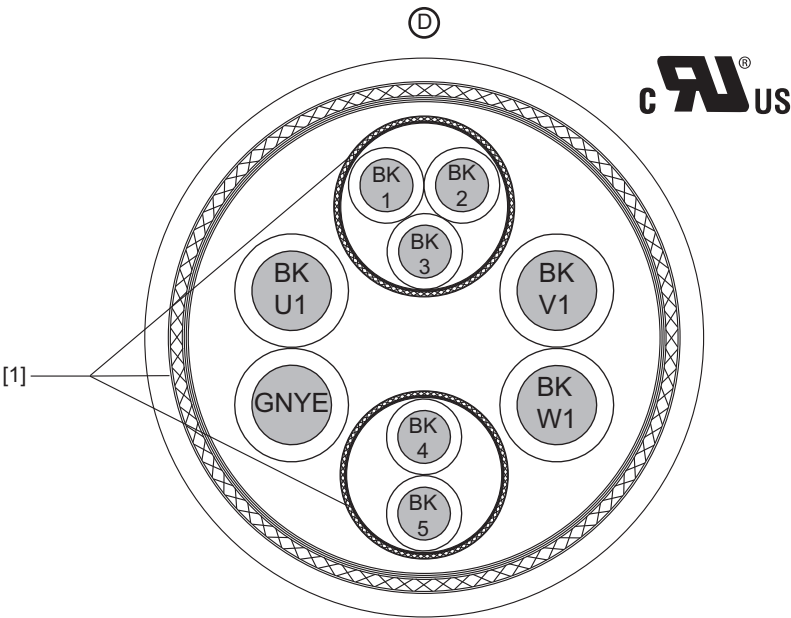
12.4.4 Thermal properties

- Processing and operation:
 - Flexible routing: -5 °C – +70 °C (current-carrying capacity to DIN VDE 0298-4)
 - Fixed installation: -30 °C – +80 °C (current-carrying capacity to DIN VDE 0298-4)
- Transport and storage: -30 °C – +80 °C (current-carrying capacity to DIN VDE 0298-4)

12.5 Hybrid cable type "D"

12.5.1 Mechanical design

The following figure shows the mechanical structure of the cable:



5436771083

[1] Shield

Cable type	D/1.5 18110886	D/2.5 11747013	D/4.0 18119573	D/6.0 11747021	D/10.0 11747048
Supply cores	4 x 1.5 mm ²	4 x 2.5 mm ²	4 x 4.0 mm ²	4 x 6.0 mm ²	4 x 10.0 mm ²
Control core pair	2 x 0.75 mm ²	2 x 0.75 mm ²	2 x 0.75 mm ²	2 x 0.75 mm ²	2 x 0.75 mm ²
Brake control	3 x 1.0 mm ²	3 x 1.0 mm ²	3 x 1.5 mm ²	3 x 1.5 mm ²	3 x 1.5 mm ²
Conductor insulation	PP (polypropylene)				
Conductor	Bare E-Cu litz wire, extra fine wires with individual wire 0.15 mm				
Shield	E-Cu wire, tinned				
Overall diameter	13.9 mm	17.2 mm	19.0 mm	21.5 mm	25.3 mm
Color of outer cable jacket	Orange				
Outer cable jacket insulation	TPE-U (Polyurethane)				

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12.5.2 Properties

All cable types have the following properties:

- Maximum 600 V operating voltage for all cores
- Approved according to European and American standards
- Suitable for cable carriers
 - Bending cycles > 5 million
 - Travel speed $\leq 3 \text{ ms}^{-1}$
 - Min. bending radius: 10 x cable diameter
- Minimum bending radius for fixed installation: 5 x cable diameter
- Resistance against oil according to VDE 0250 part 407
- General resistance to acids, alkalis, cleaning agents
- General resistance against dusts (e.g. bauxite, magnesite)
- Insulation and sheath material halogen-free
- Within the specified temperature range, free from substances interfering with wetting agents (silicone-free)
- Flame retardant according to VDE 0472 part 804 (method B IEC 60 332-1)
- Temperature range for processing and operation:

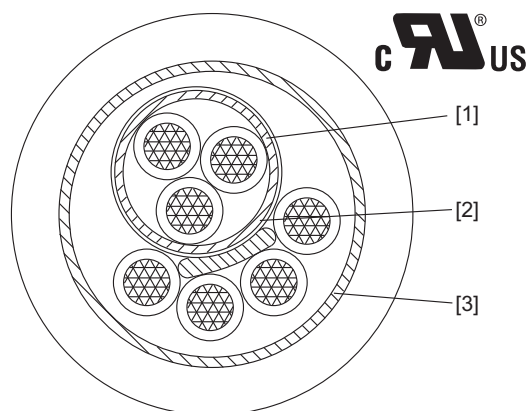
Fixed installation	Cable carrier installation
-40 °C – +90 °C (current-carrying capacity to DIN VDE 0298-4)	-5 °C – +90 °C (current-carrying capacity to DIN VDE 0298-4)
-30 °C – +80 °C according to UL758	-5 °C – +80 °C according to UL758

- Temperature range for transportation and storage:
 - -40 °C – +90 °C (current-carrying capacity to DIN VDE 0298-4)
 - -30 °C – +80 °C according to UL758

12.6 Hybrid cable type "E"

12.6.1 Mechanical design

The following figure shows the mechanical structure of the cable:



5436773643

- [1] Shielded "three-conductor" cable
- [2] EMC shielding, "three-conductor" cable
- [3] Plaiting for complete EMC shielding

Cable type	E/1.5 01768948	E/2.5 01768956	E/4.0 00150509	E/6.0 00150630
Supply cores	4 x 1.5 mm ²	4 x 2.5 mm ²	4 x 4.0 mm ²	4 x 6.0 mm ²
Brake control	3 x 1.0 mm ²	3 x 1.0 mm ²	3 x 1.0 mm ²	3 x 1.5 mm ²
Conductor insulation	TPM			
Conductor	Blank CU litz wire			
Shield	Made of tinned Cu wire			
Overall diameter	15.0 mm	16.3 mm	15.3 mm	17.4 mm
Color of outer cable jacket	Orange			
Outer cable jacket insulation	PUR (polyurethane)			

12.6.2 Properties

All cable types have the following properties:

- Maximum 600 V operating voltage for all cores
- Approved according to European and American standards
- Suitable for cable carriers
 - Bending cycles > 5 million
 - Travel speed $\leq 3 \text{ ms}^{-1}$
 - Min. bending radius: 10 x cable diameter
- Minimum bending radius for fixed installation: 5 x cable diameter
- Resistance against oil according to VDE 0250 part 407
- General resistance to acids, alkalis, cleaning agents
- General resistance against dusts (e.g. bauxite, magnesite)
- Insulation and sheath material halogen-free
- Within the specified temperature range, free from substances interfering with wetting agents (silicone-free)
- Flame retardant according to VDE 0472 part 804 (method B IEC 60 332-1)
- Temperature range for processing and operation:
 - $-50 \text{ }^{\circ}\text{C} - +80 \text{ }^{\circ}\text{C}$
 - $-20 \text{ }^{\circ}\text{C} - +60 \text{ }^{\circ}\text{C}$
- Temperature range for transportation and storage:
 - $-40 \text{ }^{\circ}\text{C} - +90 \text{ }^{\circ}\text{C}$ (current-carrying capacity to DIN VDE 0298-4)
 - $-30 \text{ }^{\circ}\text{C} - +80 \text{ }^{\circ}\text{C}$ according to UL758

13 Braking resistors

13.1 External braking resistors for MOVIPRO®

For regenerative operation, the MOVIPRO® is connected to an external braking resistor.



NOTICE

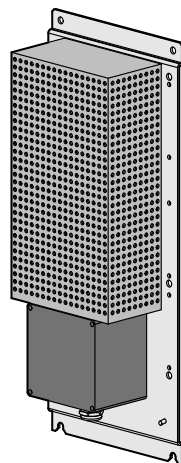
In case of incorrect assignment of the inverters, an overload may occur at the braking resistor and damage the braking resistor.

Damage to the braking resistor.

- Adhere the assignment of the braking resistor to the inverter.

Flat-type resistors have an internal thermal protection (fuse cannot be replaced) that interrupts the current circuit in the event of overload. Additional components for thermal monitoring are not required.

The following figure shows an example of a size 1 braking resistor:



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13.1.1 Braking resistors – assignment

The following table illustrates the assignment of external braking resistors to the respective MOVIPRO® units:

Braking resistor	Part number	Size	Terminal cross section	MOVIPRO®				
				up to 2.2 kW	up to 4.0 kW	up to 7.5 kW	up to 11.0 kW	up to 15.0 kW
BW100-004-00	17962188	Size 0	pre-assembled connection cable	•	•	•		
BW050-008-01	17962242	Size 1	6 mm ²		•	•	•	•
BW033-012-01	17962196	Size 1	6 mm ²		•	•	•	•
BW017-024-02	17962218	Size 2	6 mm ²				•	•

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13.1.2 Technical data according to IEC

The following tables list the technical data of the external braking resistors according to IEC:

		Braking resistor			
		BW100-004-00	BW050-008-01	BW033-012-01	BW017-024-02
Function		Carrying off of regenerative energy			
Degree of protection		IP65			
Mounting position		Flat-type resistor			
Resistance		100 Ω	50 Ω	33.3 Ω	16.7 Ω
Continuous braking power	100% cdf	0.4 kW	0.8 kW	1.2 kW	2.4 kW
	50% cdf	0.8 kW	1.6 kW	2.4 kW	4.8 kW
	25% cdf	1.5 kW	3.0 kW	4.5 kW	9.0 kW
	12% cdf	2.2 kW	4.4 kW	6.6 kW	13.2 kW
	6% cdf	3.6 kW	7.2 kW	10.8 kW	21.6 kW
Dimensions W × H × D		320 × 70 × 106 mm	550 × 105 × 230 mm		550 × 158 × 330 mm

13.1.3 Technical data according to UL

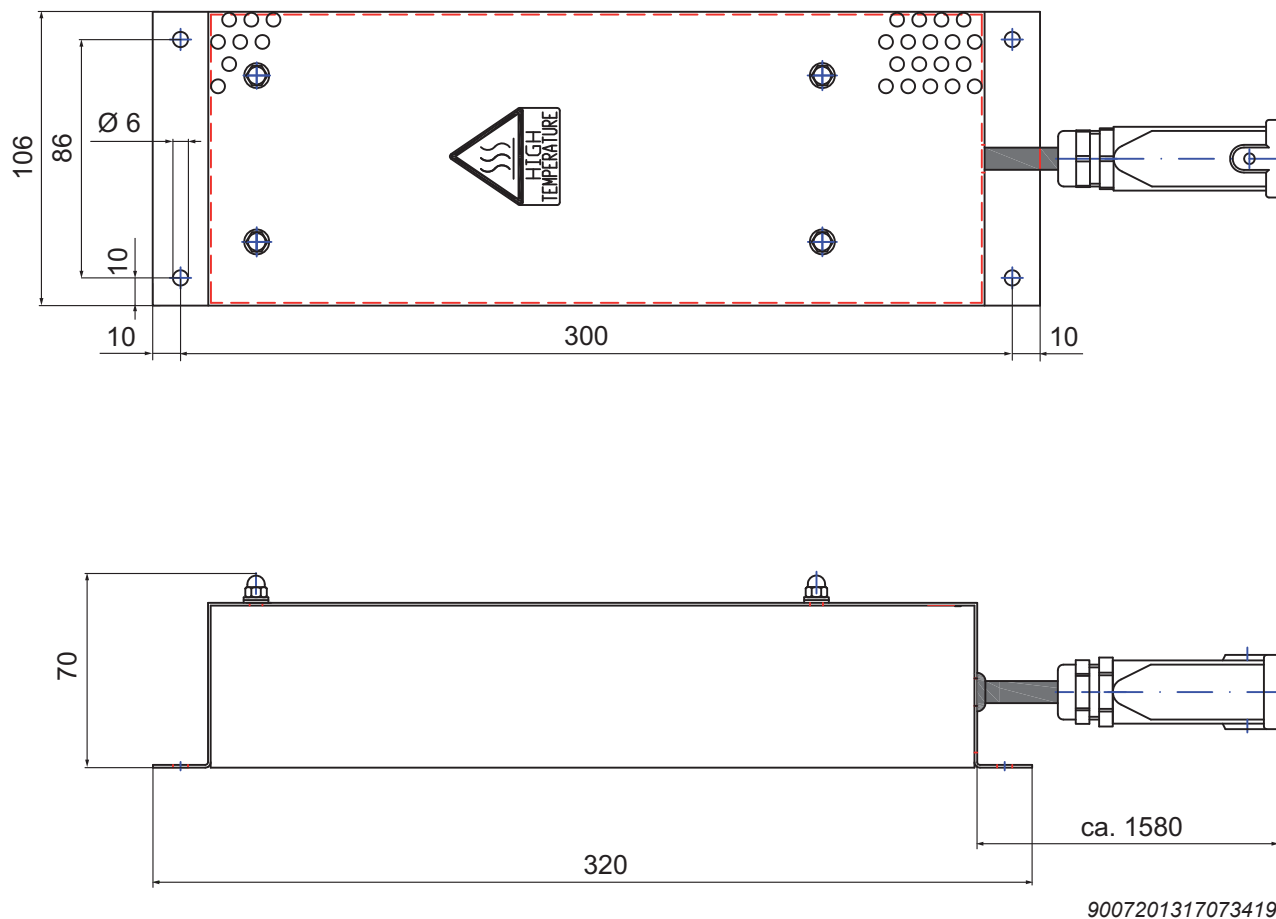
The following tables list the technical data of the external braking resistors according to UL:

		Braking resistor			
		BW100-004-00	BW050-008-01	BW033-012-01	BW017-024-02
Function		Carrying off of regenerative energy			
Degree of protection		IP65			
Mounting position		Flat-type resistor			
Resistance		100 Ω	50 Ω	33.3 Ω	16.7 Ω
Continuous braking power	100% cdf	0.24 kW	0.48 kW	0.72 kW	1.44 kW
	50% cdf	0.5 kW	1.0 kW	1.5 kW	3.0 kW
	25% cdf	1.0 kW	2.0 kW	3.0 kW	6.0 kW
	12% cdf	2.2 kW	4.4 kW	6.6 kW	13.2 kW
	6% cdf	3.6 kW	7.2 kW	10.8 kW	21.6 kW
Dimensions W × H × D		320 × 70 × 106 mm (12.6 × 2.8 × 4.17 in)	550 × 105 × 230 mm (21.7 × 4.13 × 9.06 in)		550 × 158 × 330 mm (21.7 × 6.22 × 13.0 in)

13.1.4 Braking resistors – dimension drawings

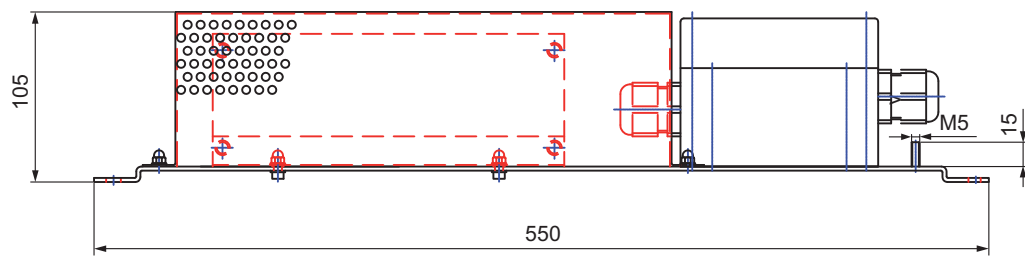
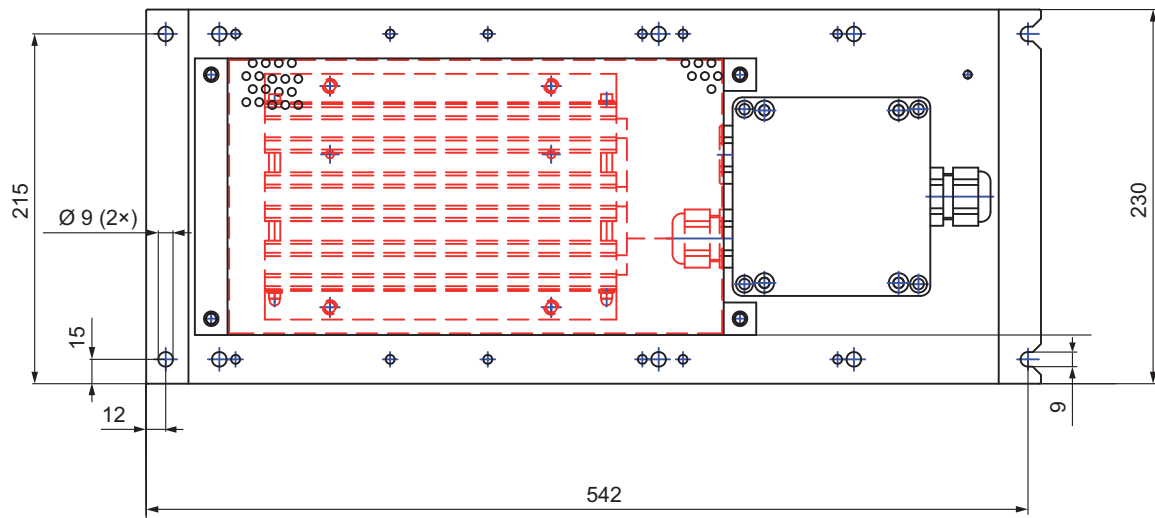
Size 0 braking resistor

The dimension drawing shows the mechanical dimensions of the size 0 braking resistor in mm:



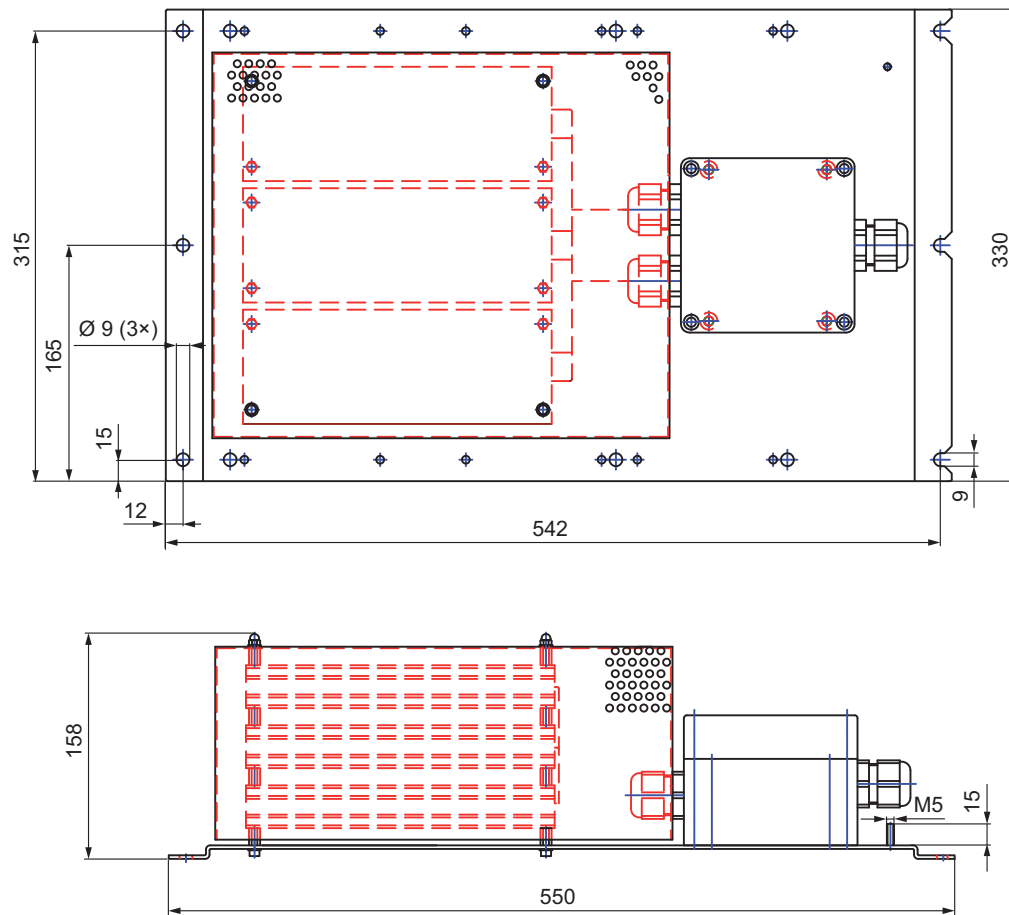
Size 1 braking resistors

The dimension drawing shows the mechanical dimensions of the size 1 braking resistors in mm:



9007201317080331

The dimension drawing shows the mechanical dimensions of the size 2 braking resistors in mm:



9007201317069579

13.2 Braking resistors for MOVIFIT® and MOVIMOT®

The following table shows the available integrated braking resistors:

MOVIFIT® FC/MOVIMOT®	Braking resistor	Part number
MTF11A003 – MTF11A015	BW1	18207057
MTF11A003 – MTF11A040	BW2	18207545
MM03D-503-00 – MM15D-503-00 MM03D-233-00 – MM07D-233-00	BW1	08228973 ¹⁾
MM22D-503-00 – MM40D-503-00 MM11D-233-00 – MM22D-233-00	BW2	08231362 ¹⁾

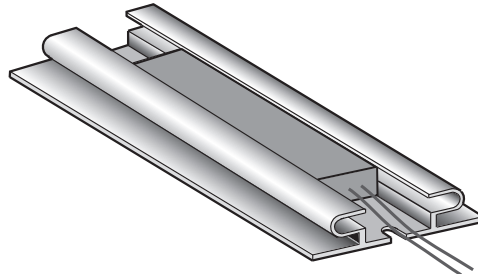
1) 2 screws M4 x 8 included in the delivery.

The following table shows the available external braking resistors:

MOVIFIT® FC/MOVIMOT®	Braking resistor	Part number	Protective grid
MTF11A003 – MTF11A015	BW200-003/K-1.5	08282919	0813152X
MM03D-503-00 – MM15D-503-00	BW200-005/K-1.5	08282838	–
MM03D-233-00 – MM07D-233-00	BW150-006/T	17969565	–
MTF11A022 – MTF11A040	BW100-003/K-1.5	08282935	0813152X
MM22D-503-00 – MM40D-503-00	BW100-005/K-1.5	08282862	–
MM11D-233-00 – MM22D-233-00	BW068-006/T	17970008	–
	BW068-012/T	17970016	–

13.2.1 4Q operation with integrated BW.. braking resistor

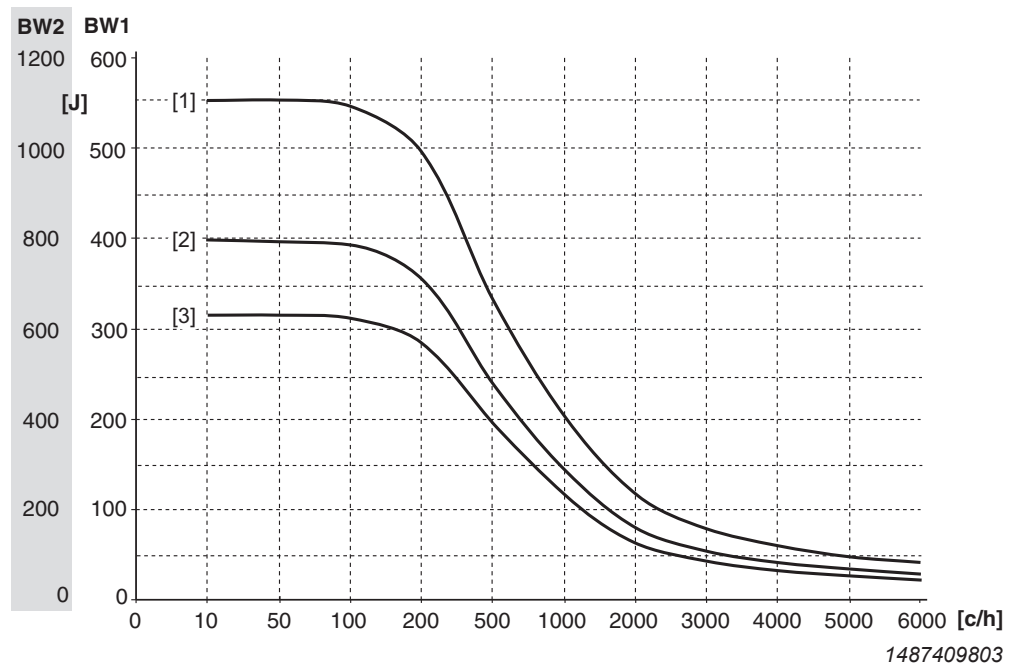
- 4Q operation with integrated braking resistor is recommended for applications in which the level of regenerative energy is low.
- The resistor protects itself (reversible) against regenerative overload by changing abruptly to high resistance and no longer consuming any more energy. The inverter then switches off and issues the error "overvoltage" (error code 07).



1487411723

Regenerative current-carrying capacity of internal braking resistors

The following figure shows the regenerative current-carrying capacity of the internal braking resistors:

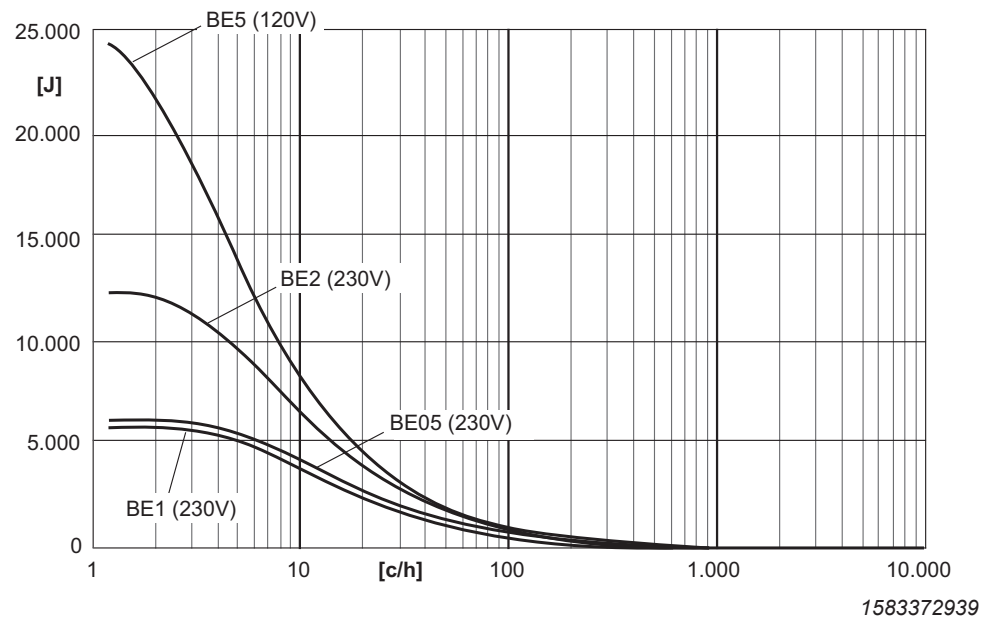


1487409803

[c/h] Cycles/hour
 [1] Brake ramp 10 s
 [2] Brake ramp 4 s
 [3] Brake ramp 0.2 s

13.2.2 4Q operation for motors with mechanical brake

- The brake coil can be used as a braking resistor in 4Q operation.
- Brake voltage is generated internally within the unit, which means it is mains-independent.
- Should the regenerative current-carrying capacity not be sufficient for the application, refer to chapter "4Q operation with integrated brake and external brake resistor" (→ 360):
- The following figure shows the current-carrying capacity of the DR.. motor brake coils:



13.2.3 4Q operation with integrated brake and external braking resistor

4Q operation with external braking resistor is necessary for applications with a large amount of regenerative energy.

NOTICE



In case of incorrect assignment of the inverters, an overload may occur at the braking resistor and damage the braking resistor.

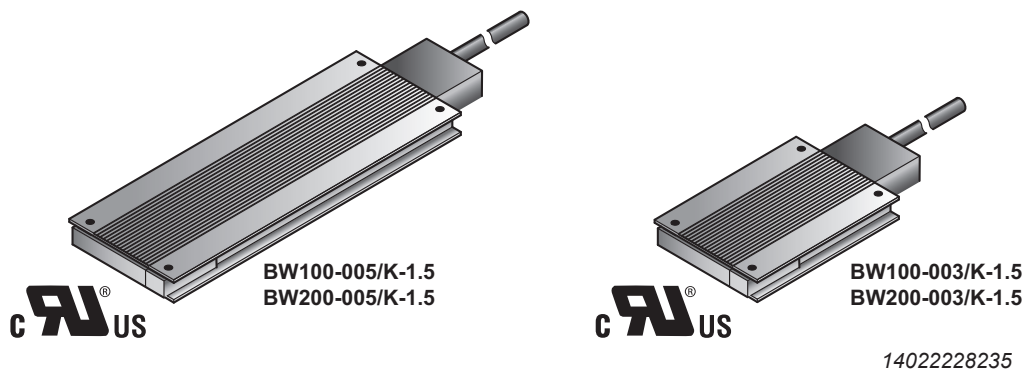
Damage to the braking resistor.

- Adhere the assignment of the braking resistor to the inverter.

Flat-type resistors have an internal thermal protection (fuse cannot be replaced) that interrupts the current circuit in the event of overload. Additional components for thermal monitoring are not required.

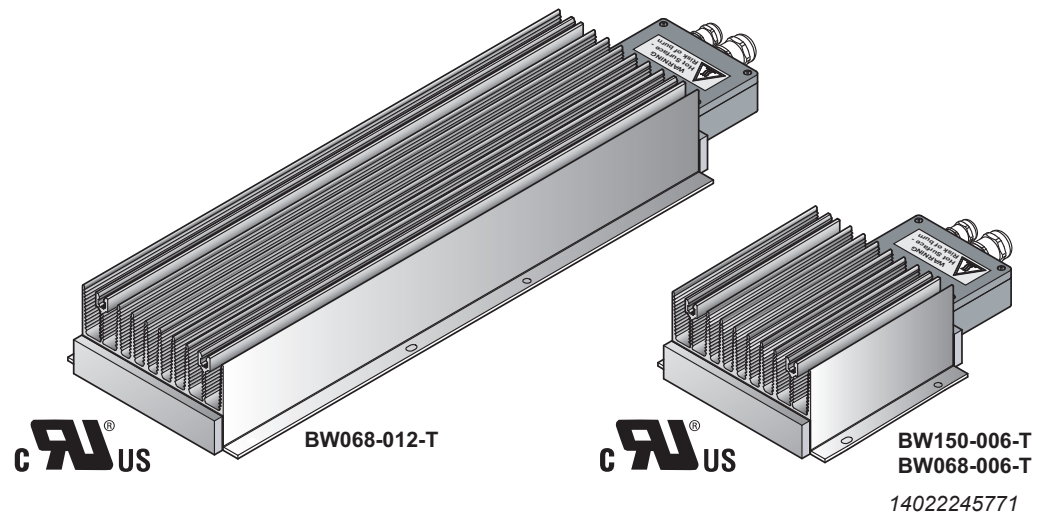
Braking resistors with IP65 degree of protection

The following figure shows the external braking resistors with IP65 degree of protection:



Braking resistors with IP66 degree of protection

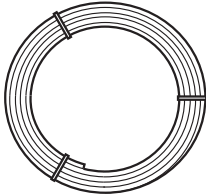
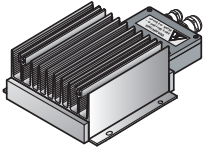
The following figure shows the external braking resistors with IP66 degree of protection:



13

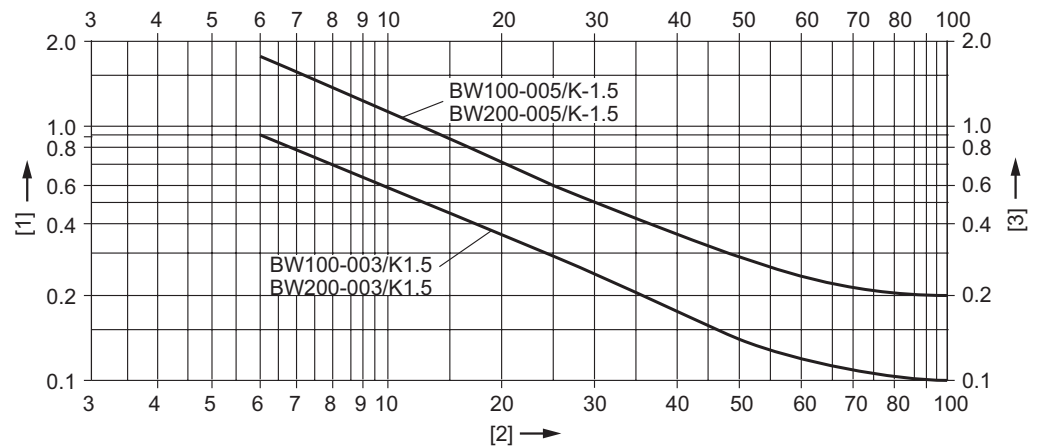
Connection cable

The following cable is available for connecting the external braking resistors:

Inverters	Connection cable	Length	Braking resistor
MOVIFIT® FC MOVIMOT®	Part number: 13230409 (cable roll) 	30 m	BW068-012-T BW068-006-T BW150-006-T 

Power diagrams BW100-003/K1.5, BW200-003/K1.5, BW100-005/K1.5 and BW200-005/K1.5

The following figure shows the power diagrams of braking resistors BW100-003/K1.5, BW200-003/K1.5, BW100-005/K1.5 and BW200-005/K1.5:

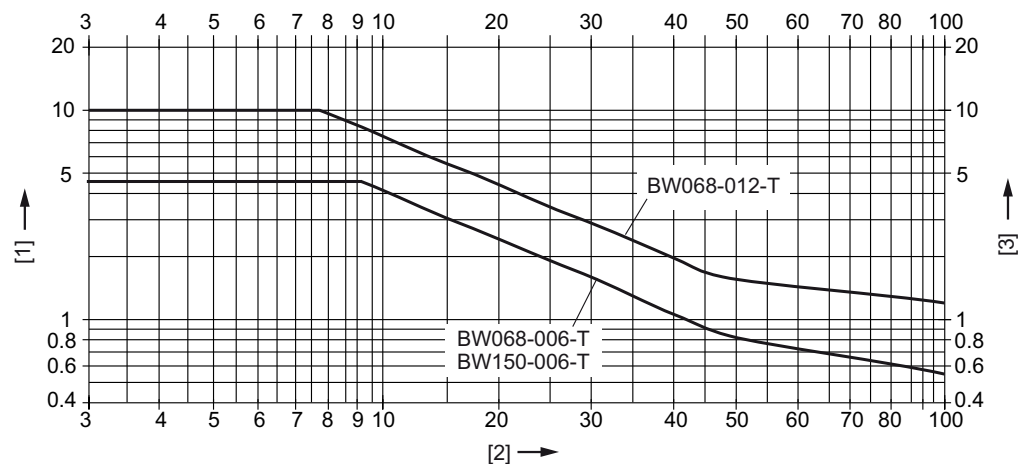


9007200744805003

- [1] Short-term power in kW
- [2] Cyclic duration factor cdf in %
- [3] Continuous power 100% cdf in kW

Rating diagrams for BW150-006-T, BW068-006-T and BW068-012-T according to UL approval

The following figure shows the rating diagrams of braking resistors BW150-006-T, BW068-006-T and BW068-012-T according to UL approval:

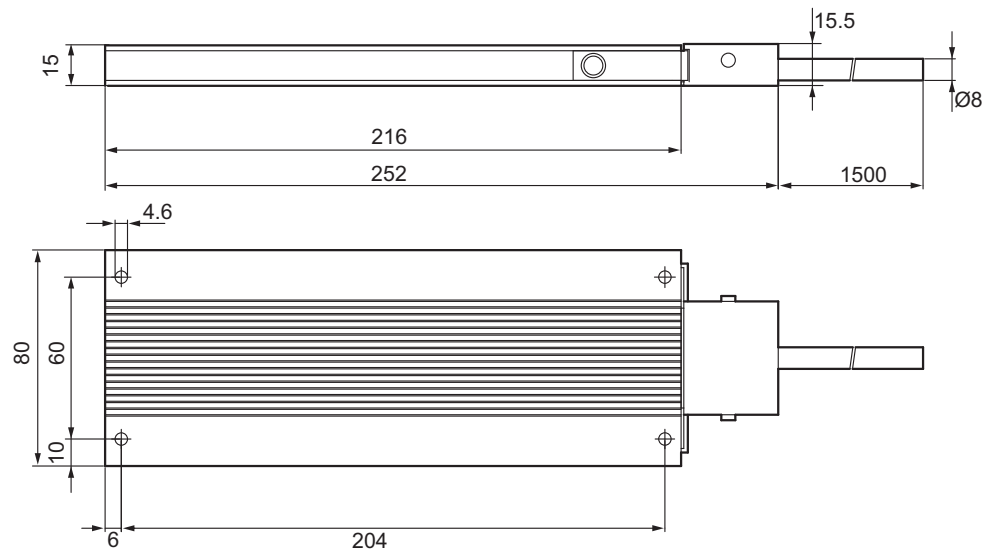


5057727243

- [1] Short-term braking power in kW
 - [2] Cyclic duration factor cdf in %
 - [3] Continuous power 100% cdf in kW
- cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T_D \leq 120$ s.

Dimension drawing of BW100-005/K-1.5 and BW200-005/K-1.5

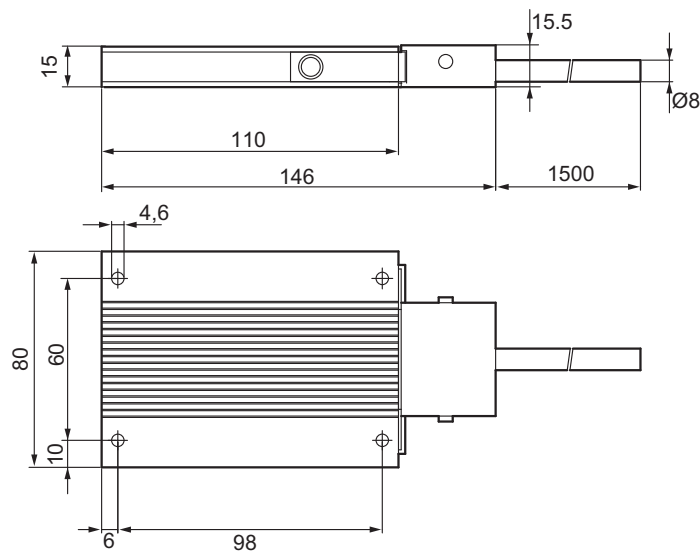
The following figure shows the dimensions of the external braking resistors BW100-005/K-1.5 and BW200-005/K-1.5:



1490210571

Dimension drawing of BW100-003/K-1.5 and BW200-003/K-1.5

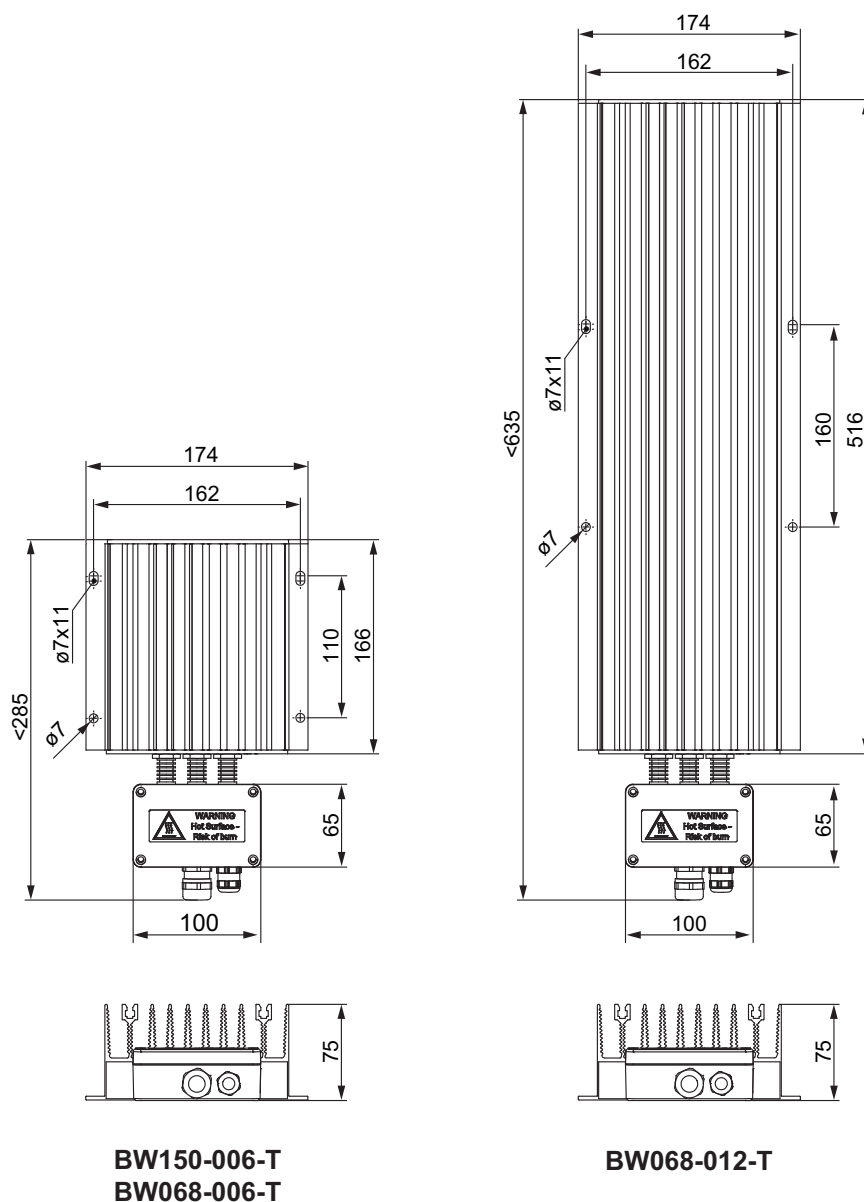
The following figure shows the dimensions of the external braking resistors BW100-003/K-1.5 and BW200-003/K-1.5:



1490212491

Dimension drawing of BW150-006-T, BW068-006-T and BW068-012-T

The following figure shows the dimensions of the external braking resistors BW150-006-T, BW068-006-T and BW068-012-T¹⁾:



9007200744957323

1) The braking resistor is equipped with a temperature sensor.

14 Address directory SEW-EURODRIVE

Algeria

Sales	Algiers	REDUCOM Sarl 16, rue des Frères Zaghroune Bellevue 16200 El Harrach Alger	Tel. +213 21 8214-91 Fax +213 21 8222-84 http://www.reducom-dz.com info@reducom-dz.com
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Argentina

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Service	Mendoza	SEW EURODRIVE ARGENTINA S.A. Francisco Gabrielli (ex Urquiza) 2060-Zona Industrial- Guaymallen- CP 5521	Tel. +54 261-4214150 http://www.sew-eurodrive.com.ar sewmen@sew-eurodrive.com.ar
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	Perth	SEW-EURODRIVE PTY. LTD. 10 Colin Jamieson Drive Welshpool, WA 6106	Tel. +61 8 9251-4900 Fax +61 8 9251-4903 enquires@sew-eurodrive.com.au
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Bangladesh

Sales	Bangladesh	SEW-EURODRIVE INDIA PRIVATE LIMITED 345 DIT Road East Rampura Dhaka-1219, Bangladesh	Tel. +88 01729 097309 salesdhaka@seweurodrivebangladesh.com
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Belarus

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Belgium

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Service Competence Center	Industrial Gears	SEW-EURODRIVE n.v./s.a. Rue de Parc Industriel, 31 BE-6900 Marche-en-Famenne	Tel. +32 84 219-878 Fax +32 84 219-879 http://www.sew-eurodrive.be service-wallonie@sew-eurodrive.be

Brazil

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	Joinville	SEW-EURODRIVE Brasil Ltda. Rua Dona Francisca, 12.346 – Pirabeiraba 89239-270 – Joinville / SC	Tel. +55 47 3027-6886 Fax +55 47 3027-6888 filial.sc@sew.com.br

Bulgaria

Sales	Sofia	BEVER-DRIVE GmbH Bogdanovetz Str.1 BG-1606 Sofia	Tel. +359 2 9151160 Fax +359 2 9151166 bever@bever.bg
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Cameroon

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	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. Tilbury Industrial Park 7188 Honeyman Street Delta, BC V4G 1G1	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 Lasalle, PQ H8N 2V9	Tel. +1 514 367-1124 Fax +1 514 367-3677 a.peluso@sew-eurodrive.ca

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Production Assembly Sales Service	Tianjin	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 78, 13th Avenue, TEDA Tianjin 300457	Tel. +86 22 25322612 Fax +86 22 25323273 http://www.sew-eurodrive.cn info@sew-eurodrive.cn
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	Taiyuan	SEW-EURODRIVE (Taiyuan) Co., Ltd. No.3, HuaZhang Street, TaiYuan Economic & Technical Development Zone ShanXi, 030032	Tel. +86-351-7117520 Fax +86-351-7117522 taiyuan@sew-eurodrive.cn
	Wuhan	SEW-EURODRIVE (Wuhan) Co., Ltd. 10A-2, 6th Road No. 59, the 4th Quanli Road, WEDA 430056 Wuhan	Tel. +86 27 84478388 Fax +86 27 84478389 wuhan@sew-eurodrive.cn
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Egypt

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Estonia

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Finland

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Service	Hollola	SEW-EURODRIVE OY Keskikankaantie 21 FIN-15860 Hollola	Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi
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Technical Offices	Helsinki	SEW-EURODRIVE OY Luutnantintie 5 FIN-00410 Helsinki	Tel. +358 201 589-300 sew@sew.fi
	Oulu	SEW Industrial Gears Oy Paulaharjuntie 22 FIN-90530 Oulu	Tel. +358 201 589 300 sew@sew.fi
	Vaasa	SEW Industrial Gears Oy Asemakatu 7 FIN-65100 Vaasa	Tel. +358 201 589-300 sew@sew.fi
	Kuopio	SEW Industrial Gears Oy Leväsentie 23 FIN-70780 Kuopio	Tel. +358 201 589-300 sew@sew.fi
	Tampere	SEW Industrial Gears Oy Hermiankatu 3 A FI-33720 Tampere	Tel. +358 201 589-300 sew@sew.fi

Kotka	SEW Industrial Gears Oy Heikinkatu 7 FIN-48100 Kotka	Tel. +358 201 589 300 sew@sew.fi
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France

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Production	Forbach	SEW-USOCOME Zone industrielle Technopôle Forbach Sud B. P. 30269 F-57604 Forbach Cedex	Tel. +33 3 87 29 38 00
	Brumath	SEW-USOCOME 1 rue de Bruxelles F-67670 Mommenheim	Tel. +33 3 88 37 48 48
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
	Nantes	SEW-USOCOME Parc d'activités de la forêt 4 rue des Fontenelles F-44140 Le Bignon	Tel. +33 2 40 78 42 00 Fax +33 2 40 78 42 20
	Paris	SEW-USOCOME Zone industrielle 2 rue Denis Papin F-77390 Verneuil l'Étang	Tel. +33 1 64 42 40 80 Fax +33 1 64 42 40 88
Technical Offices	Alsace	SEW-USOCOME 1 rue Auguste Gasser F-68360 Soultz	Tel. +33 3 89 74 51 62 Fax +33 3 89 76 58 71
	Aquitaine / Charentes	SEW-USOCOME Parc d'activités de Magellan 62 avenue de Magellan – B.P.182 F-33607 Pessac Cedex	Tel. +33 5 57 26 39 08 Fax +33 5 57 26 39 09
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Rhône-Alpes North	SEW-USOCOME Parc d'affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. +33 4 72 15 37 03 Fax +33 4 72 15 37 15
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Gabon

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Germany

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Production	Graben	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf P.O. Box Postfach 1220 – D-76671 Graben-Neudorf	Tel. +49 7251 75-0 Fax +49 7251 2970
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	Electronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 scc-elektronik@sew-eurodrive.de

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	East	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg 1 D-08393 Meerane (Zwickau)	Tel. +49 3764 7606-0 Fax +49 3764 7606-30 dtc-ost@sew-eurodrive.de
	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 D-85551 Kirchheim (München)	Tel. +49 89 909552-10 Fax +49 89 909552-50 dtc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 D-40764 Langenfeld (Düsseldorf)	Tel. +49 2173 8507-30 Fax +49 2173 8507-55 dtc-west@sew-eurodrive.de
Drive Center	Berlin	SEW-EURODRIVE GmbH & Co KG Alexander-Meißner-Straße 44 D-12526 Berlin	Tel. +49 306331131-30 Fax +49 306331131-36 dc-berlin@sew-eurodrive.de
	Ludwigshafen	SEW-EURODRIVE GmbH & Co KG c/o BASF SE Gebäude W130 Raum 101 D-67056 Ludwigshafen	Tel. +49 7251 75 3759 Fax +49 7251 75 503759 dc-ludwigshafen@sew-eurodrive.de
	Saarland	SEW-EURODRIVE GmbH & Co KG Gottlieb-Daimler-Straße 4 D-66773 Schwalbach Saar – Hülzweiler	Tel. +49 6831 48946 10 Fax +49 6831 48946 13 dc-saarland@sew-eurodrive.de
	Ulm	SEW-EURODRIVE GmbH & Co KG Dieselstraße 18 D-89160 Dornstadt	Tel. +49 7348 9885-0 Fax +49 7348 9885-90 dc-ulm@sew-eurodrive.de
	Würzburg	SEW-EURODRIVE GmbH & Co KG Nürnbergerstraße 118 D-97076 Würzburg-Lengfeld	Tel. +49 931 27886-60 Fax +49 931 27886-66 dc-wuerzburg@sew-eurodrive.de
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	Hannover / Garbsen	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Str.40-42 D-30823 Garbsen P.O. Box Postfach 1104 53 – D-30804 Garbsen	Tel. +49 5137 8798-10 Fax +49 5137 8798-50 tb-hannover@sew-eurodrive.de
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Stuttgart	SEW-EURODRIVE GmbH & Co KG Friedrich-List-Straße 46 D-70771 Leinfelden-Echterdingen	Tel. +49 711 16072-0 Fax +49 711 16072-72 tb-stuttgart@sew-eurodrive.de
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Great Britain

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Drive Service Hotline / 24 Hour Service

Tel. 01924 896911

Service Competence Center	Southern Eng- land	SEW-EURODRIVE Ltd. Unit 41 Easter Park Benyon Road Silchester Reading Berkshire RG7 2PQ	Tel. +44 1189 701-699 Fax +44 1189 701-021
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Technical Offices	Midlands	SEW-EURODRIVE Ltd. 5 Sugar Brook court Aston Road Bromsgrove Worcs. B60 3EX	Tel. +44 1527 877-319 Fax +44 1527 575-245
	Scotland	SEW-EURODRIVE Ltd. No 37 Enterprise House Springkerse Business Park Stirling FK7 7UF	Tel. +44 17 8647-8730 Fax +44 17 8645-0223
	Northern Ireland	Heyn Engineering (NI) Ltd. 1 Corry Place, Belfast, BT3 9AH	Tel. +44 02890350022 Fax +44 02890350012 http://www.heyne.co.uk info@heyne.co.uk

Greece

Sales	Athens	Christ. Boznos & Son S.A. 12, K. 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
Technical Office	Thessaloniki	Christ. Boznos & Son S.A. Asklipiou 26 562 24 Evosmos, Thessaloniki	Tel. +30 2 310 7054-00 Fax +30 2 310 7055-15 info@boznos.gr

Hungary

Sales Service	Budapest	SEW-EURODRIVE Kft. Csillaghegyi út 13. H-1037 Budapest	Tel. +36 1 437 06-58 Fax +36 1 437 06-50 http://www.sew-eurodrive.hu office@sew-eurodrive.hu
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Iceland

Sales	Reykjavik	Varma & Vélaverk ehf. Knarrarvogi 4 IS-104 Reykjavik	Tel. +354 585 1070 Fax +354 585)1071 http://www.varmaverk.is vov@vov.is
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India

Registered Office Assembly Sales Service	Vadodara	SEW-EURODRIVE India Private Limited Plot No. 4, GIDC POR Ramangamdi • Vadodara - 391 243 Gujarat	Tel. +91 265 3045200 Fax +91 265 3045300 http://www.seweurodriveindia.com salesvadodara@seweurodriveindia.com
Assembly Sales Service	Chennai	SEW-EURODRIVE India Private Limited Plot No. K3/1, Sipcot Industrial Park Phase II Mambakkam Village Sriperumbudur - 602105 Kancheepuram Dist, Tamil Nadu	Tel. +91 44 37188888 Fax +91 44 37188811 saleschennai@seweurodriveindia.com
	Pune	SEW-EURODRIVE India Private Limited Plant: Plot No. D236/1, Chakan Industrial Area Phase- II, Warale, Tal- Khed, Pune-410501, Maharashtra	Tel. +91 21 35301400 salespune@seweurodriveindia.com
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	Aurangabad	SEW-EURODRIVE India Private Limited Flat.No.403 , Prism Appt. The Venus Housing Society. Beed Bypass Road, Behind Nishant Park Hotel, Aurangabad – 431003, Maharashtra.	Tel. +91 86000 12333 salesaurangabad@seweurodriveindia.com
	Bangalore	SEW-EURODRIVE India Private Limited Sy.no:41-P3, Peenya1, Phase 1A, Peenya Vil- lage, Yeswanthapura Hobli, Bangalore North Taluk, Bangalore - 560058, Karnataka	Tel. +91 80 28370664 Fax +91 80 28370665 salesbangalore@seweurodriveindia.com

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Bellary	SEW-EURODRIVE India Private Limited Door no-56/279 Ward No-15, Sindhigi compound, Near Raghavendra talkies, Bellary-583101, Karnataka	Tel. +91 77609 88668 salesbellary@seweurodriveindia.com
Chandigarh	SEW-EURODRIVE India Private Limited # 72, Type- 4, Power Colony, Chandigarh - Rupnagar Highway Rupnagar - 140001, Punjab	Tel. +91 81462 67606 saleschandigarh@seweurodrivein- dia.com
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Kochi	SEW-EURODRIVE India Private Limited House No: 30/1168 A Kaniyampuzha Road Vyttila Post Office Cochin – 682019, Kerala	Tel. +91 98951 30375 salescochin@seweurodriveindia.com
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Kolhapur	SEW-EURODRIVE India Private Limited C/O. Mr.S.V.Pawar.461/37, Abhideep Resid- ency, Opp-Shriram Petrol Pump, Kasaba Bawada, Kolhapur - 416 122, Maharashtra	Tel. +91 86000 20846 saleskolhapur@seweurodriveindia.com
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	Surabaya	CV. Multi Mas Jl. Raden Saleh 43A Kav. 18 Surabaya 60174	Tel. +62 31 5458589 Fax +62 31 5317220 sianhwa@sby.centrin.net.id http://www.cvmultimas.com
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	Pescara	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Viale Europa,132 I-65010 Villa Raspa di Spoltore (PE)	Tel. +39 085 41-59-427 Fax +39 02 96 980 699 pescara@sew-eurodrive.it
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	Verona	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via Antonio Meucci, 5 I-37042 - Caldiero (VR)	Tel. +39 045 89-239-11 Fax +39 02 96 980 814 verona@sew-eurodrive.it
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Japan			
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	Kyoto	SEW-EURODRIVE JAPAN CO., LTD Kyoto Operation Center 9-1-11 Seikadai, Seika-cho, Souraku-gun, Kyoto 619-0238	Tel. +81 774 98-2750 Fax +81 774 93-2100 sewjapan@sew-eurodrive.co.jp
	Osaka	SEW-EURODRIVE JAPAN CO., LTD Higobashi Shimizu Bldg. 10th floor 1-3-7 Tosabori, Nishi-ku Osaka, 550-0001	Tel. +81 6 6444--8330 Fax +81 6 6444--8338 osaka@sew-eurodrive.co.jp
	Tokio	SEW-EURODRIVE JAPAN CO., LTD Renai Partire Shiodome 5th floor 2-18-3 Higashi-Shinbashi, Minato-Ku, Tokyo 105-0021	Tel. +81 3 3239-0469 Fax +81 3 3239-0943 tokyo@sew-eurodrive.co.jp

Kazakhstan

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	Tashkent	SEW-EURODRIVE LLP Representative office in Uzbekistan 96A, Sharaf Rashidov street, Tashkent, 100084	Tel. +998 71 2359411 Fax +998 71 2359412 http://www.sew-eurodrive.uz sew@sew-eurodrive.uz
	Ulaanbaatar	SEW-EURODRIVE LLP Representative office in Mongolia Suite 407, Tushig Centre Seoul street 23, Sukhbaatar district, Ulaanbaatar 14250	Tel. +976-77109997 Fax +976-77109997 http://www.sew-eurodrive.mn sew@sew-eurodrive.mn
Technical Offices	Karagandy	SEW-EURODRIVE LLP 82, Molokov Street 100004, Karagandy	Tel. +7 (7212) 955 956 Fax +7 (7212) 955 956 karagandy@sew-eurodrive.kz

Kenya

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Latvia

Sales	Riga	SIA Alas-Kuul Katlakalna 11C LV-1073 Riga	Tel. +371 6 7139253 Fax +371 6 7139386 http://www.alas-kuul.lv info@alas-kuul.com
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Lebanon

Sales (Lebanon)	Beirut	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 510 532 Fax +961 1 494 971 ssacar@inco.com.lb
Sales (Jordan, Kuwait , Beirut Saudi Arabia, Syria)		Middle East Drives S.A.L. (offshore) Sin El Fil. B. P. 55-378 Beirut	Tel. +961 1 494 786 Fax +961 1 494 971 http://www.medrives.com info@medrives.com

Lithuania

Sales	Alytus	UAB Irseva Statybininku 106C LT-63431 Alytus	Tel. +370 315 79204 Fax +370 315 56175 http://www.irseva.lt irmantas@irseva.lt
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Luxembourg

Assembly Sales Service	Brussels	SEW-EURODRIVE n.v./s.a. Researchpark Haasrode 1060 Evenementenlaan 7 BE-3001 Leuven	Tel. +32 16 386-311 Fax +32 16 386-336 http://www.sew-eurodrive.lu info@sew-eurodrive.be
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Macedonia			
Sales	Skopje	Boznos DOOEL Dime Anicin 2A/7A 1000 Skopje	Tel. +389 23256553 Fax +389 23256554 http://www.boznos.mk
Madagascar			
Sales	Antananarivo	Ocean Trade BP21bis. Andraharo Antananarivo 101 Madagascar	Tel. +261 20 2330303 Fax +261 20 2330330 oceantrabp@moov.mg
Malaysia			
Assembly Sales Service	Johor	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 sales@sew-eurodrive.com.my
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	Penang	SEW-EURODRIVE SDN BHD No. 38, Jalan Bawal Kimsar Garden 13700 Prai, Penang West Malaysia	Tel. +60 4 3999349 Fax +60 4 3999348 sewpg@sew-eurodrive.com.my
	Kuching	SEW-EURODRIVE SDN BHD No. 69, Lot 10899 1st Floor, Jalan Tun Jugah 93350 Kuching Sarawak East Malaysia	Tel. +60 82 572780 Fax +60 82 571780 sewswk@sew-eurodrive.com.my
	Kota Kinabalu	SEW-EURODRIVE SDN BHD East Malaysia	Tel. +60 19 7539395 sales@sew-eurodrive.com.my
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Mexiko			
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Netherlands			
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Sambia

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	Lake Con- stance and East Switzer- land	Markus Künzle Eichweg 4 CH-9403 Goldach	Tel. +41 71 845 2808 Fax +41 71 845 2809
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	Nan Tou	Ting Shou Trading Co., Ltd. No. 55 Kung Yeh N. Road Industrial District Nan Tou 540	Tel. +886 49 255353 Fax +886 49 257878 sewtwn@ms63.hinet.net http://www.tingshou.com.tw
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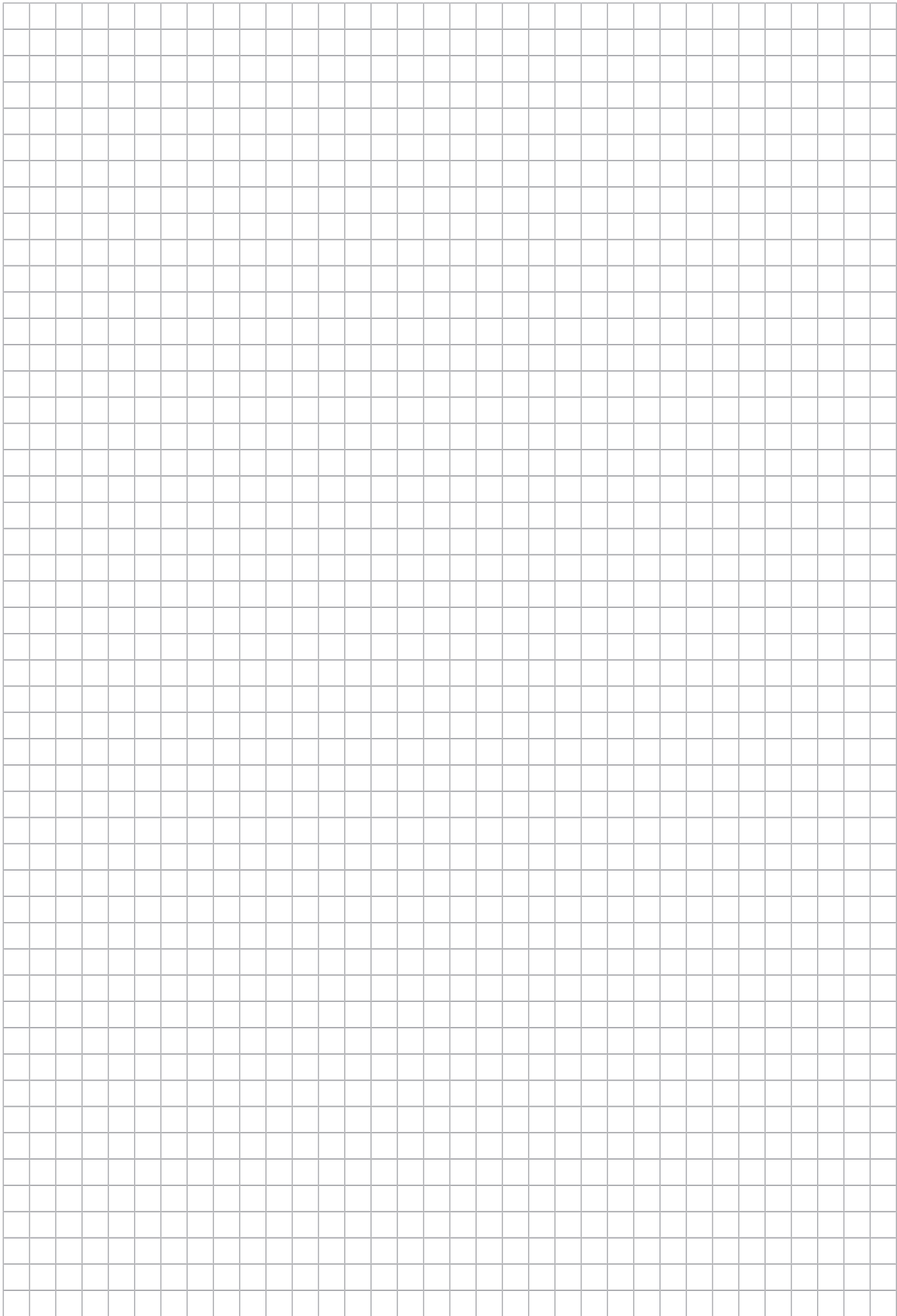
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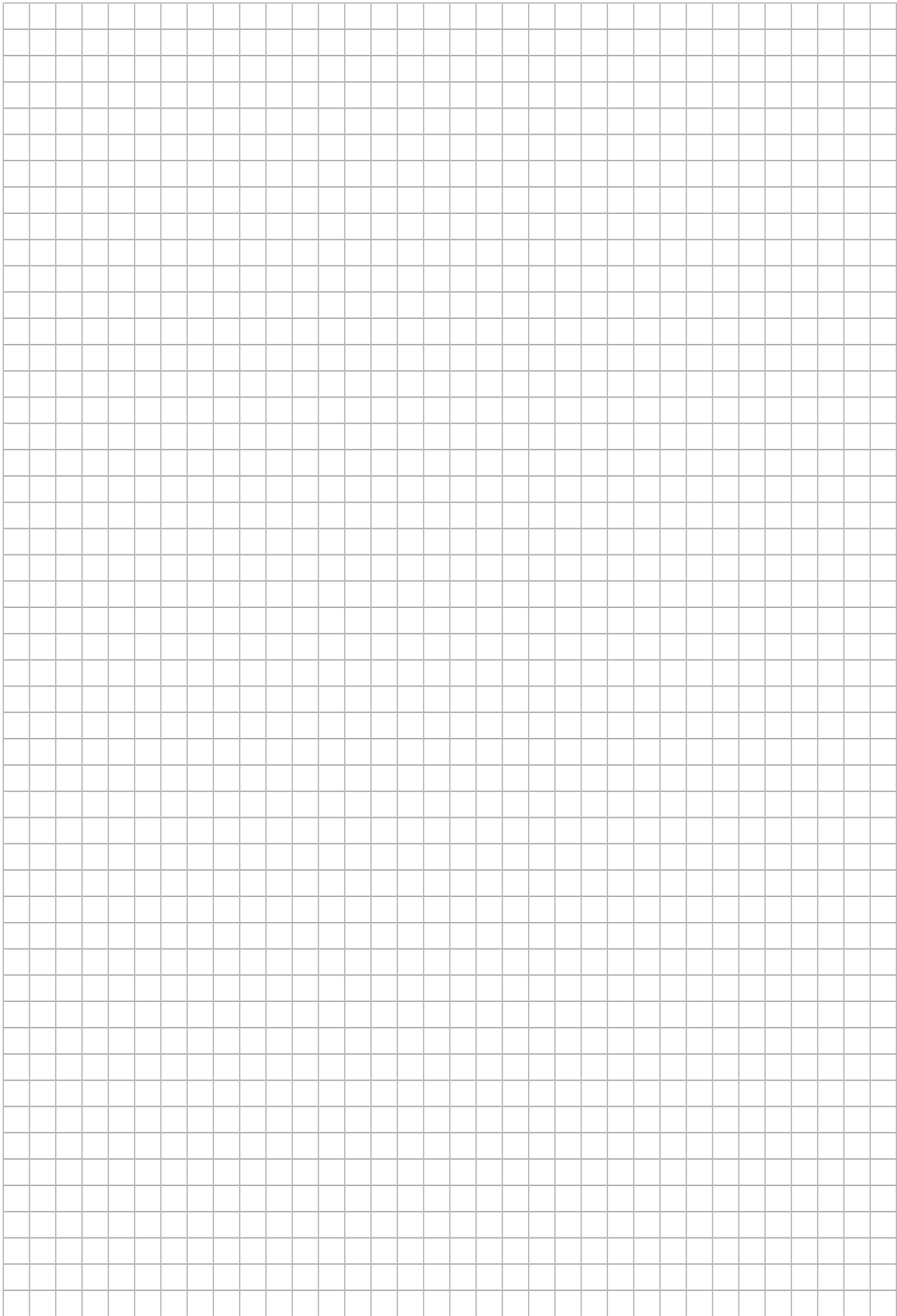
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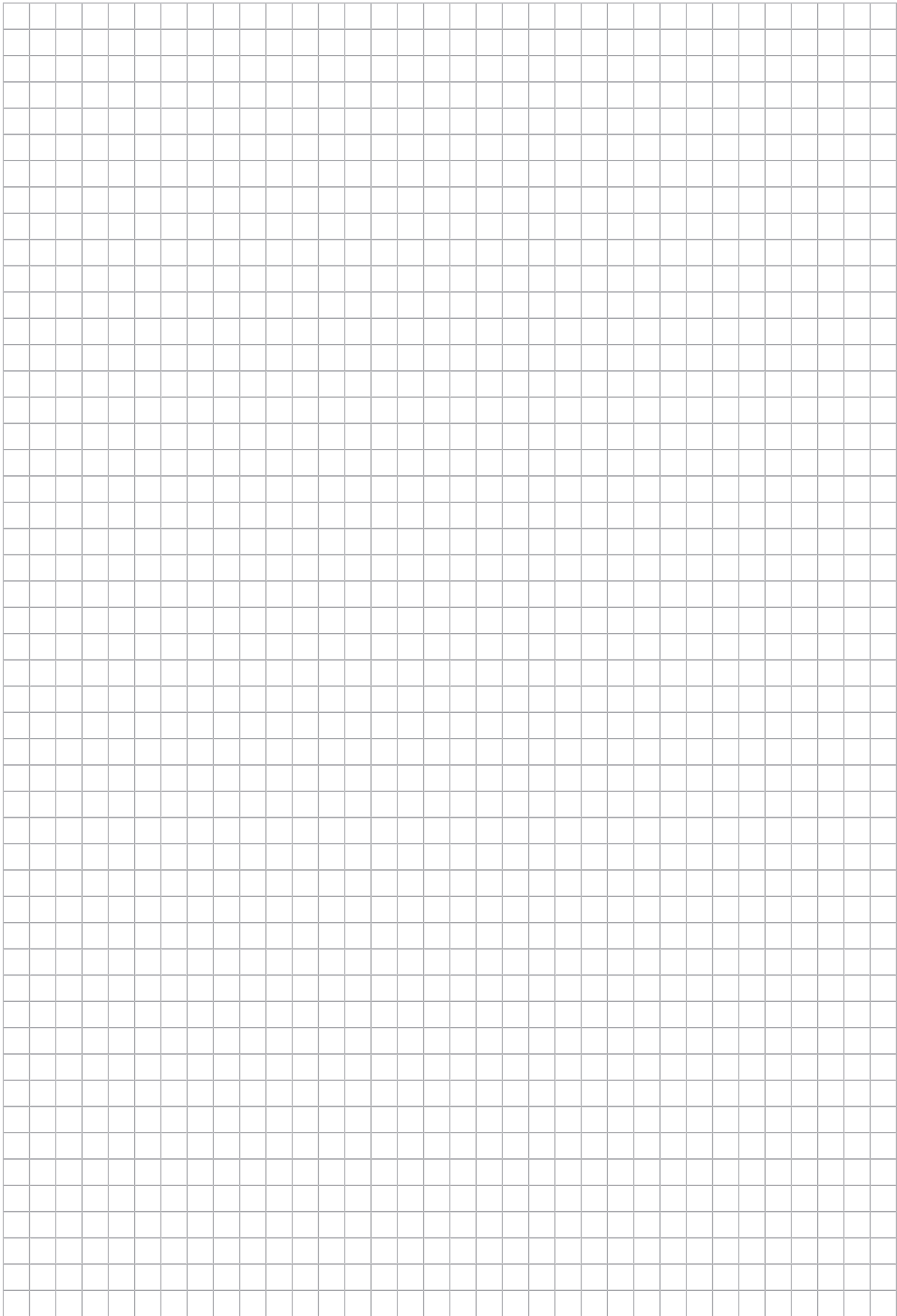
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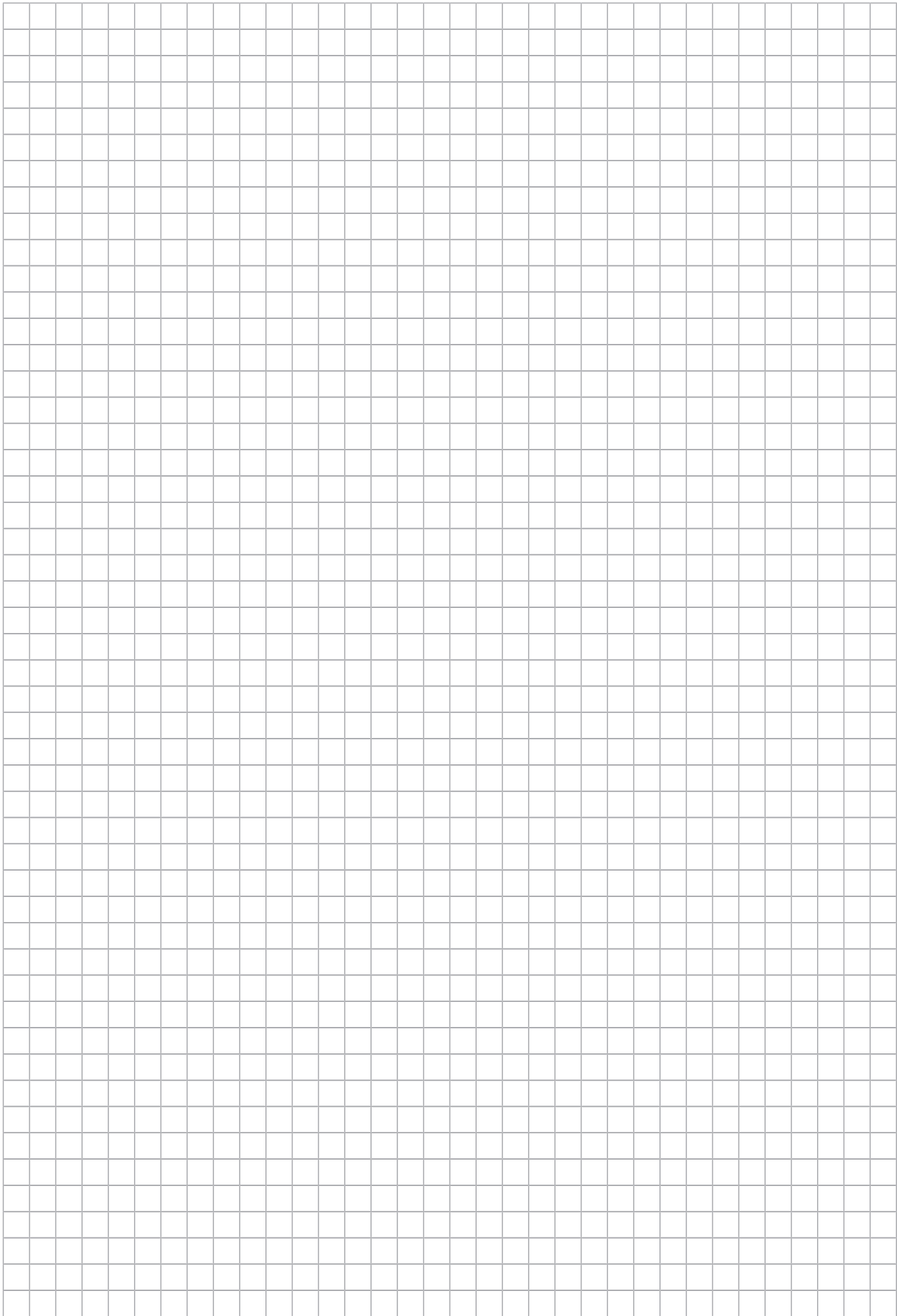
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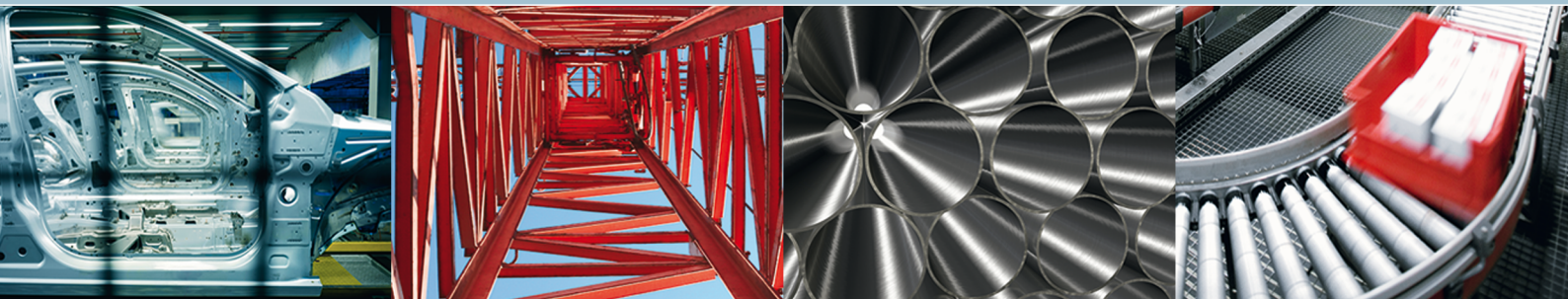
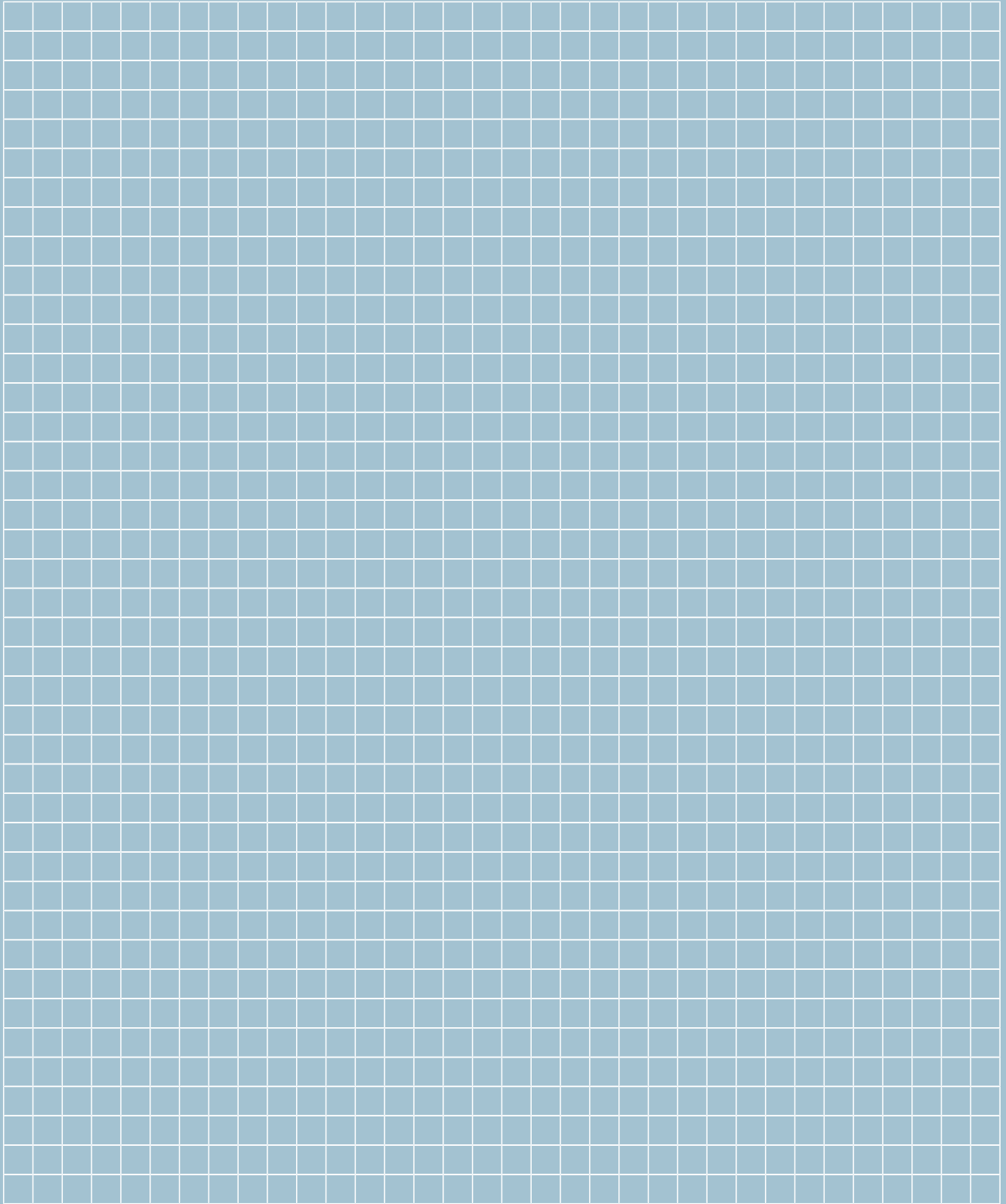
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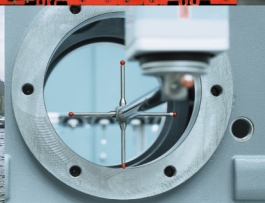












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