SEW EURODRIVE

Catalog



DI2023 Drive System for Decentralized Installation

Edition 11/2023

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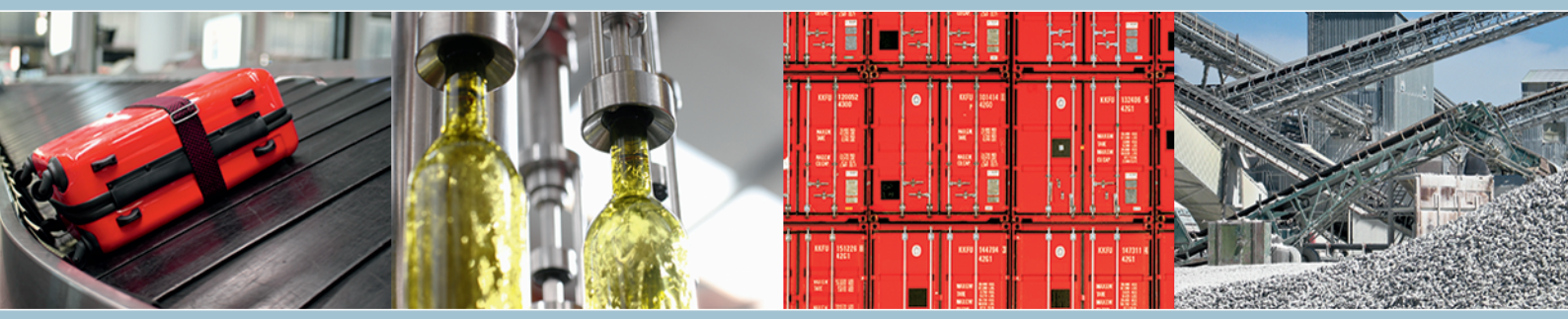


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1 Introduction

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" means you get reliable products and a safe investment.

SEW-EURODRIVE's products and services can be found in all the important industries of our era. We also demonstrate this presence with subsidiaries and production plants all over the world, as well as with our service, which we see as an integrative part of our portfolio that extends SEW-EURODRIVE's high quality standards.

1.1.2 Always the right drive solution

With the broad product range of SEW-EURODRIVE, which also includes mechatronic drive units, frequency inverters, controllers, software and communication in addition to the tried-and-tested modular system for gearmotors, it is possible to implement the perfect drive solution for every application.

Gear units and motors

Using the modular system, gearmotors can be individually assembled according to the required speed and torque ranges, the available space and the ambient conditions. Gear units and gearmotors offering a unique and finely tuned power range and the best economic prerequisites to face any drive challenge.

Motors by SEW-EURODRIVE can be mounted directly or via adapter to SEW-EURODRIVE gear units. They meet all global requirements in terms of energy efficiency and technical regulations. A wide range of options and accessories ensures high flexibility for adjusting the motor to the requirements of the user and the application.

Inverter

The proven inverter series MOVITRAC®, MOVIDRIVE® and MOVIAXIS® enhance the gearmotors, forming a combination that blends in perfectly with the existing range of SEW-EURODRIVE systems.

Modular automation system

With its brand MOVI-C®, SEW-EURODRIVE launches a new generation of drive and automation technology. MOVI-C® is the modular automation system that allows for the highest level of system and machine automation. It comprises drive technology, motion control, control technology and visualization.

MOVIDRIVE® modular is the modular application inverter for all types of applications, ranging from simple open-loop speed control to servo drives with kinematic model. MOVIDRIVE® modular can be supplemented by connecting MOVIDRIVE® system single-axis units. These possess functionalities comparable to those of axis modules, but have their own line connection. Especially in the upper power range, MOVIDRIVE® system complements the modular application inverter.

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MOVIDRIVE® modular and MOVIDRIVE® system are intended for operation on the MOVI-C® CONTROLLER, the controller from SEW-EURODRIVE. They offer a powerful clock-synchronous connection via the integrated EtherCAT®/SBus^{PLUS} communication interface. Other EtherCAT® stations from SEW-EURODRIVE or other manufacturers can be controlled and diagnosed by the MOVI-C® CONTROLLER.

The MOVISUITE® engineering software with its unique operating philosophy is above all MOVI-C® hardware and software components. MOVISUITE® was developed with a focus on systematically shortening the startup time and covers the entire engineering process, from planning to diagnostics.

Decentralized drive technology

For economical, decentralized installations, SEW-EURODRIVE offers components from decentralized drive technology, such as MOVIMOT®, the gearmotor with integrated frequency inverter, or MOVI-SWITCH®, the gearmotor with integrated switching and protection function. And with the specially developed hybrid cables, SEW-EURODRIVE implements economically functional solutions regardless of the system philosophy or scope.

The decentralized drive technology portfolio is complemented by the 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.

The smart energy management system MOVI-DPS® enhances the modular product range of SEW-EURODRIVE. With MOVI-DPS®, SEW-EURODRIVE offers the perfect combination: Conserving resources. Reducing costs.

MOVI-DPS® allows for stable power grids, no power failures, and consequently reliable system availability. MOVI-DPS® is convincing in both, mobile and stationary applications. In addition, MOVI-DPS® can be combined with other systems, such as the contactless energy transfer system MOVITRANS®, resulting in further important synergy effects.

Industrial gear units

Power, quality and sturdy design combined in one standard product: With high torque levels, industrial gear units from SEW-EURODRIVE realize major movements. Here, too, the modular principle ensures optimum adaptation of industrial gear units to a wide range of operating conditions.

Individual system solutions with MAXOLUTION®

MAXOLUTION® from SEW-EURODRIVE provides individual system solutions in all areas of system and machine automation. From electromechanical drives, controllers and communication to visualization and the contactless energy transfer system MOVITRANS® up to a comprehensive service portfolio, MAXOLUTION® offers all modules required to design customer-specific solutions for machines and systems.

MAXOLUTION® combines individual products of the proven modular system with innovative system components to form individual system solutions that perfectly match the requirements of the specific application – "powered by SEW-EURODRIVE".

Safe – flexible – effective: safetyDRIVE

Guaranteeing the safety of all employees and preventing work accidents while ensuring trouble-free production processes are demands placed on all production areas. safetyDRIVE, the comprehensive safety concept, allows you to implement your machines "safely", in accordance with the currently valid guidelines. With controllers that meet the respective requirement of the safety categories or performance levels and that monitor instead of shut down.

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All of our drive and frequency inverters provide the function that safely stops the electrical power to the motor (STO). The MOVISAFE® components complete the product range – integrated into the inverter as option cards or modular as safety modules. The decentralized MOVIFIT® and MOVIPRO® drive controllers with integrated safety functions are ready for use in decentralized installations.

The functionally safe motor options allow for implementing safety functions in safety-related applications. Safety encoders are used to implement safety functions with respect to speed, direction of rotation, standstill, and relative position. Safety brakes can implement safety functions with respect to decelerating and stopping.

1.1.3 Your ideal partner

Its global presence, extensive product portfolio and wide range of services make SEW-EURODRIVE the ideal partner for the machinery and plant construction industry when it comes to providing drive systems for demanding drive tasks in all industries and applications.

For detailed information on the entire product range of SEW-EURODRIVE, refer to our website www.sew-eurodrive.com. The website provides information about components, system solutions, services, and industries. Online Support provides access to a wide range of documents and tools such as the product configurator and various selection aids, as well as all documentation available for download in various languages.

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1.2 Documentation

1.2.1 Content of this publication

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

- Decentralized drive controllers
  - MOVIPRO® SDC, ADC
  - MOVIFIT® FDC
  - MOVIFIT® MC, SC, FC
  - Z.3, Z.6, Z.7, Z.8, Z.9 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

1.2.2 Additional documentation

The following catalogs are available from SEW-EURODRIVE in addition to this "Drive System for Decentralized Installation" catalog:

- "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

1.3 Product names and trademarks

All product names included in this documentation are trademarks or registered trademarks of the respective titleholders.

1.4 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



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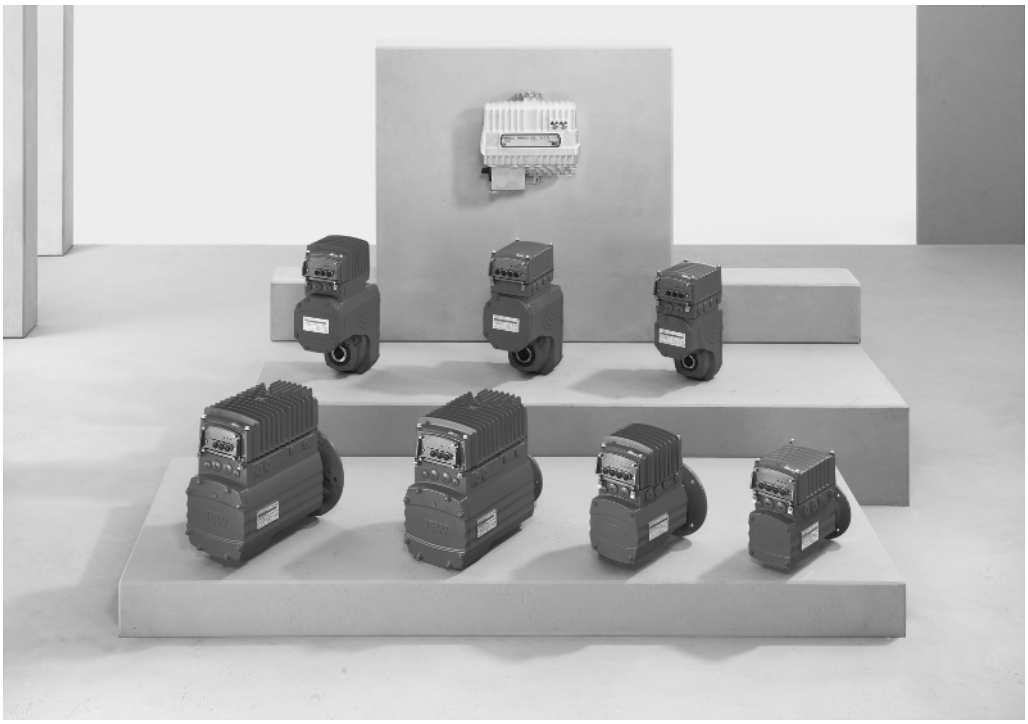
MOVIFIT®

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

Controller for controlling up to 16 MOVIGEAR® or DRC.. drive units.



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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.



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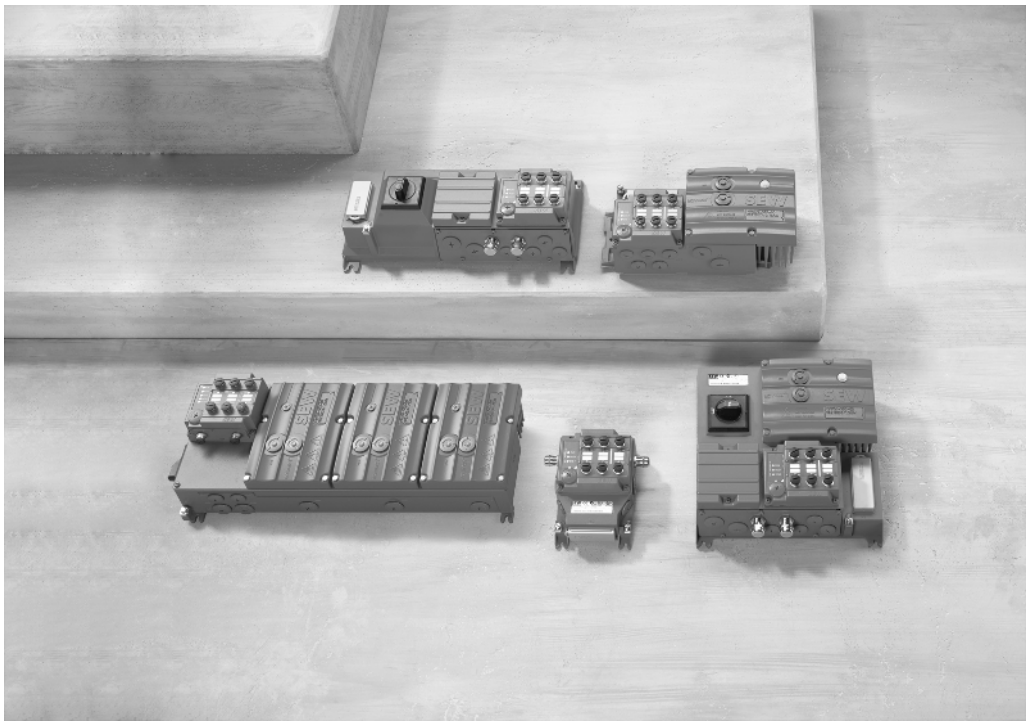
MOVIFIT® FC

Frequency inverter for controlling AC motors



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.



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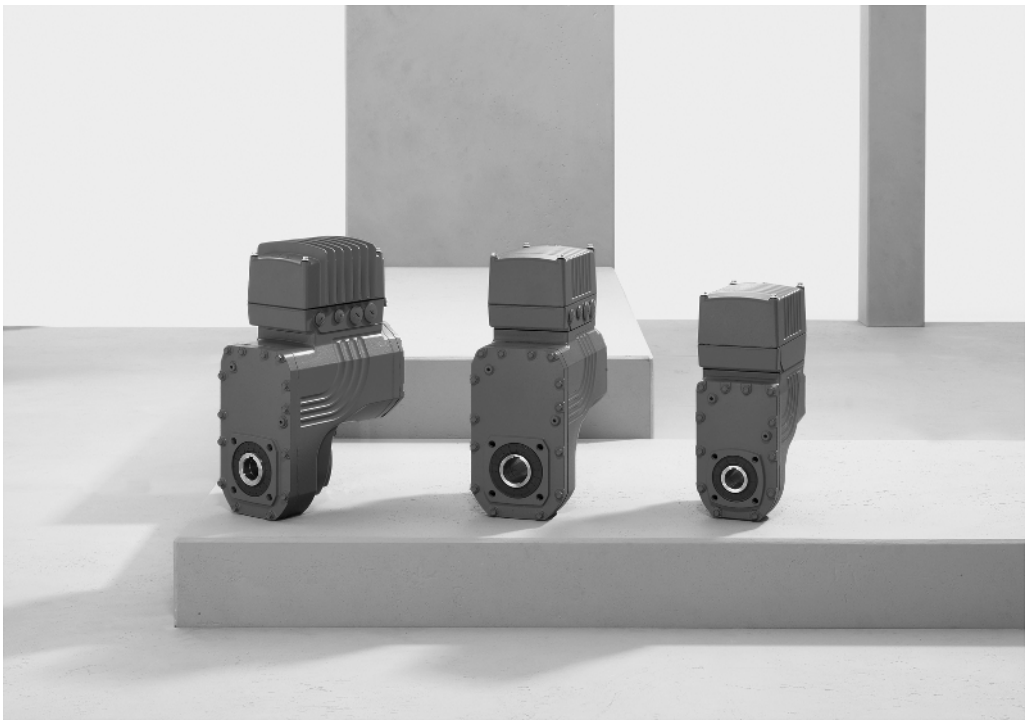
2.1.2 Drives

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.



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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.

The DRC.. motor supplements the product portfolio of mechatronic drive systems with 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 via a flange and a pinion shaft.



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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.



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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.



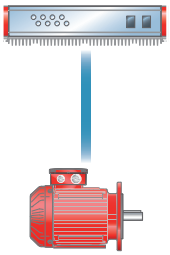
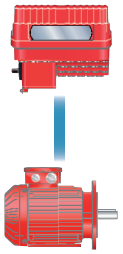
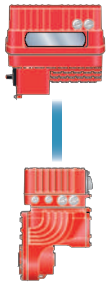
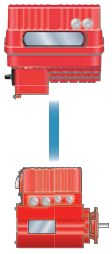
The optional field mounting plate allows the MOVI-SWITCH® 2S control section to be mounted close to the motor.



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2.2 Component selection

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

Controllers	MOVIPRO®	MOVIFIT® FC, MOVIFIT® SC	MOVIFIT® FDC	MOVIFIT® FDC	Field distributor, MOVIFIT® MC
					
Drive / **Application**	**Gearmotor**	**Gearmotor**	**MOVIGEAR®**	**DRC..**	**MOVIMOT® gearmotor**
			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	●	○	● / ●	● / ●	–
Process agitator	–	○	● / ●	● / ●	○
Requirements					
Positioning with encoder	●	○	● / ●	● / ●	–
Functional safety	●	●	● / ●	● / ●	– / ○
Wet area	–	●	● / ●	○ / ○	○
Local application modules	●	●	● / ●	● / ●	–
Further information	(→ 🖹 22)	(→ 🖹 168)	(→ 🖹 117)	(→ 🖹 117)	(→ 🖹 287) (→ 🖹 168)

○ Components suitable ● Components recommendable

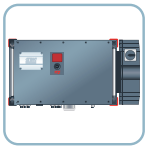
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2.3 Flexible use of decentralized components

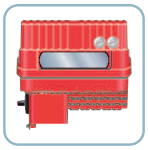
2.3.1 Automotive industry

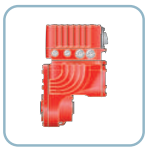
The flexibility of decentralized components from SEW-EURODRIVE helps you to make the most of your car manufacturing plant.

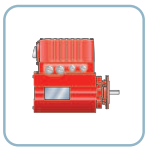
Positioning control
Lifting application
Transfer systems

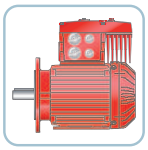


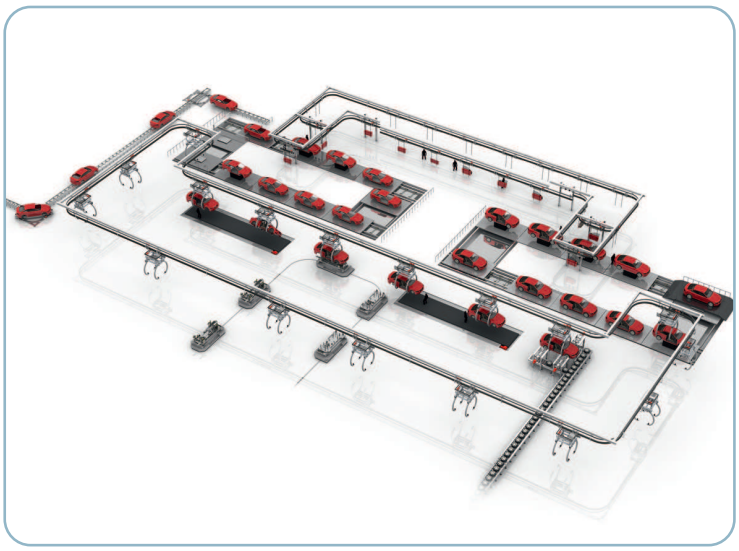
Horizontal materials handling technology
Lifting applications without encoder

















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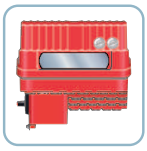
2.3.2 Intralogistics

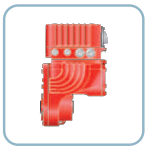
Benefit from the perfect interplay between decentralized components from SEW-EURODRIVE that ensures smooth intralogistics processes.

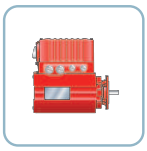
Positioning control
Lifting application
Transfer systems

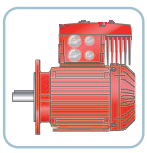


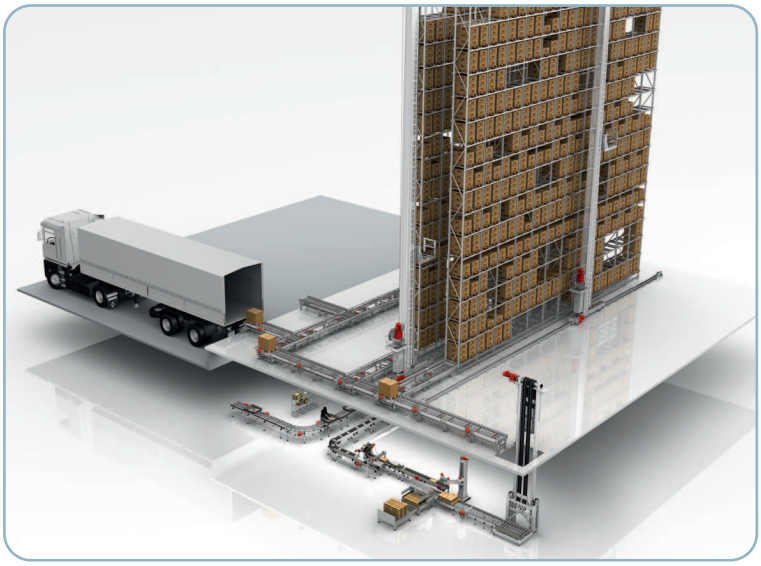
Horizontal materials handling technology
Lifting applications without encoder













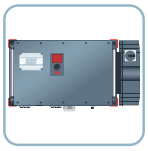


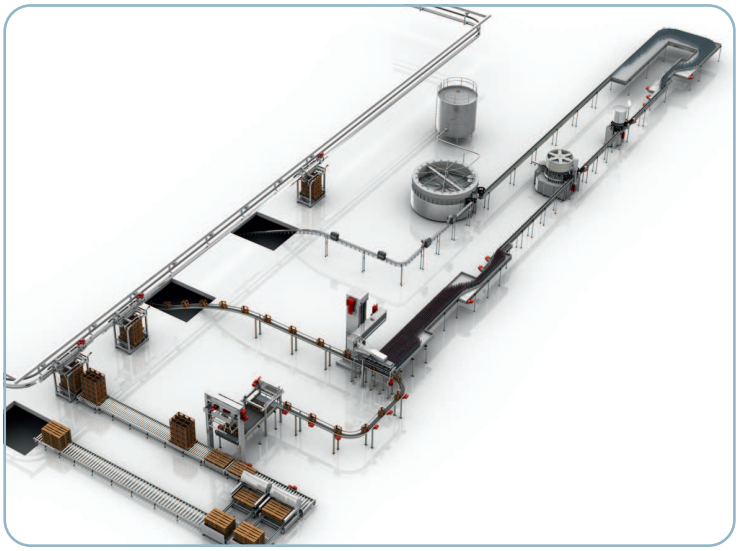
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2.3.3 Food industry

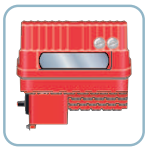
Decentralized components from SEW-EURODRIVE are also the right choice for the food and beverage industry.

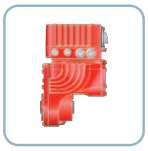
Positioning control
Lifting application
Transfer systems

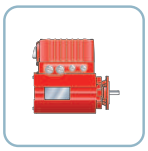


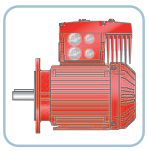


Pallet conveyor
Bottle transport
Crate transport

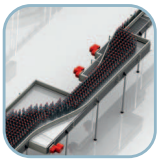














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3 MOVIPRO® SDC/ADC

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.



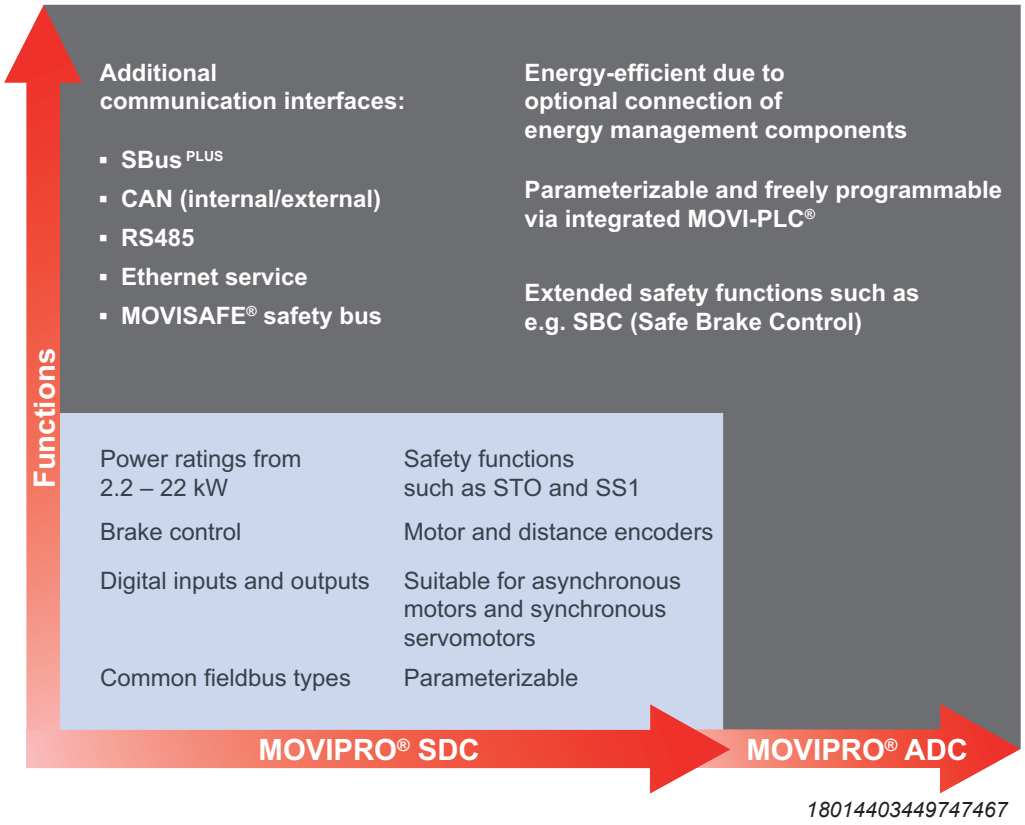
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3.2 Overview of functions of MOVIPRO® SDC/ADC

MOVIPRO® SDC offers various basic functions, which make it an ideal solution for simple applications. MOVIPRO® ADC builds on these basic functions, and also offers more specialized functions for more complex applications.

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

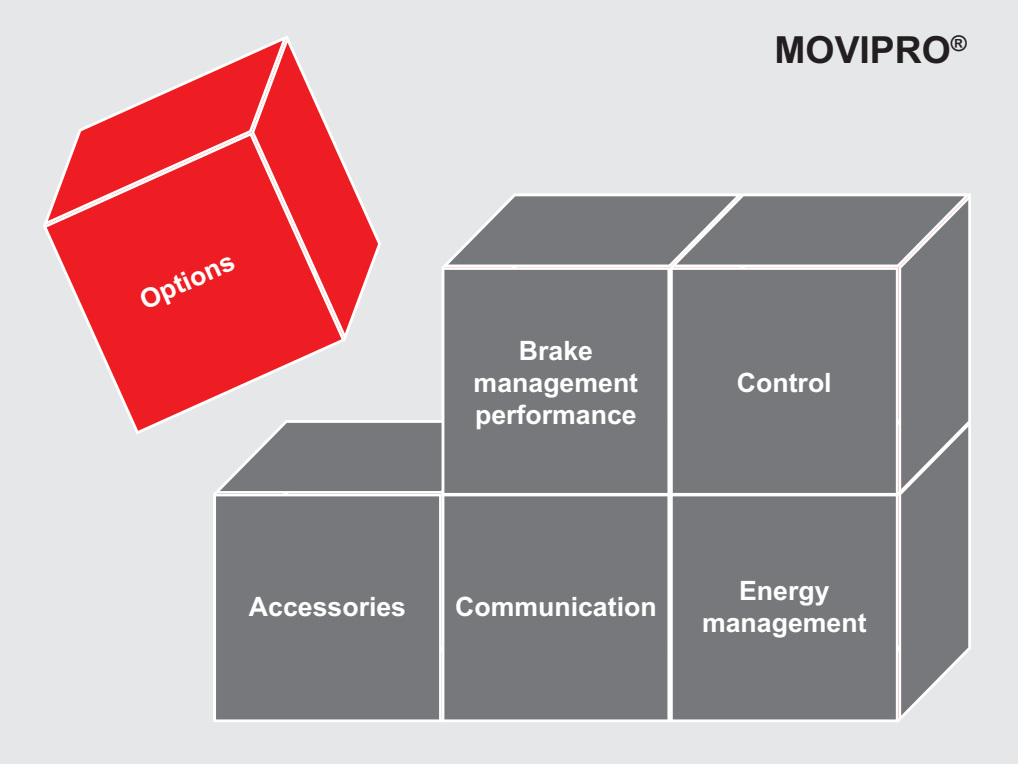


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3.3 Product philosophy

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.



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

3.4 General device 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 kW, 7.5 kW, 11 kW, 15 kW, and 22 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 device 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

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- Can communicate via the following fieldbus types:
  - PROFINET IO
  - EtherNet/IP™
  - Modbus TCP
  - PROFIBUS DP-V1
  - DeviceNet™
- STO, SS1 safety functions in accordance with EN 61800-5-2
- Performance level d in accordance with EN ISO 13849-1
- PROFIsafe device

3.5 Additional device 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)
  - MOVISAFE® safety bus interface
- Safe brake control (SBC in accordance with IEC 61800-5-2)
- Energy management interface for connecting MOVI-DPS energy or power interface EKK
- Available with device power of 11 kW and 15 kW with regenerative power supply R15

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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 a MOVIPRO® as standard:

- **STO** (Safe Torque Off in accordance with 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 in accordance with EN 60204-1:2006, stop category 0.

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

- **SS1(c)** (Safe Stop 1, function variant c in accordance with 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 in accordance with 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® with an optional, safety-related brake module.

- **SBC** (Safe Brake Control in accordance with EN 61800-5-2:2007)

  If the SBC function is activated, the frequency inverter de-energizes the connected brake. This safety function corresponds to an uncontrolled stop in accordance with EN 60204-1:2006, stop category 0.

  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.

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3.7 Process data exchange

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

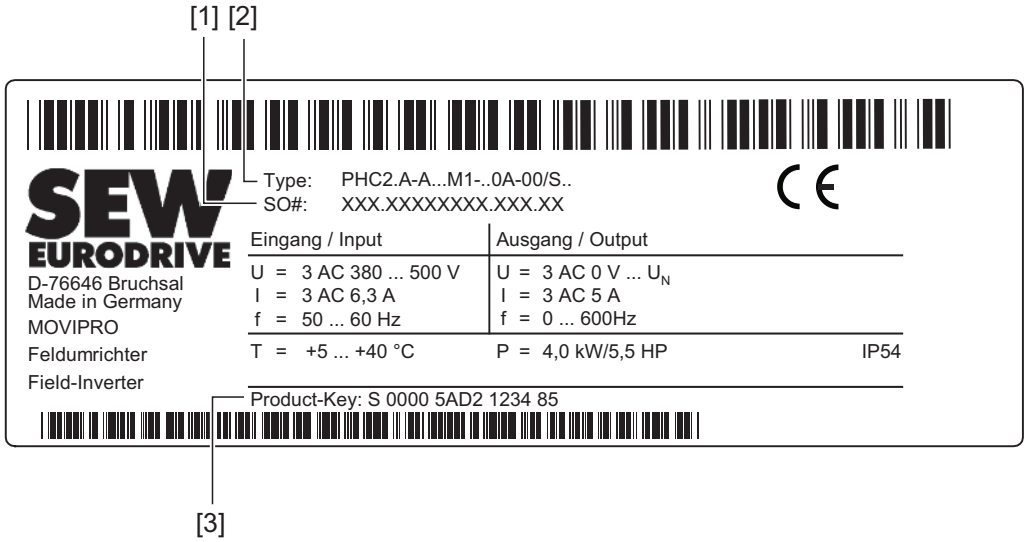
Communication between the PLC and MOVIPRO® units is based on process data according to the uniform MOVILINK® unit profile from SEW-EURODRIVE. This means it is largely compatible with the existing decentralized components from SEW-EURODRIVE.

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



15689688715

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

Type code "Type"

The main nameplate lists some technical data, the 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 production data of the MOVIPRO®.

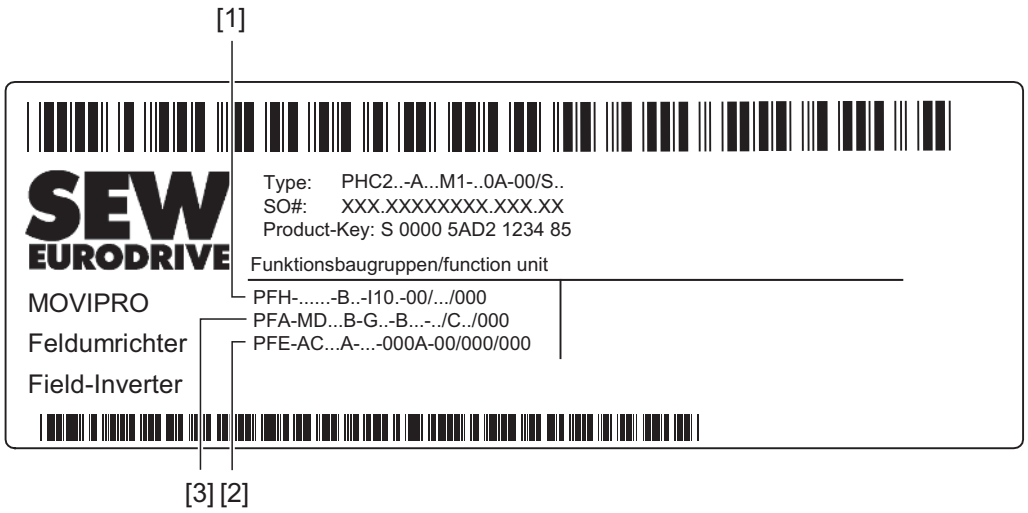
Product key

The product key encodes all the configuration data of the MOVIPRO®. It contains the data of the main nameplate and the function unit nameplate. With the product key, it is very easy, for example, 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.

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Function unit nameplate



15689686283

[1] Communication and control unit
[2] Power section
[3] Power 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 the encoder type or the brake voltage. These features uniquely identify the MOVIPRO® device type.

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3.9 Type designation and function units of MOVIPRO® ADC

3.9.1 Type designation

PHC2.A	MOVIPRO® ADC drive and application controller	
–		
A	Power supply: Three-phase current	
...	Rated input power:	
	022	2.2 kW
	040	4 kW
	075	7.5 kW
	110	11 kW
	150	15 kW
	220	22 kW
M1	1 integrated power section	
–		
..	Fieldbus:	
	P1	PROFIBUS DP-V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™, Modbus TCP
	Z1	SBus
..	Control type:	
	1A	ADC
	4A	Slave gateway
–		
00/...	Device option:	
	00/S11	PROFIsafe option S11
	00/S11B	PROFIsafe option S11B

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3.9.2 Type designations of the function units

Power section

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
	220B	22 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
/		

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

Communication and control unit

PFH	Control/communication	
–		
..	Fieldbus:	
	P1	PROFIBUS DP-V1
	D1	DeviceNet™
	E2	PROFINET IO
	E3	EtherNet/IP™/Modbus TCP
	Z1	SBus
..	Control type:	
	1A	ADC
	4A	Slave gateway
.	Storage medium:	
	H	SD memory card OMH for parameterizable and programmable functions
	D	DIP switch
.	Technology level:	
	0	OMH41B-T0 (with storage medium H) Slave without SD memory card (with storage medium D)
	1	OMH41B-T1
	2	OMH41B-T2
	3	OMH41B-T3
	4	OMH41B-T4
–		
B..	Fieldbus interface:	
	B11	PROFIBUS, bus module 2 × M12
	B12	DeviceNet™, bus module 2 × M12
	B13	SBus, 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	

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..	Communication package:	
	00	Without communication package
	01	SBus^{PLUS} interface CAN interface – external (electrically isolated) RS485 interface – external (electrically isolated)
	02	SBus^{PLUS} interface CAN interface – external (electrically isolated) 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 (electrically isolated)
	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 (electrically isolated) CAN interface – system bus (with DC 24 V)
	11	MOVISAFE® safety bus interface RS485 interface – external (electrically isolated) CAN interface – system bus (with DC 24 V)
	12	Ethernet engineering interface CAN interface – external (electrically isolated) RS485 interface – external (electrically isolated)
–		
00/.../000	Option:	
	00/000/000	Without option 1
	00/S11/000	PROFIsafe option S11
	00/S1B/000	PROFIsafe Option S11B

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Energy supply

PFE	Energy	
-		
AC...A	3-phase alternating current with the following maximum input power:	
	080	8 kW for 2.2 kW, 4 kW, 7.5 kW devices
	160	16 kW for 11 kW, 15 kW devices
	300	30 kW for 22 kW devices only
-		
...	Supply connection:	
	001	Connection cable 2.2 kW, 4.0 kW, 7.5 kW
	002	Connection cable 11 kW, 15 kW, 22 kW
	101	Interface box 2.2 kW, 4.0 kW, 7.5 kW
	102	Interface box 11 kW, 15 kW, 22 kW
-		
000A	Without extra-low voltage supply for external components	
-		
00/...	Energy management:	
	00/000	Without energy management
	00/ R15	Regenerative power supply module
	00/ E42	Connection for external energy management components
000	Without option	

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3.10 Type designation and function units of MOVIPRO® SDC

3.10.1 Type designation

PHC2.A	Drive and positioning control MOVIPRO® SDC	
–		
A	Power supply: Three-phase current	
...	Rated input power:	
	022	2.2 kW
	040	4 kW
	075	7.5 kW
	110	11 kW
	150	15 kW
	220	22 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/...	Device option:	
	00/S11	PROFIsafe option S11
	00/S11B	PROFIsafe option S11B

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3.10.2 Type designations of the function units

Power section

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
	220B	22 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

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Communication and control unit

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/S11/000	PROFIsafe option S11
	00/S1B/000	PROFIsafe option S11B

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Energy supply

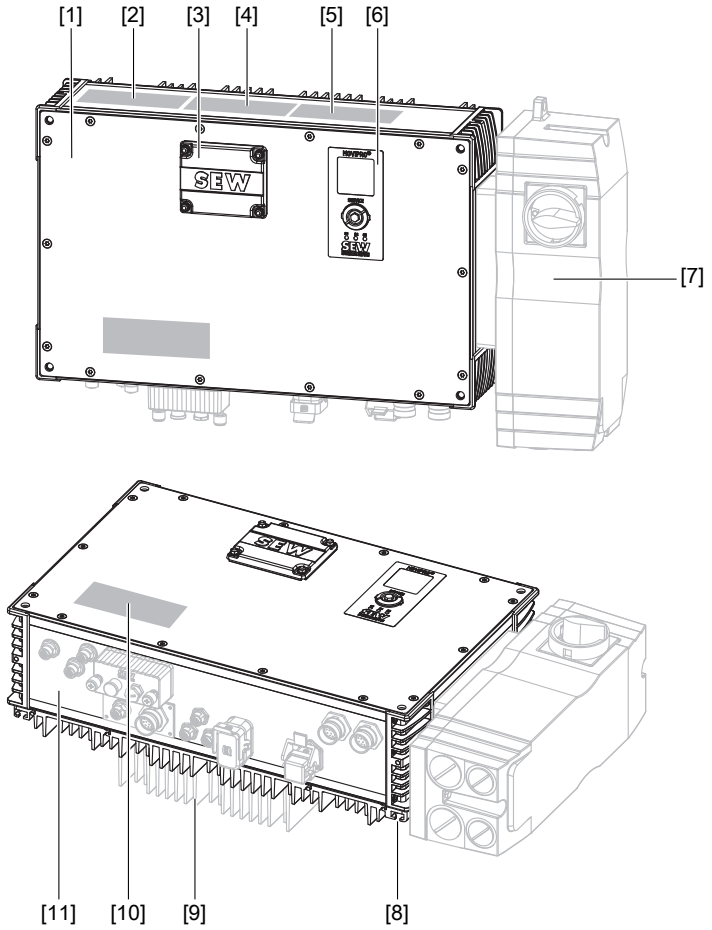
PFE	Energy	
-		
AC...A	3-phase alternating current with the following maximum input power:	
	080	8 kW for 2.2 kW, 4 kW, 7.5 kW devices
	160	16 kW for 11 kW, 15 kW devices
	300	30 kW for 22 kW devices only
-		
...	Supply connection	
	001	Connection cable 2.2 kW, 4.0 kW, 7.5 kW
	002	Connection cable 11 kW, 15 kW, 22 kW
	101	Interface box 2.2 kW, 4.0 kW, 7.5 kW
	102	Interface box 11 kW, 15 kW, 22 kW
-		
000A	Without extra-low voltage supply for external components	
-		
00/000/000	Without option	

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3.11 Unit structure of MOVIPRO® SDC/ADC

3.11.1 2.2 kW, 4 kW, 7.5 kW

The following figure provides an example of an overview of the most important device components and the position of the labels on the device:



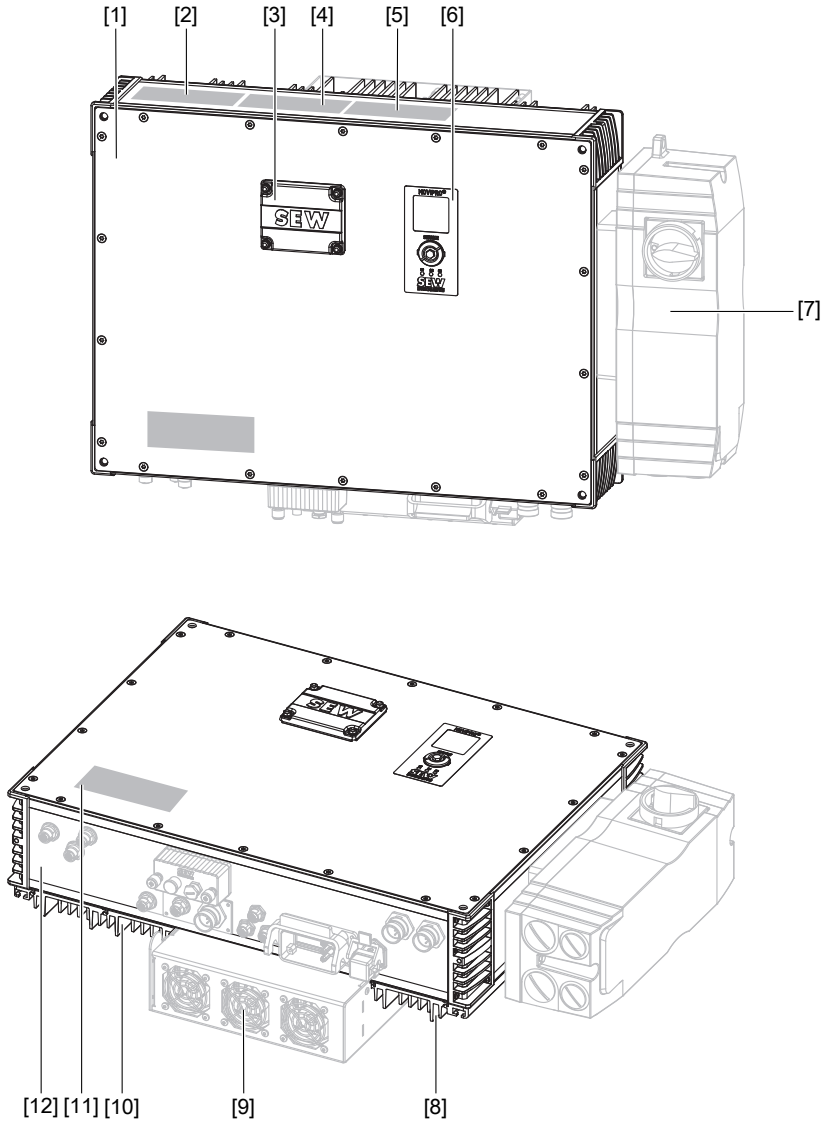
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[1] Device cover
[2] Main nameplate
[3] Memory card cover
[4] Nameplate of the function units
[5] Service information by SEW-EURODRIVE
[6] Service unit
[7] Interface box
[8] T-slot profile
[9] Cooling fins
[10] Connection block label
[11] Connection block

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3.11.2 11 kW, 15 kW, 22 kW

The following figure provides an example of an overview of the most important device components and the position of the labels on the device:

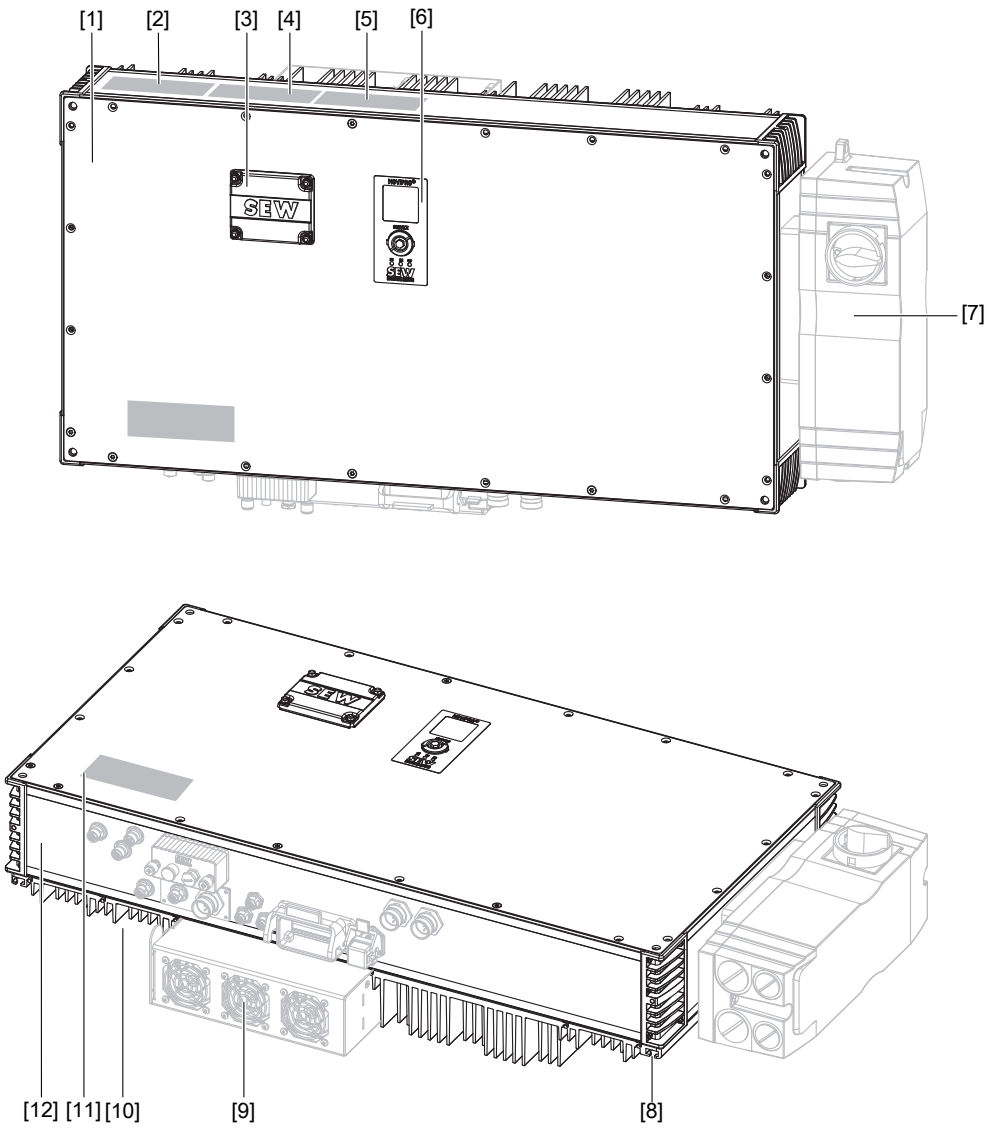


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[1] Device cover
[2] Main nameplate
[3] Memory card cover
[4] Nameplate of the function units
[5] Service information by SEW-EURODRIVE
[6] Service unit
[7] Interface box
[8] T-slot profile
[9] Fan assembly (optional for 11 kW, mandatory for 15 kW and 22 kW)
[10] Cooling fins
[11] Connection block label
[12] Connection block (connection depends on the device design)

11 kW, 15 kW with R15 regenerative power supply module

The following figure provides an example of an overview of the most important device components and the position of the labels on the device:



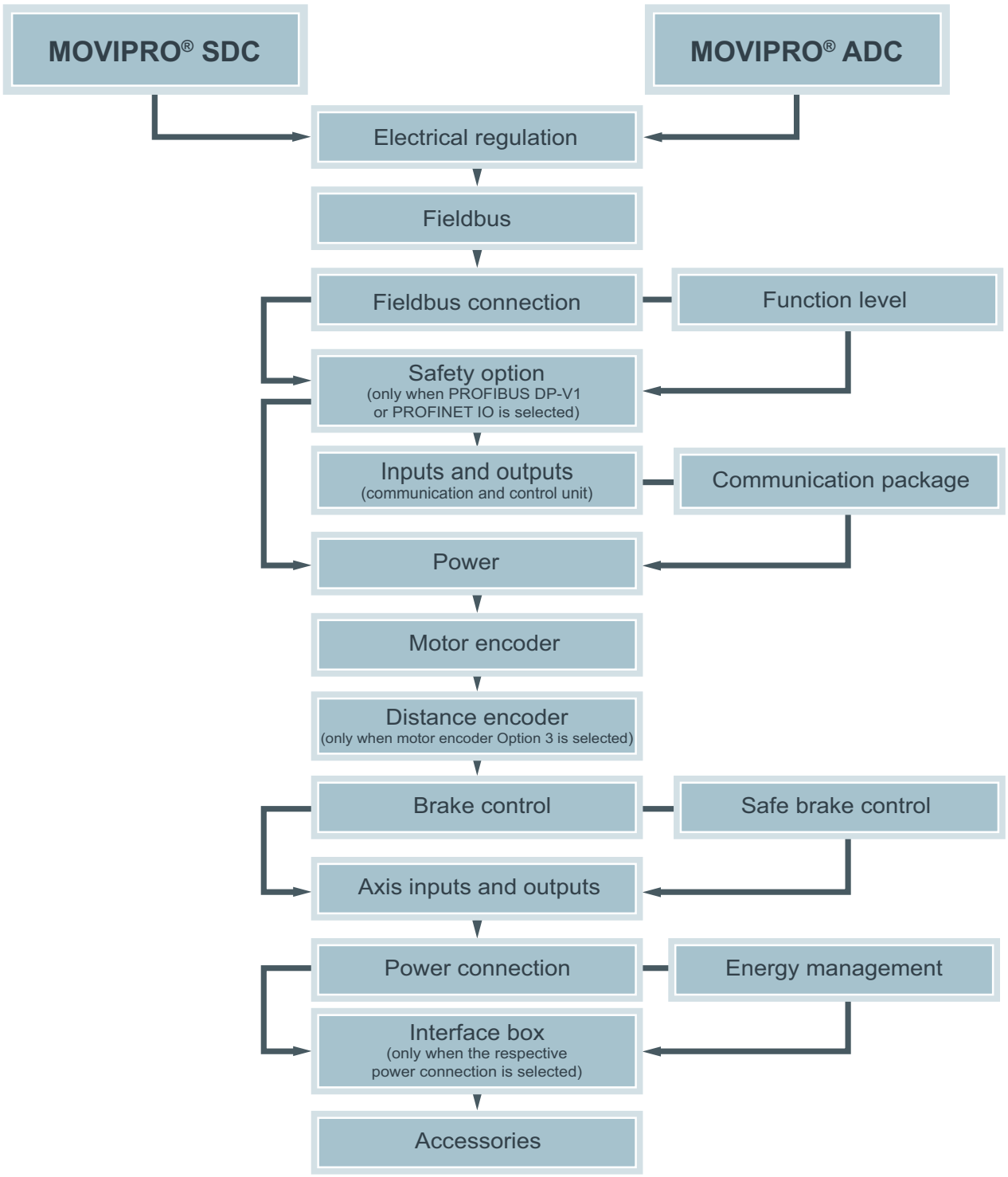
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[1] Device cover
[2] Main nameplate
[3] Memory card cover
[4] Nameplate of the function units
[5] Service information by SEW-EURODRIVE
[6] Service unit
[7] Interface box (optional)
[8] T-slot profile
[9] Fan assembly
[10] Cooling fins
[11] Connection block label
[12] Connection block (connection depends on the device design)

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3.12 Selecting the right MOVIPRO® for your drive solution

An overview of the necessary configuration steps is provided below to help you select the right device for you:



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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 chooses 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 various fieldbus types for the MOVIPRO®:

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

3.12.4 Fieldbus connections

MOVIPRO® offers the following connection types depending on the selected 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
SBus	DIP module SBus slave with 2 × M12 connections

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3.12.5 Function level (for MOVIPRO® ADC only)

With the MOVIPRO® ADC, the SD memory cards OMH_T0 – OMH_T4 can be selected, according to the required functions.

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

Parameterizing

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

Programming

A user program for more complex automated motion sequences can be programmed for your MOVIPRO® ADC. The programming software PLC Editor offers you optimal support.

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

The following table gives you a sample overview of the range of functions:

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

INFORMATION

Special case of devices of the type SBus slave gateway (PHC...Z14A): These devices do not contain a programmable or configurable control unit (CCU/MOVI-PLC®) and so cannot be parameterized or programmed in an applicative way. The CCU/MOVI-PLC® application must be implemented in the master. IPOS application modules can also be used in SBus slave devices.

3.12.6 Safety option

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

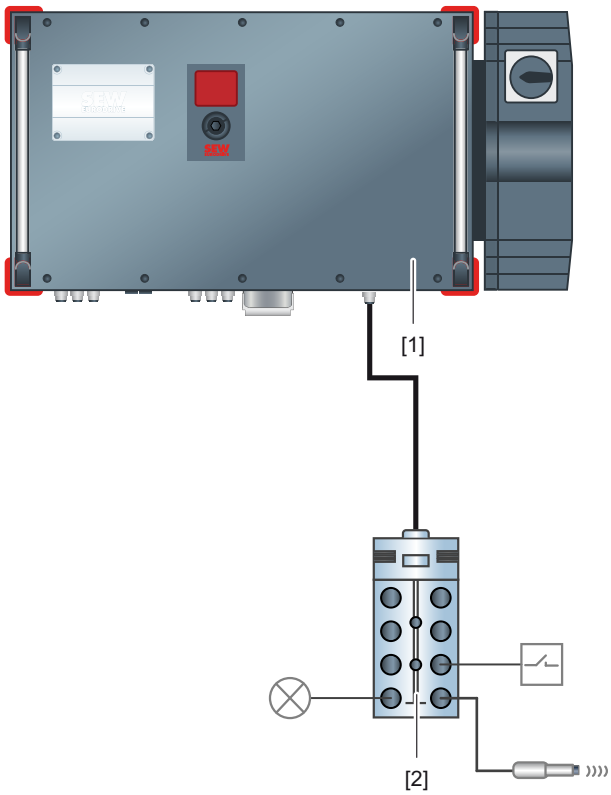
The PROFIsafe option S11 lets you control the STO or STO with SBC safety functions via PROFIsafe, depending on the device configuration.

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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:



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[1] MOVIPRO®

[2] Sensor/actuator box with M23 connector and M12 connections, e.g. for:

- Switch
- Inductive sensors
- Light barriers
- Indicator lamps, etc.

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3.12.8 Communication packages (for MOVIPRO® ADC only)

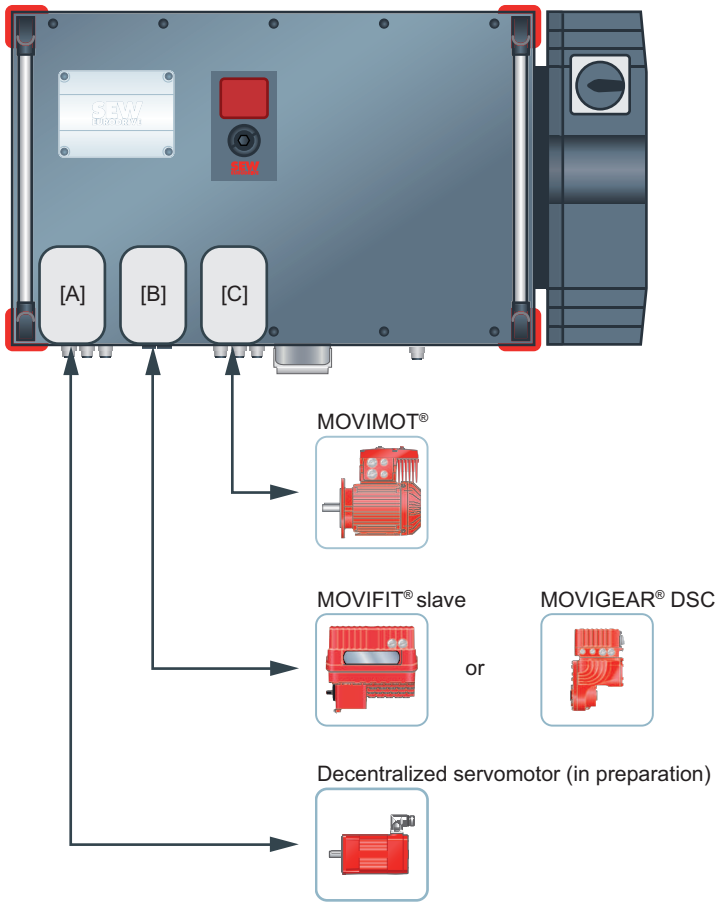
For communication with external auxiliary axes, such as MOVIFIT® or MOVIGEAR®, you can select additional communication packages for MOVIPRO® ADC.

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)

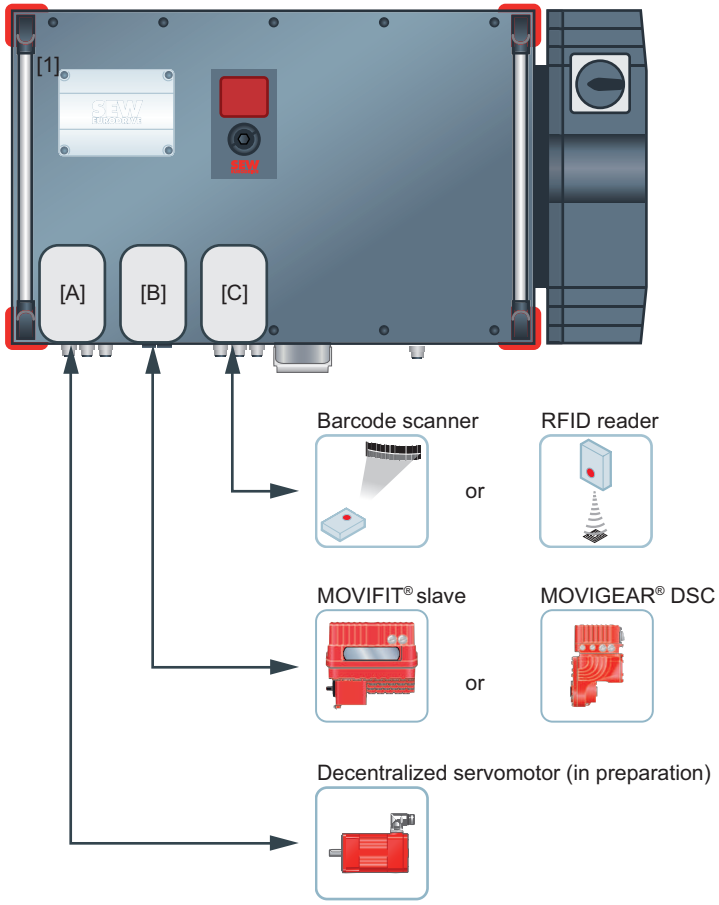
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Communication package 2

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)

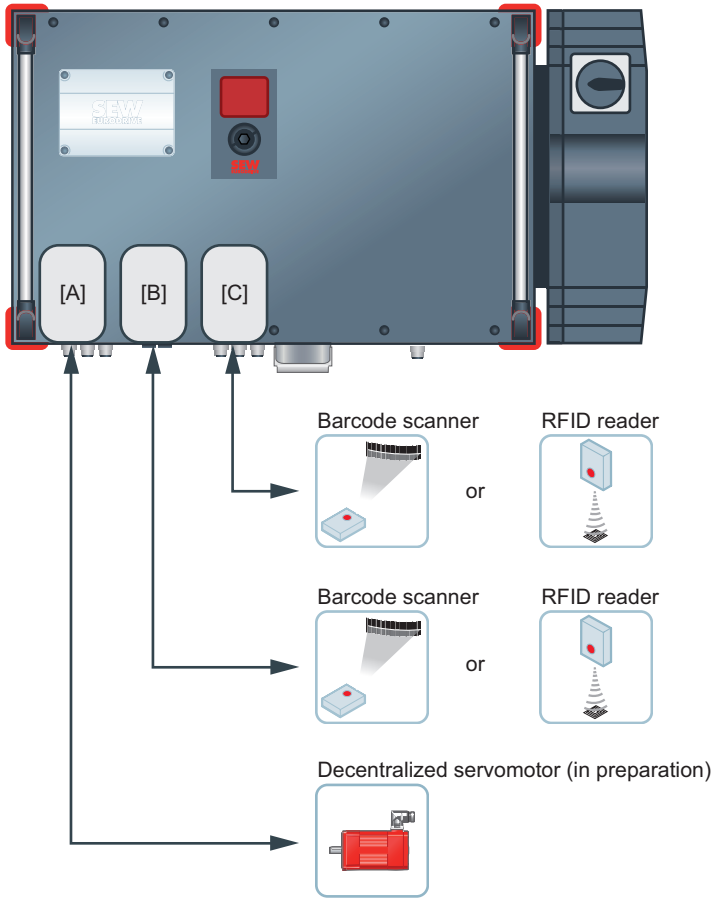
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Communication package 3

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:



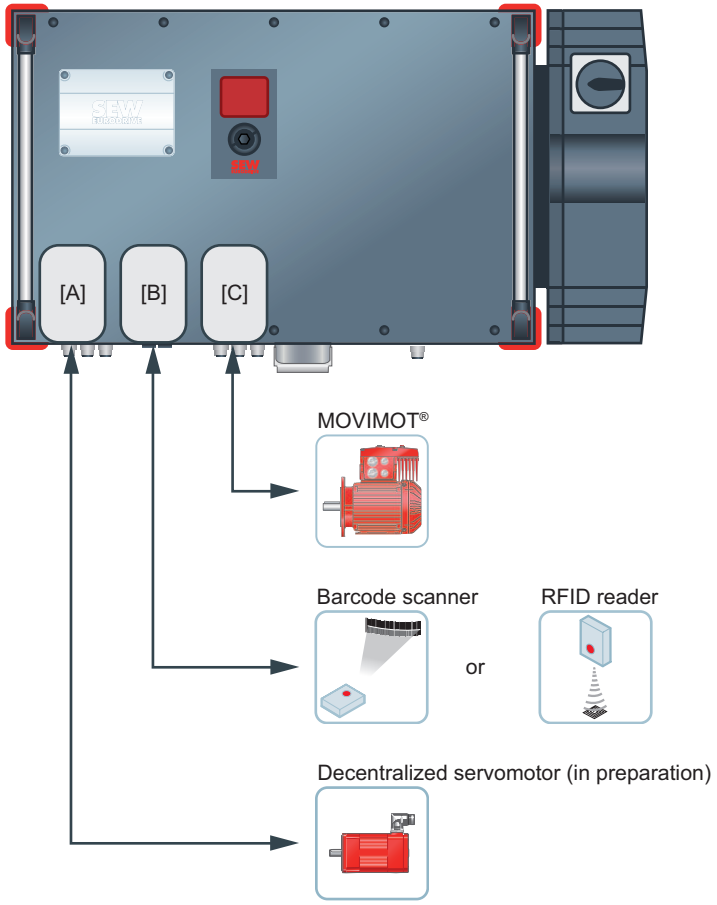
[A] SBus^{PLUS} interface
[B] CAN interface (with DC 24 V)
[C] RS485 interface (with DC 24 V)

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)

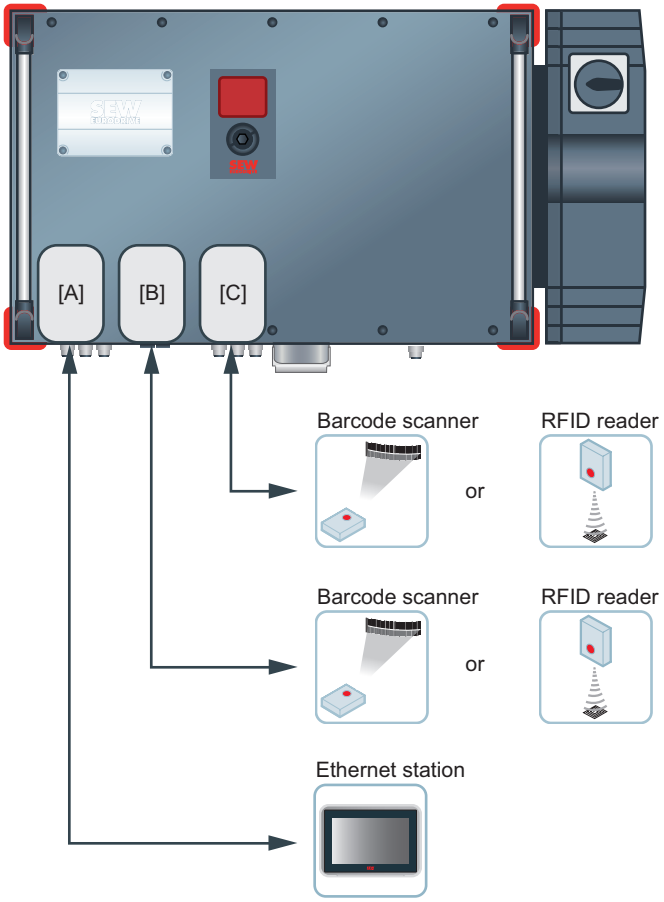
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Communication package 6

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)

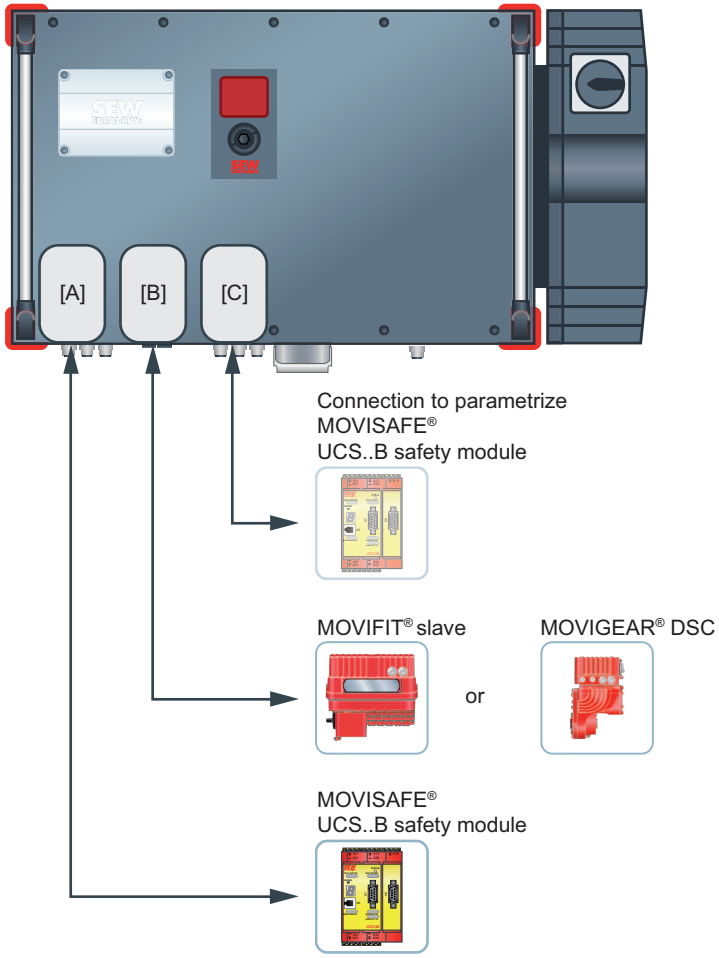
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Communication package 10

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)

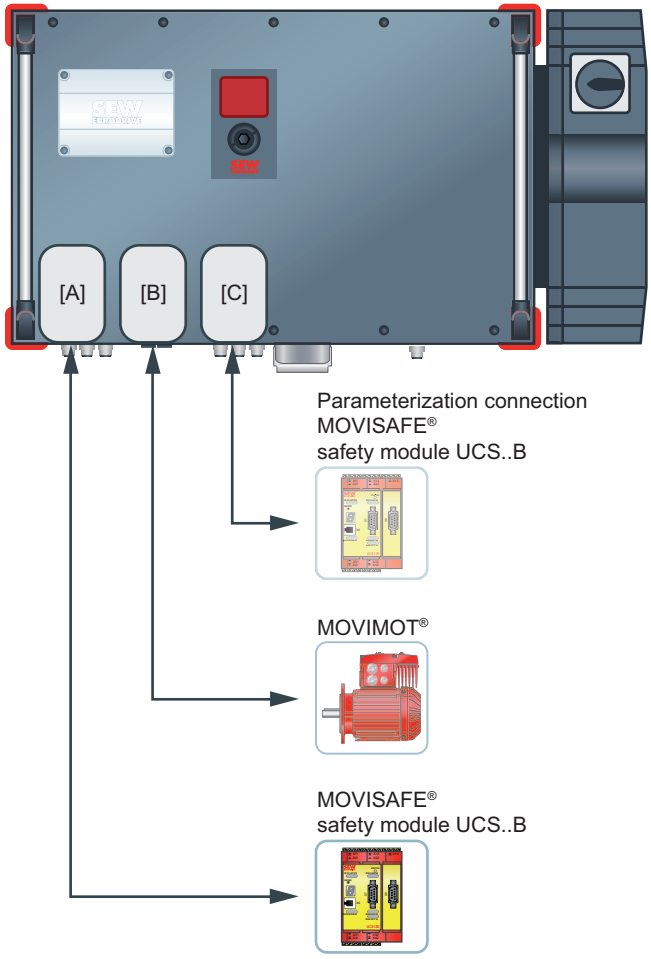
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Communication package 11

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)

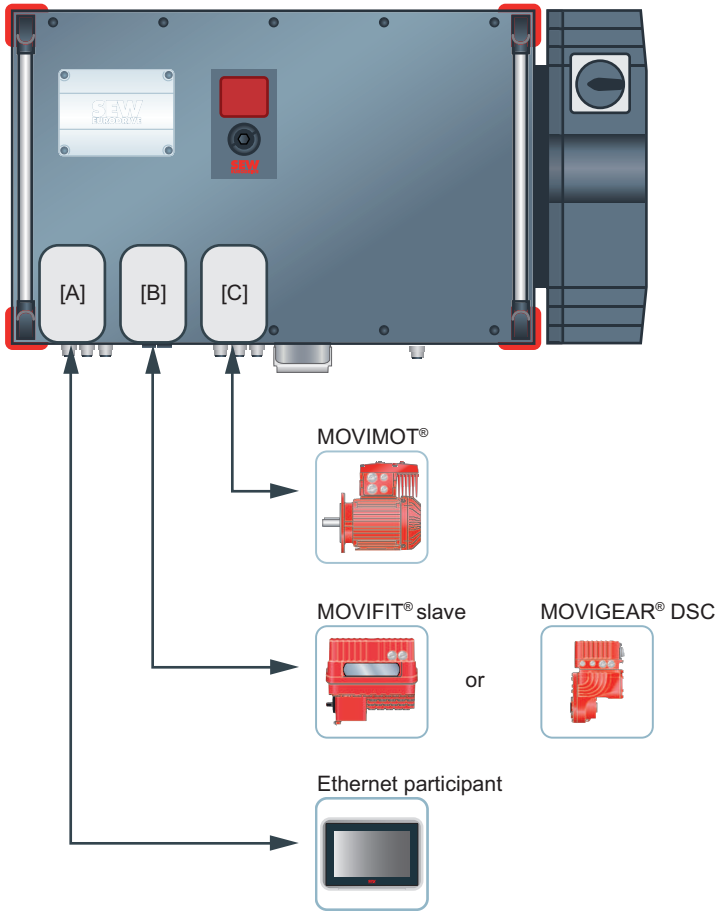
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Communication package 12

The communication package contains the following additional interfaces:

Interfaces	
[A]	Ethernet engineering interface (without DC 24 V)
[B]	CAN interface – external (electrically isolated)
[C]	RS485 interface (galvanically isolated)

The following figure shows an example of the connection options:



24232395787

[A] Ethernet engineering interface (without DC 24 V)
[B] CAN interface – external (electrically isolated)
[C] RS485 interface (galvanically isolated)

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3.12.9 Power rating

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

- 2.2 kW
- 4 kW
- 7.5 kW
- 11 kW
- 15 kW
- 22 kW

3.12.10 Motor encoder

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

INFORMATION

The selection of a distance encoder is shown in the configurator only if "Sin/cos", "TTL", "HTL", "HIPERFACE®" or "RS422" was selected for the motor encoder. If "None" or "Resolver" is selected, you cannot configure a distance encoder.

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 supply and control of the SEW-EURODRIVE disk brakes. Only connect approved SEW-EURODRIVE disk brakes to the device.

Brake voltages	Function unit
DC 24 V	PFA-MD...B-G..-B**G02**-../C../000
AC 230 V	PFA-MD...B-G..-B**G23**-../C../000
AC 400 V	PFA-MD...B-G..-B**G40**-../C../000
AC 460 V	PFA-MD...B-G..-B**G46**-../C../000

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Safety-related brake module (MOVIPRO® ADC only)

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

Brake voltages	Function unit
AC 230 V	PFA-MD...B-G..-B**S23**-../C../000
AC 400 V	PFA-MD...B-G..-B**S40**-../C../000
AC 460 V	PFA-MD...B-G..-B**S46**-../C../000

INFORMATION

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

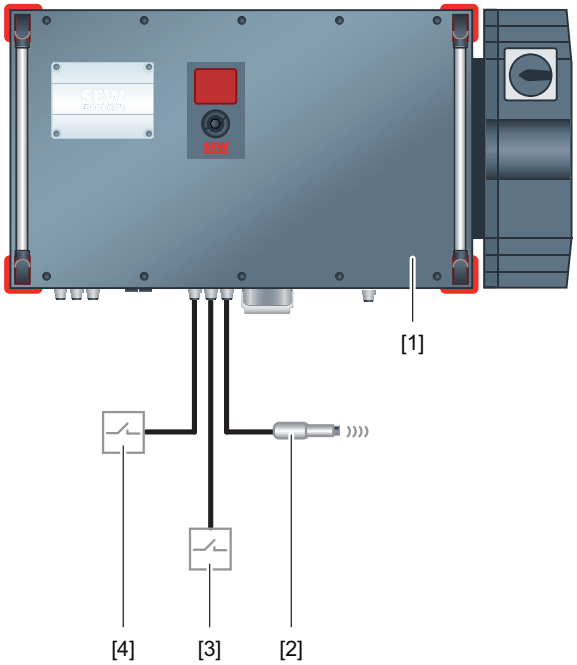
3.12.13 Axis inputs (power section)

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

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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 feedback
- 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 excess energy or feed it back to the supply system.

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

- Energy management interface (4.0 kW or higher)
- Regenerative power supply R15 (11 kW and 15 kW)

Energy management interface (4.0 kW or higher)

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

Benefits

- Decentralized energy storage
- Decentralized energy supply
- Energy optimization of applications and systems
- Reduction of overall operation costs
- Reduction of costs for supply system infrastructure
- Increased process safety in case of power failure

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 load peaks
- Saving energy
- Storing of regenerative energy in the MOVI-DPS® storage bundle

Applications

Energy mode
- Automated guided vehicle systems (AGVS)
  - Heavy-duty
  - Light-duty
- Pallet transfer shuttle

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Power mode

- Shuttles for high-bay warehouses
- Lifting and travel axis for storage/retrieval system
- Lifting station for electrified monorail vehicles
- Vertical conveyor

Regenerative power supply R15 (11 kW and 15 kW)

A regenerative power supply R15 can be configured for MOVIPRO® ADC units with a power rating of 11 kW and 15 kW. The MOVIPRO® ADC already contains the required line chokes and the line filter.

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

- Hoists
- Storage and retrieval systems

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3.13 Accessories

3.13.1 Interface box

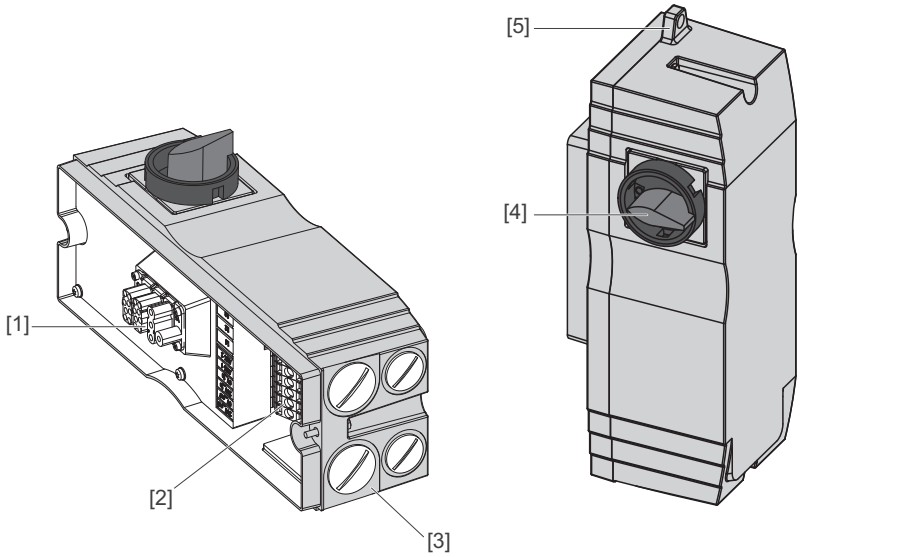
Scope of functions

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 MOVIPRO® device via the integrated power supply of the device
- Connected voltages are looped through
- Disconnect the MOVIPRO® device from the supply system by using the maintenance switch of the interface box

Device overview

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



9007201302901515

[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® device replacement, for example)

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Type designation

The type designation contains the following data:

PZM2xA	MOVIPRO® interface box	
-		
A...	Maximum power:	
	022	2.2 kW
	040	4 kW
	075	7.5 kW
	150	15 kW
	220	22 kW
-		
...-00	Switch type/design:	
	D02-00	Disconnection switch up to 16 A
	D03-00	Disconnection switch up to 32 A
	D04-00	Disconnection switch up to 42 A
	M13-00	Line and device protection up to 5 A
	M14-00	Line and device protection up to 9 A
	M16-00	Line and device protection up to 15 A

Interface box assignment

The following table shows the assignment of the interface boxes to the different MOVIPRO® device powers:

Interface box	Part number	2.2 kW	4 kW	7.5 kW	11 kW	15 kW	22 kW
PZM2xA-A075-D02-00	18250149	•	•	•			
PZM2xA-A150-D03-00	18250157	•	•	•	•	•	
PZM2xA-A220-D04-00	28218264	•	•	•	•	•	•
PZM2xA-A022-M13-00	18250238	•					
PZM2xA-A040-M14-00	18250165		•				
PZM2xA-A075-M16-00	18250173			•			

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Maintenance switch

The maintenance switch is used to interrupt the AC 400 V voltage supply to the interface box. The maintenance switch can be secured with 3 locks. If the maintenance switch is in position 0, the MOVIPRO® is disconnected from the AC 400 V voltage supply.

Depending on the device type, the interface boxes are equipped with different maintenance switches:

- D.. disconnection switch
- M.. line and device protection

D.. disconnection switch

The following disconnection switches are possible, depending on the device's power rating:

Power	Short designation	Description
Up to 7.5 kW	D02	Disconnection switch up to 16 A
Up to 15 kW	D03	Disconnection switch up to 32 A
Up to 22 kW	D04	Disconnection switch up to 42 A

M.. line and device protection

The following line and device protection is possible depending on the power:

Power	Short designation	Description
Up to 2.2 kW	M13	Line and device protection up to 5 A
Up to 4 kW	M14	Line and device protection up to 9 A
Up to 7.5 kW	M16	Line and device protection up to 15 A

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Technical data

Basic device

Interface box						
Description	**PZM2xA-A022-M13-00**	**PZM2xA-A040-M14-00**	**PZM2xA-A075-M16-00**	**PZM2xA-A075-D02-00**	**PZM2xA-A150-D03-00**	**PZM2xA-A220-D04-00**
	2.2 kW	**4 kW**	**7.5 kW**	**7.5 kW**	**15 kW**	**22 kW[1)]**
	With line and equipment protection			**With disconnection switch**		
Ambient temperature	+5 – +40 °C (non-condensing, no moisture condensation)					
Derating Ambient temperature ϑ_{amb}	P_N reduction: 3% I_N per K Up to a max. of 60 °C					
Climate class	EN 60721-3-3, class 3K3					
Storage temperature 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					
Device output to MOVIPRO®						
Nominal current	5 A	9 A	15 A	16 A	32 A	42 A
Integrated equipment protection	5 A	9 A	15 A	–	–	–
Maximum switching capacity (IEC, AC 3)	2.2 kW	4 kW	7.5 kW	7.5 kW	15 kW	22 kW
Device 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 mm² – 10 mm² (flexible with conductor end sleeve)					
24 V terminal cross section	1.5 mm² – 6 mm² (flexible with conductor end sleeve)					
Maximum permitted back-up fuse (gL characteristics)	60 A			35 A[2)]	50 A[2)]	

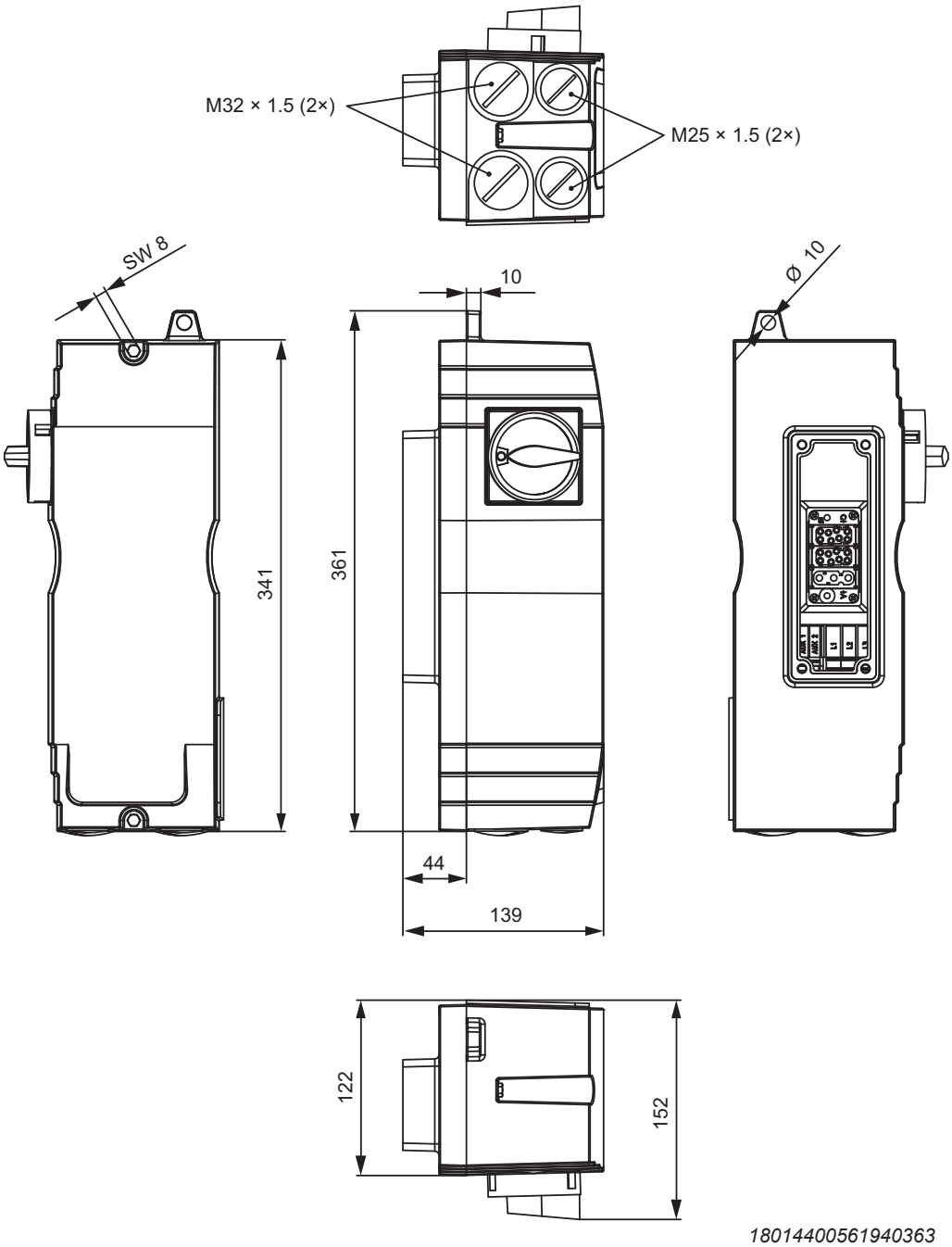
1) There is no UL approval for the 22 kW variant. An IEC approval only is available.

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

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Dimension drawing

The dimension drawing shows the mechanical dimensions in mm:



18014400561940363

3.13.2 External braking resistors

The external braking resistors are described in chapter "External braking resistors for MOVIPRO®" (→ 🗎 451).

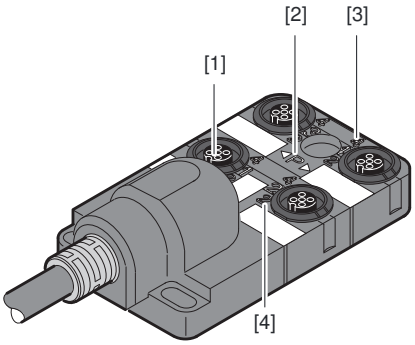
3.13.3 Sensor/actuator box

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

Cables	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	–

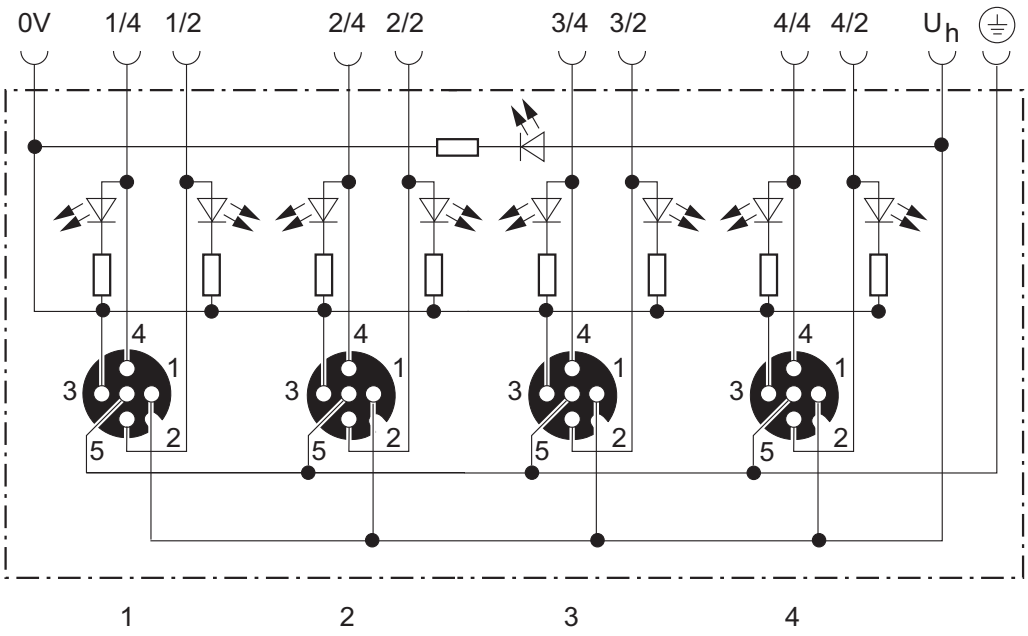
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Technical data

Basic device		
Nominal voltage	V_N	DC 24 V
Maximum operating voltage	V_{max}	DC 30 V
Current carrying capacity Per slot Overall		 >4 A >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 installation For cable carrier	 -30 – +80 °C -5 – +70 °C
Cable type	Main cable suitable for cable carriers

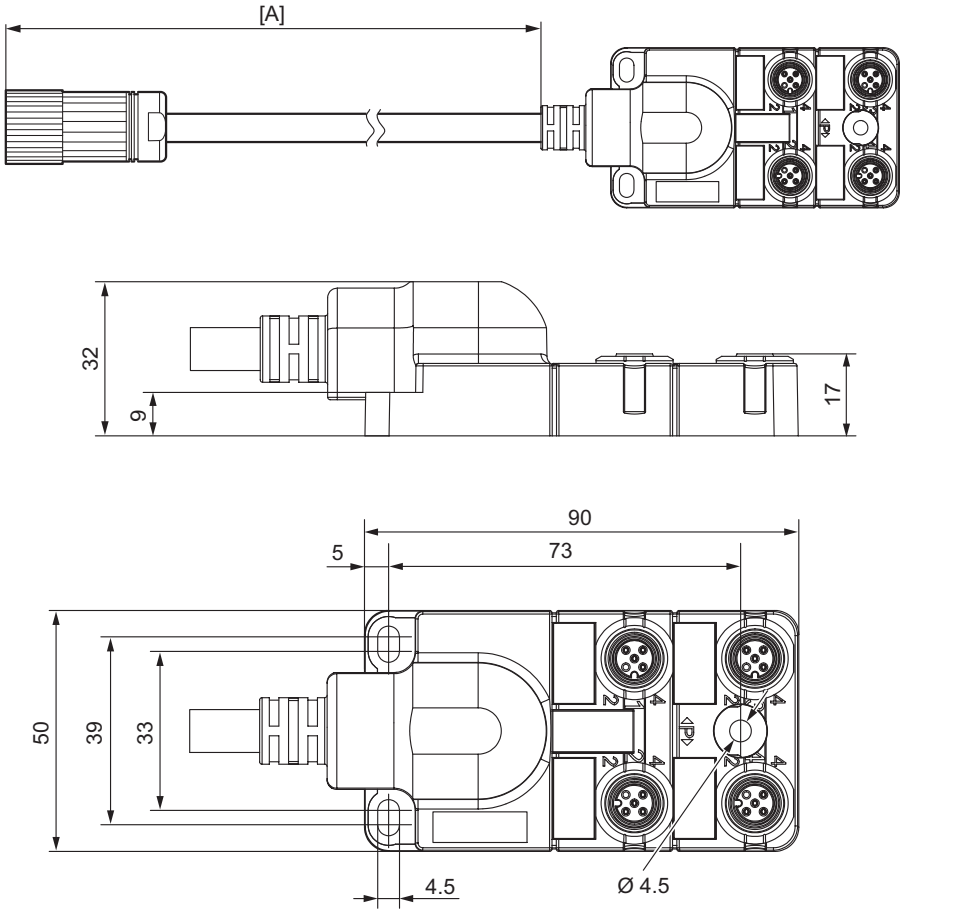
Wiring



14790252683

Dimension drawing

The dimension drawing shows the mechanical dimensions in mm:



14791723915

[A] = Cable length

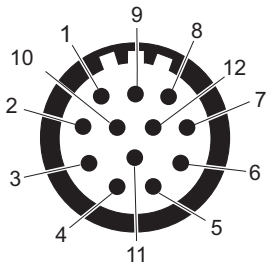
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Electrical connection

Function
Signal transmission to a MOVIPRO®

Connection type
M23, P insert 12-pole, male, 0°-coded

Pin assignment

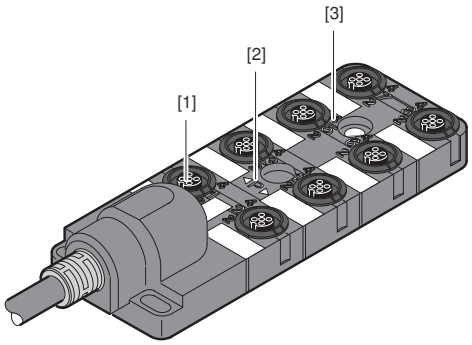


Assignment

No.	Name	Function
1	1	Slot 1 – Pin 4
2	2	Slot 1 – Pin 2
3	3	Slot 2 – Pin 4
4	4	Slot 2 – Pin 2
5	5	Slot 3 – Pin 4
6	6	Slot 3 – Pin 2
7	7	Slot 4 – Pin 4
8	8	Slot 4 – Pin 2
9	0V24	0V24 reference potential
10	0V24	0V24 reference potential
11	+24V	DC 24 V output
12	FE	Equipotential bonding / functional earth

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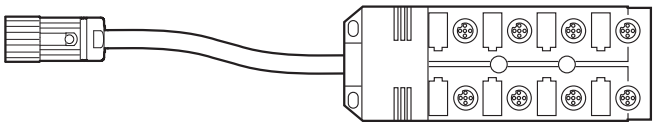
Design with 8 slots



54043196599307403

[1] M12 slot
[2] Operating display LED
[3] Status display of inputs/outputs

Part numbers

Cables	Length/installation type	Component
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 	–

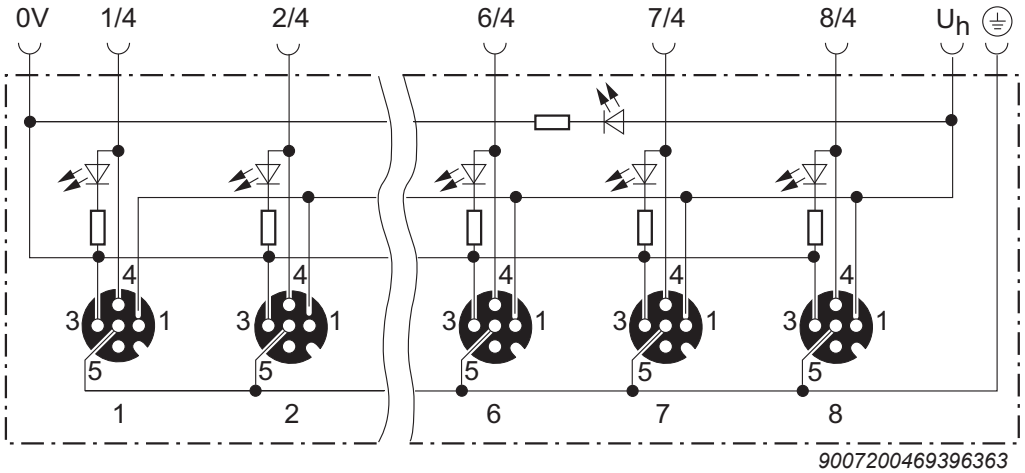
31550126/EN – 11/2023

Technical data

Basic device		
Nominal voltage	V_N	DC 24 V
Maximum operating voltage	V_{max}	DC 30 V
Current carrying capacity		
Per slot		>4 A
Overall		>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 installation	-30 – +80 °C
For cable carrier	-5 – +70 °C
Cable type	Main cable suitable for cable carriers

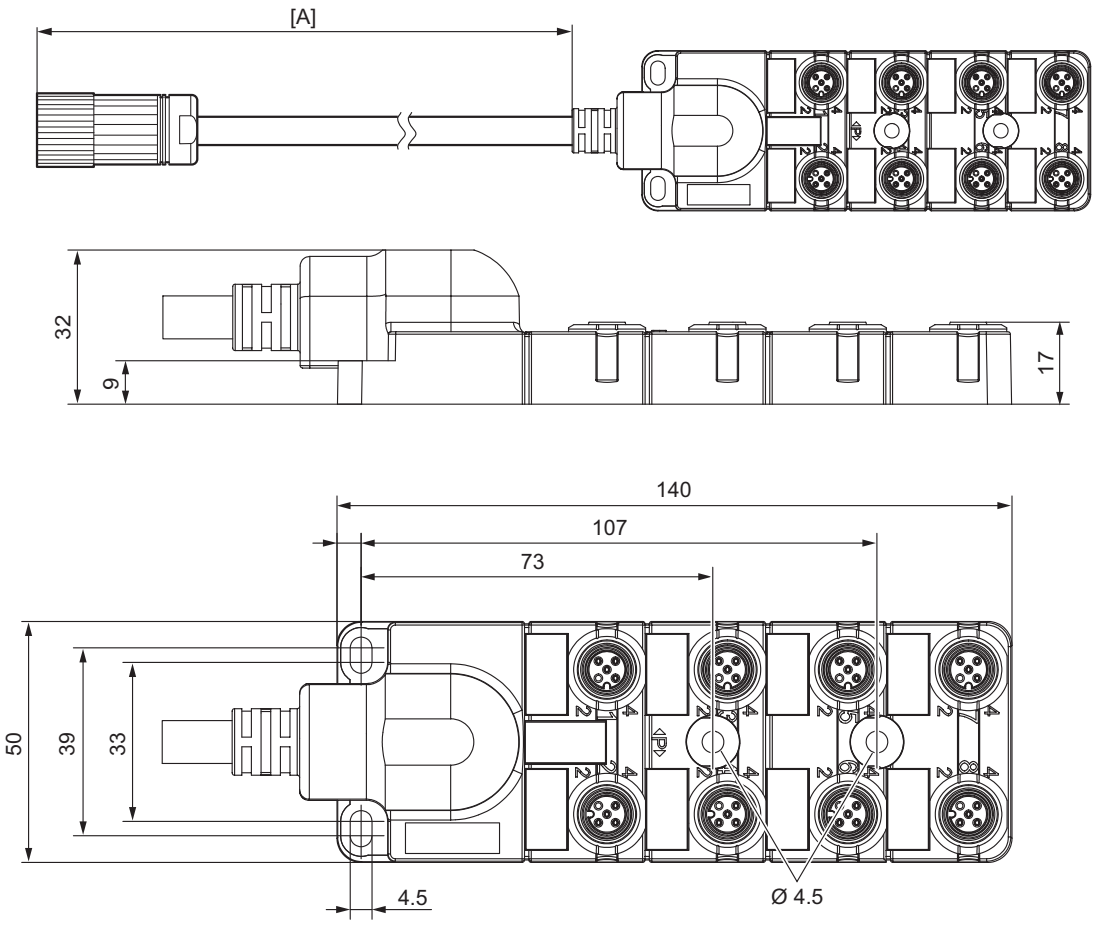
Wiring



9007200469396363

Dimension drawing

The dimension drawing shows the mechanical dimensions in mm:



18014399580341515

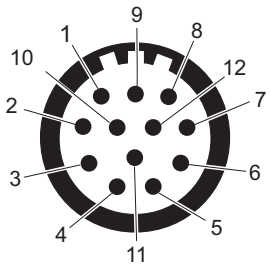
[A] = Cable length

Electrical connection

Function
Signal transmission to a MOVIPRO®

Connection type
M23, P insert 12-pole, male, 0°-coded

Pin assignment



Assignment

No.	Name	Function
1	1	Slot 1 – Pin 4
2	2	Slot 2 – Pin 4
3	3	Slot 3 – Pin 4
4	4	Slot 4 – Pin 4
5	5	Slot 5 – Pin 4
6	6	Slot 6 – Pin 4
7	7	Slot 7 – Pin 4
8	8	Slot 8 – Pin 4
9	0V24	0V24 reference potential
10	0V24	0V24 reference potential
11	+24V	DC 24 V output
12	FE	Equipotential bonding / functional earth

3.13.4 Jumper plug



⚠ WARNING

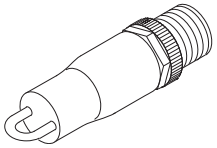
Safe disconnection of the device is not possible when the jumper plug is used.

Severe or fatal injuries.

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

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The jumper plug can be connected to the X5502 port 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.

Jumper plug	Part number
	11747099

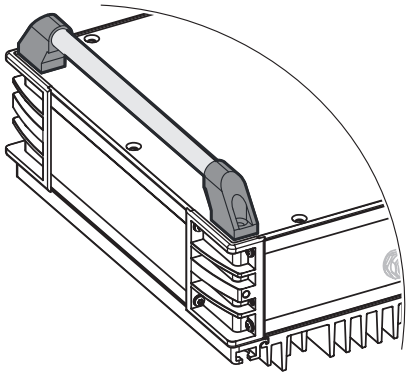
Assignment of the jumper plug

The jumper plug is available as an accessory for MOVIPRO® STO devices. Information about the accessories which are required for your device can be found in the operating instructions provided with the device.

3.13.5 Mounting accessories

Handles

You can equip the MOVIPRO® with handles for easier handling. The handles are available in two lengths, depending on the size of MOVIPRO®.



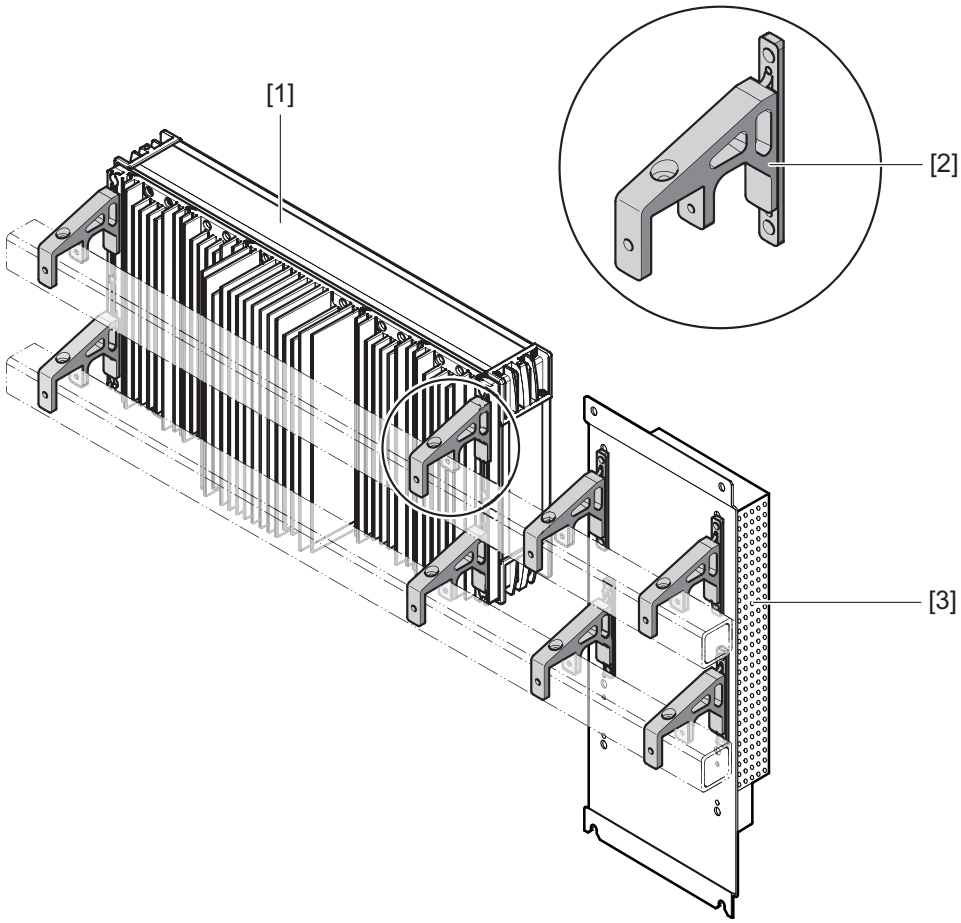
2049840395

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

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Mounting brackets

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



9007199913283339

[1] MOVIPRO®
[2] Mounting bracket
[3] Braking resistor

	Mounting bracket	Part number
MOVIPRO®	Mounting bracket kit, large (4 pieces)	12708305
Braking resistors sizes 1 and 2	Mounting bracket kit, BW (4 pieces)	18229689

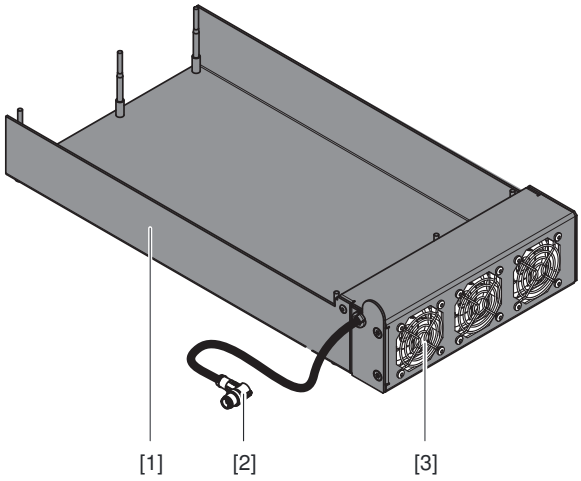
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3.13.6 Fan

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® devices with a power rating of 15 kW and higher; it is included automatically in the configuration here. For devices with 11 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 assembly	12709700

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3.14 Connection cables

INFORMATION

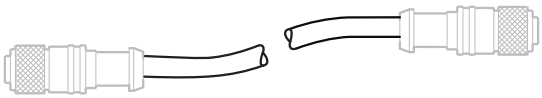
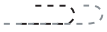
For more information about cable types, see chapter "Technical data".

Connection cables are not included in the delivery. Prefabricated cables for connecting SEW-EURODRIVE components are available to order. 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 design of the devices and the components to be connected. This is why you do not need all listed cables.

3.14.1 Cable types

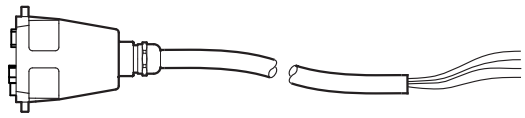
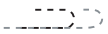
The table below shows the depictions used and what they mean:

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

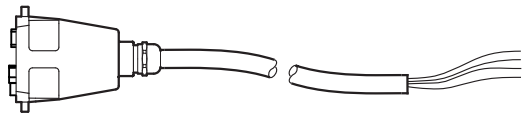
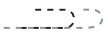
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3.14.2 Connection cable for AC 400 V/DC 24 V supply

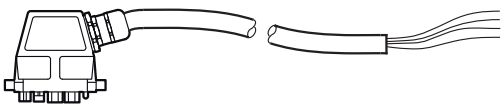
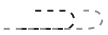
2.2 kW/4 kW device power IEC/UL

Cables	Length/installation type	Type	Component
Part number: 18131433 Cable design: 4G2.5  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/2.5	–

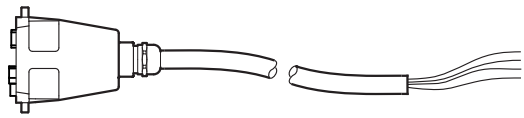
7.5 kW device power IEC

Cables	Length/installation type	Type	Component
Part number: 18131433 Cable design: 4G2.5  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/2.5	–

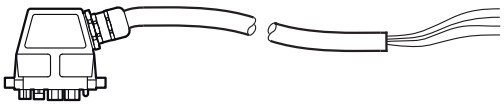
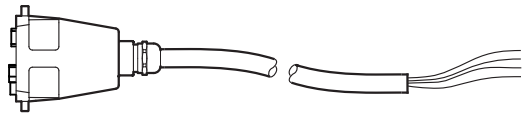
7.5 kW device power UL

Cables	Length/installation type	Type	Component
Part number: 18195237 Cable design: 4G4.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/4	–

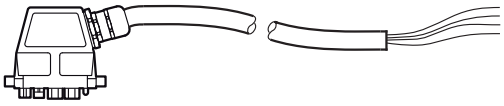
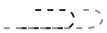
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Cables	Length/installation type	Type	Component
Part number: 18195253 Cable design: 4G4.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/4	–

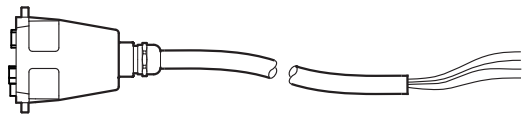
11 kW device power IEC

Cables	Length/installation type	Type	Component
Part number: 18195237 Cable design: 4G4.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/4	–
Part number: 18195253 Cable design: 4G4.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/4	–

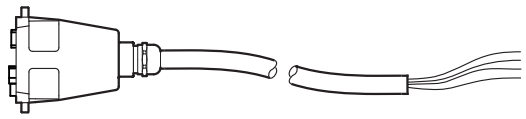
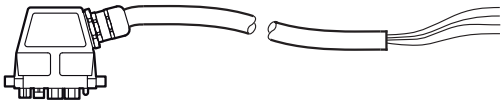
11 kW device power UL

Cables	Length/installation type	Type	Component
Part number: 18174183 Cable design: 4G6.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/6	–

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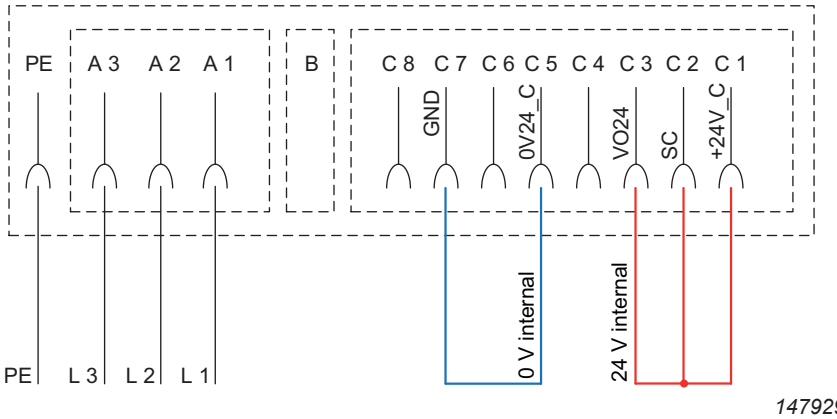
Cables	Length/installation type	Type	Component
Part number: 18131468 Cable design: 4G6.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/6	–

15 kW device power IEC

Cables	Length/installation type	Type	Component
Part number: 18131468 Cable design: 4G6.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/6	–
Part number: 18174183 Cable design: 4G6.0  Han® 10 B ↔ open with conductor end sleeves	Variable length 	D/6	–

Wiring diagram

The following figure shows the wiring diagram of the connection cables.

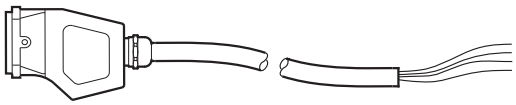
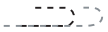
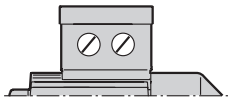
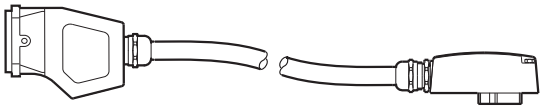
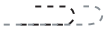
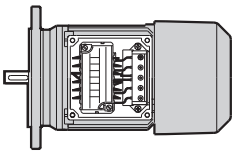
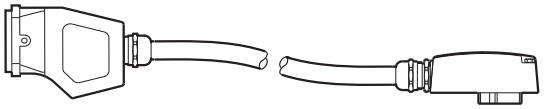
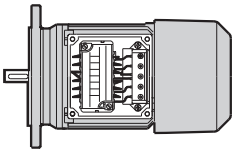
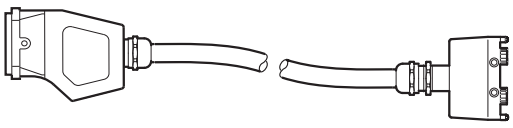
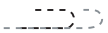
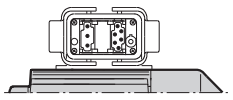


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3.14.3 Connection cable for asynchronous and synchronous servomotors

2.2 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18125794 Cable design: 4G1.5  Han®Q 8/0 ↔ open (terminal box connection M4)	Variable length 	D/1.5	DRN80 – 100 DRL71 – 80 
Part number: 18127703 ☆ Cable design: 4G1.5  Han® Q 8/0 ↔ IS ☆	Variable length 	D/1.5	DRN80 – 100⅄ DRL71 – 80⅄ 
Part number: 18127681 △ Cable design: 4G1.5  Han® Q 8/0 ↔ IS △	Variable length 	D/1.5	DRN80 – 100△ DRL71 – 80△ 
Part number: 18127711 Cable design: 4G1.5  Han® Q 8/0 ↔ ABB8	Variable length 	D/1.5	DRN80 – 100 DRL71 – 80 

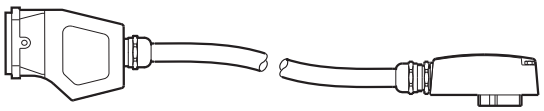
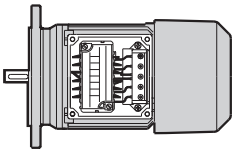
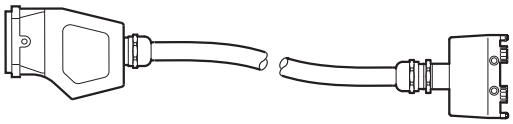
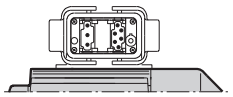
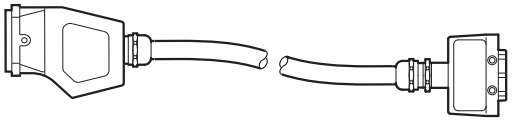
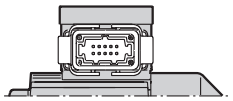
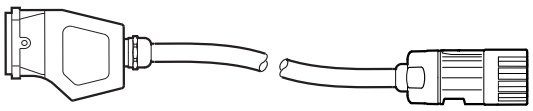
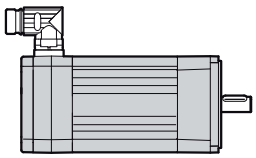
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Cable	Length/installation type	Type	Component
Part number: 18127738 Cable design: 4G1.5 Han® Q 8/0 ↔ ASB8	Variable length	D/1.5	DRN80 – 100 DRL71 – 80
Part number: 18125859 Cable design: 4G1.5 Han® Q 8/0 ↔ SB11	Variable length	E/1.5	CMP63 – 80

2.2 kW device power UL

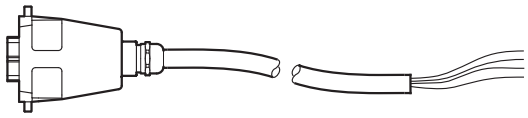
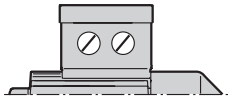
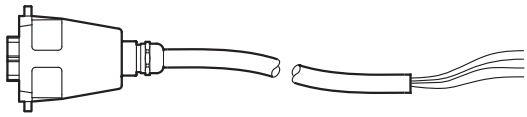
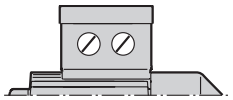
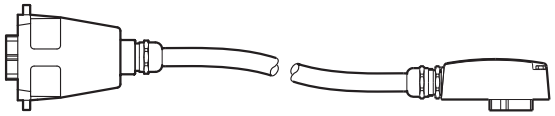
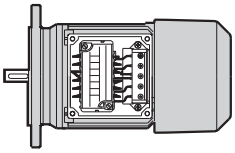
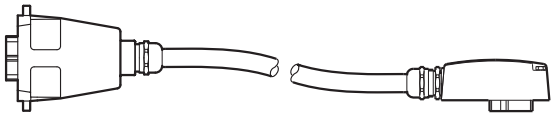
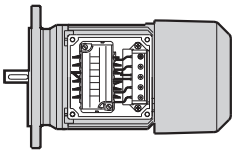
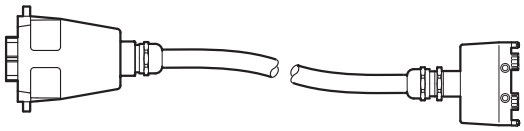
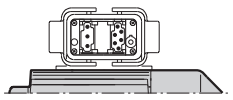
Cable	Length/installation type	Type	Component
Part number: 18143776 Cable design: 4G2.5 Han®Q 8/0 ↔ open (terminal box connection M4)	Variable length	D/2.5	DRN80 – 100 DRL71 – 80
Part number: 18145949人 Cable design: 4G2.5 Han® Q 8/0 ↔ IS 人	Variable length	D/2.5	DRN80 – 100人 DRL71 – 80人

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Cable	Length/installation type	Type	Component
Part number: 18144284△ Cable design: 4G2.5  Han® Q 8/0 ↔ IS △	Variable length 	D/2.5	DRN80 – 100△ DRL71 – 80△ 
Part number: 18174442 Cable design: 4G2.5  Han® Q 8/0 ↔ ABB8	Variable length 	D/2.5	DRN80 – 100 DRL71 – 80 
Part number: 18174434 Cable design: 4G2.5  Han® Q 8/0 ↔ ASB8	Variable length 	D/2.5	DRN80 – 100 DRL71 – 80 
Part number: 18174450 Cable design: 4G2.5  Han® Q 8/0 ↔ SB11	Variable length 	D/2.5	CMP63 – 80 

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4 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18118135 Cable design: 4G1.5  Han® 6 B ↔ open (terminal box connection M4)	Variable length 	D/1.5	DRN80 – 100 DRL71 – 100 
Part number: 18118143 Cable design: 4G1.5  Han® 6 B ↔ open (terminal box connection M5)	Variable length 	D/1.5	DRN112 DRL112 – 132 
Part number: 18118178 ⅄ Cable design: 4G1.5  Han® 6 B ↔ IS ⅄	Variable length 	D/1.5	DRN80 – 132 ⅄ DRL71 – 132 ⅄ 
Part number: 18118151 △ Cable design: 4G1.5  Han® 6 B ↔ IS △	Variable length 	D/1.5	DRN80 – 132 △ DRL71 – 132 △ 
Part number: 18118186 Cable design: 4G1.5  Han® 6 B ↔ ABB8	Variable length 	D/1.5	DRN80 – 112 DRL71 – 132 

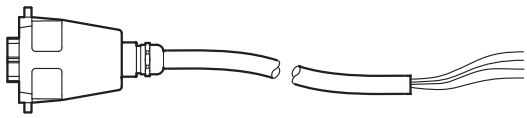
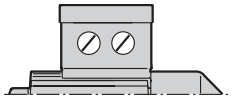
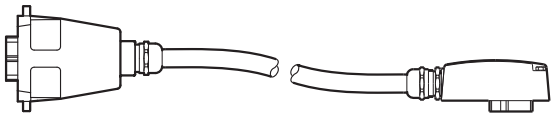
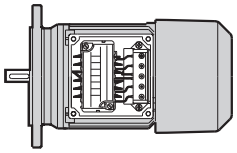
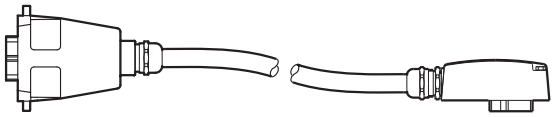
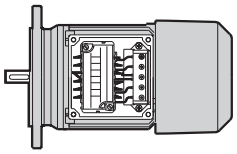
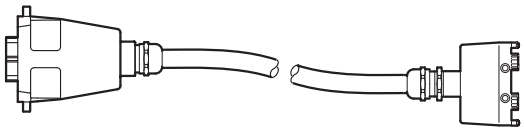
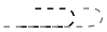
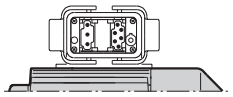
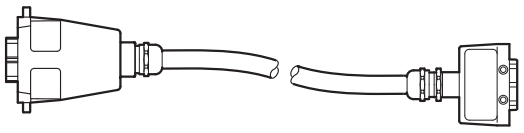
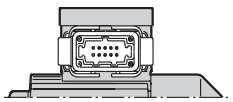
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Cable	Length/installation type	Type	Component
Part number: 18118194 Cable design: 4G1.5 Han® 6 B ↔ ASB8	Variable length	D/1.5	DRN80 – 112 DRL71 – 132
Part number: 18122027 Cable design: 4G1.5 Han® 6 B ↔ SB11	Variable length	E/1.5	CMP63 – 80
Part number: 18110525 Cable design: 4G2.5 Han® 6 B ↔ SB12	Variable length	E/2.5	CMP63 – 80

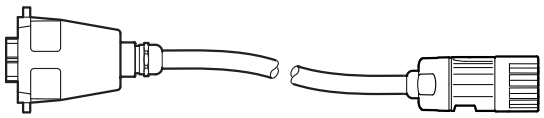
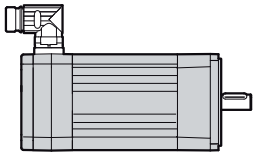
4 kW device power UL

Cable	Length/installation type	Type	Component
Part number: 18108334 Cable design: 4G2.5 Han® 6 B ↔ open (terminal box connection M4)	Variable length	D/2.5	DRN80 – 100 DRL71 – 100

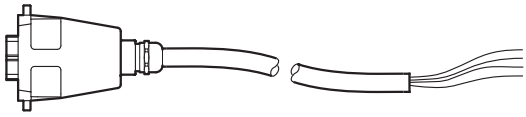
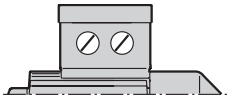
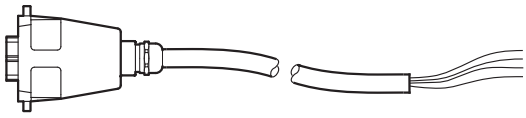
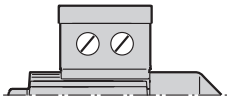
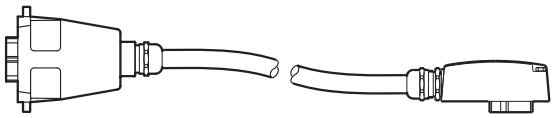
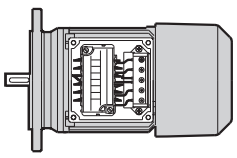
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Cable	Length/installation type	Type	Component
Part number: 18108342 Cable design: 4G2.5  Han® 6 B ↔ open (terminal box connection M5)	Variable length 	D/2.5	DRN112 DRL112 – 132 
Part number: 18108326 ⅄ Cable design: 4G2.5  Han® 6 B ↔ IS ⅄	Variable length 	D/2.5	DRN80 – 112 ⅄ DRL71 – 100 ⅄ 
Part number: 18108318 △ Cable design: 4G2.5  Han® 6 B ↔ IS △	Variable length 	D/2.5	DRN80 – 112 △ DRL71 – 100 △ 
Part number: 18108245 Cable design: 4G2.5  Han® 6 B ↔ ABB8	Variable length 	D/2.5	DRN80 – 112 DRL71 – 100 
Part number: 18108202 Cable design: 4G2.5  Han® 6 B ↔ ASB8	Variable length 	D/2.5	DRN80 – 112 DRL71 – 100 

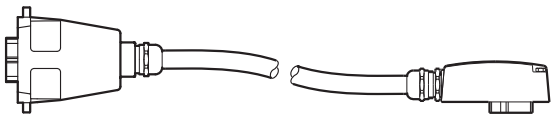
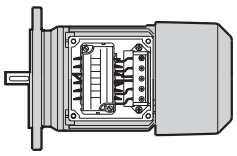
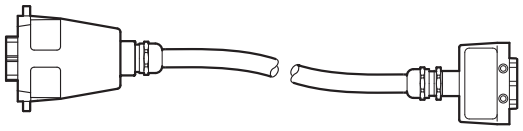
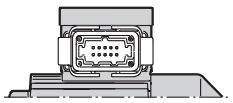
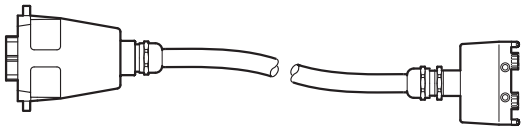
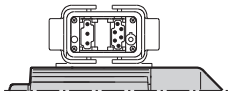
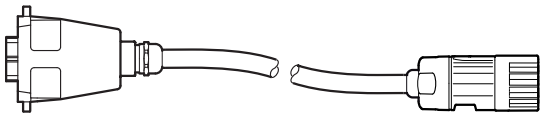
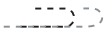
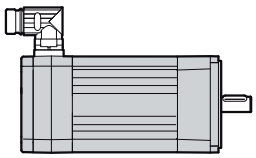
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Cable	Length/installation type	Type	Component
Part number: 18110525 Cable design: 4G2.5  Han® 6 B ↔ SB12	Variable length	E/2.5	CMP63 – 80 

7.5 kW device power IEC

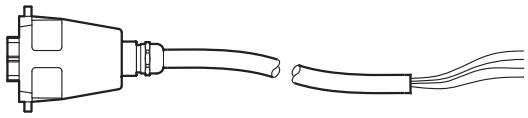
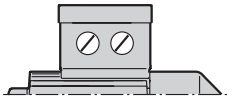
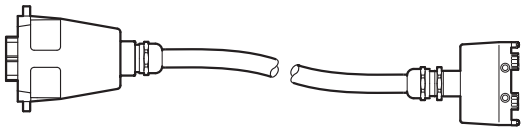
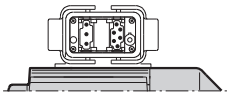
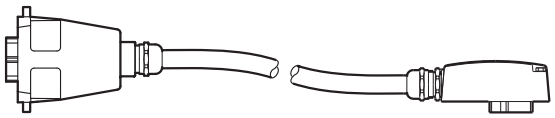
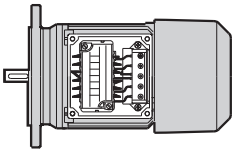
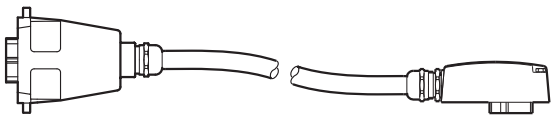
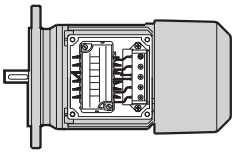
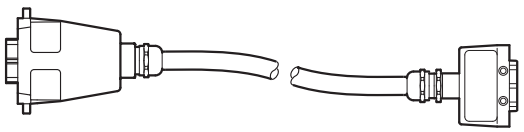
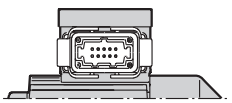
Cable	Length/installation type	Type	Component
Part number: 18108334 Cable design: 4G2.5  Han® 6 B ↔ open (terminal box connection M4)	Variable length	D/2.5	DRN80 – 100 DRL71 – 100 
Part number: 18108342 Cable design: 4G2.5  Han® 6 B ↔ open (terminal box connection M5)	Variable length	D/2.5	DRN112 DRL112 – 132 
Part number: 18108318 △ Cable design: 4G2.5  Han® 6 B ↔ IS △	Variable length	D/2.5	DRN80 – 112 △ DRL71 – 100 △ 

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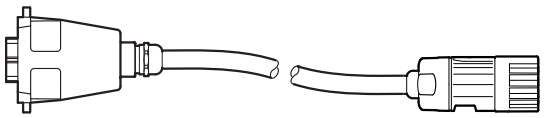
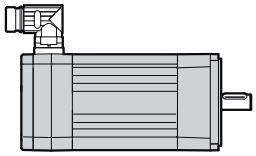
Cable	Length/installation type	Type	Component
Part number: 18108326 ⅄ Cable design: 4G2.5  Han® 6 B ↔ IS ⅄	Variable length 	D/2.5	DRN80 – 112 ⅄ DRL71 – 100 ⅄ 
Part number: 18108202 Cable design: 4G2.5  Han® 6 B ↔ ASB8	Variable length 	D/2.5	DRN80 – 112 DRL71 – 100 
Part number: 18108245 Cable design: 4G2.5  Han® 6 B ↔ ABB8	Variable length 	D/2.5	DRN80 – 112 DRL71 – 100 
Part number: 18122035 Cable design: 4G4  Han® 6 B ↔ SB14	Variable length 	E/4.0	CMP63 – 100 

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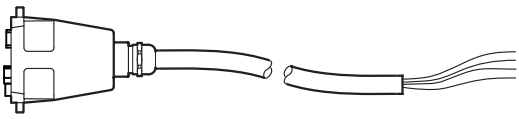
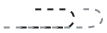
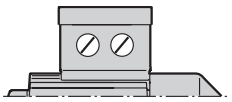
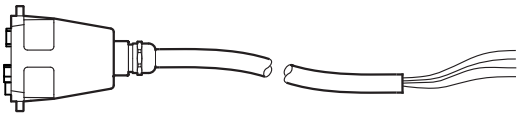
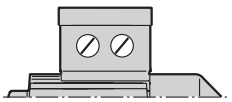
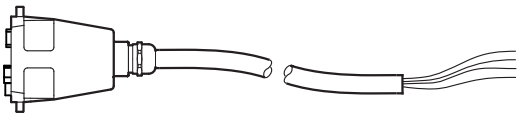
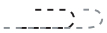
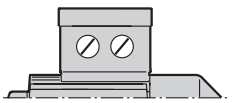
7.5 kW device power UL

Cable	Length/installation type	Type	Component
Part number: 18120601 Cable design: 4G4  Han® 6 B ↔ open (terminal box connection M5)	Variable length 	D/4.0	DRN112 – 132 DRL112 – 132 
Part number: 18120628 Cable design: 4G4  Han® 6 B ↔ ABB8	Variable length 	D/4.0	DRN80 – 132 DRL71 – 90 
Part number: 18121276 △ Cable design: 4G4  Han® 6 B ↔ IS △	Variable length 	D/4.0	DRN80 – 132 △ DRL71 – 90 △ 
Part number: 18121284 人 Cable design: 4G4  Han® 6 B ↔ IS 人	Variable length 	D/4.0	DRN80 – 132 人 DRL71 – 90 人 
Part number: 18120636 Cable design: 4G4  Han® 6 B ↔ ASB8	Variable length 	D/4.0	DRN80 – 132 DRL71 – 90 

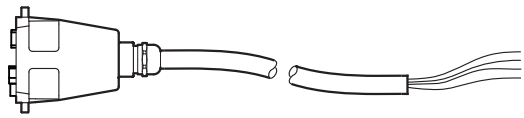
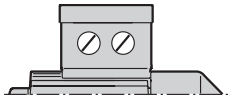
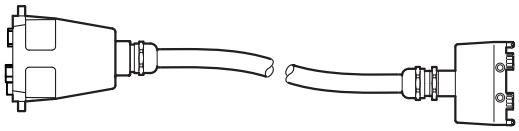
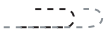
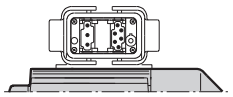
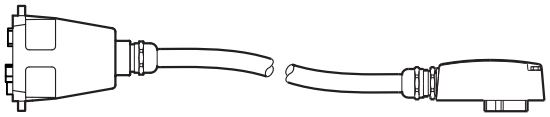
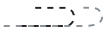
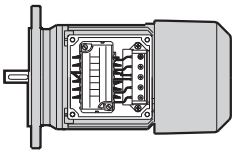
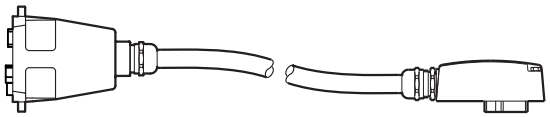
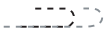
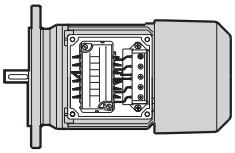
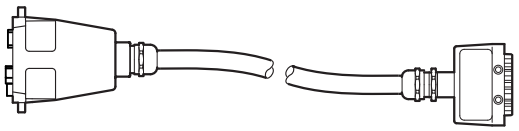
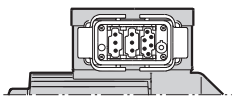
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Cable	Length/installation type	Type	Component
Part number: 18122035 Cable design: 4G4  Han® 6 B ↔ SB14	Variable length 	E/4.0	CMP63 – 100 

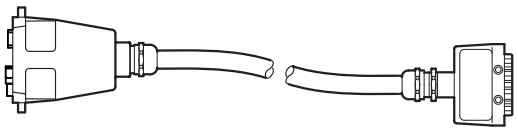
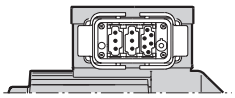
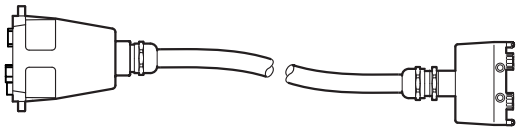
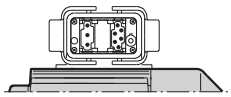
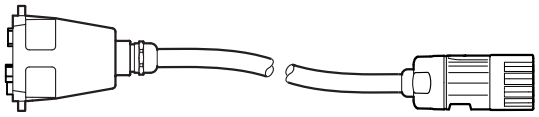
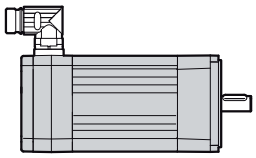
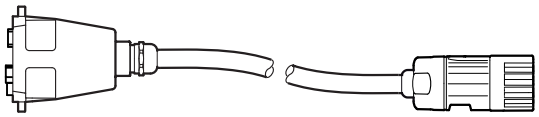
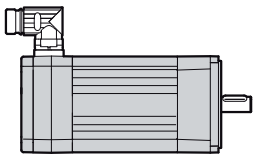
11 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18110452 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M5)	Variable length 	D/6.0	DRN112 – 132 DRL112 – 132 
Part number: 18110479 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M6)	Variable length 	D/6.0	DRN160 DRL160 
Part number: 18120644 Cable design: 4G4  Han® 10 B ↔ open (terminal box connection M5)	Variable length 	D/4.0	DRN112 – 132 DRL112 – 132 

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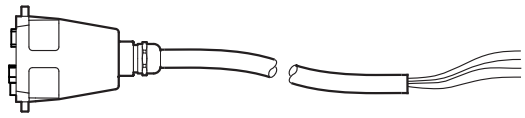
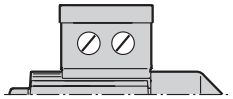
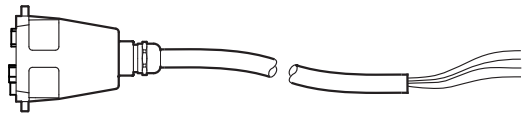
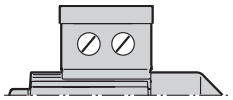
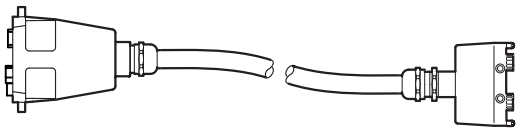
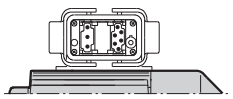
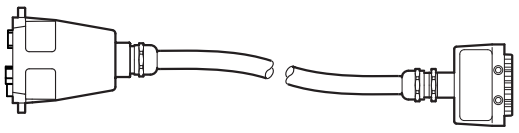
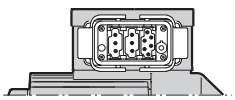
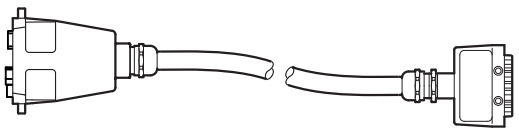
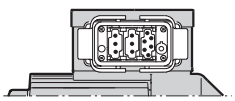
Cable	Length/installation type	Type	Component
Part number: 18120741 Cable design: 4G4  Han® 10 B ↔ open (terminal box connection M6)	Variable length 	D/4.0	DRN112 – 132 DRL112 – 132 
Part number: 18120652 Cable design: 4G4  Han® 10 B ↔ ABB8	Variable length 	D/4.0	DRN112 – 160 DRL112 – 132 
Part number: 18146252 △ Cable design: 4G4  Han® 10 B ↔ IS2 △	Variable length 	D/4.0	DRN80 – 132△ DRL71 – 90△ 
Part number: 18146228 人 Cable design: 4G4  Han® 10 B ↔ IS2 人	Variable length 	D/4.0	DRN80 – 132人 DRL71 – 90人 
Part number: 18123562人 Cable design: 4G6  Han® 10B ↔ ADB2 人	Variable length 	D/6.0	DRN160人 DRL160人 

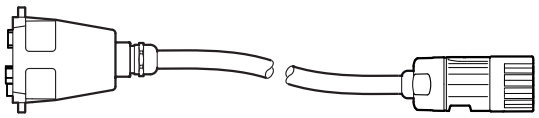
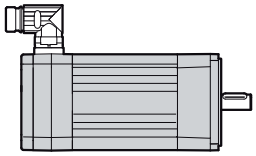
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Cable	Length/installation type	Type	Component
Part number: 18123570△ Cable design: 4G6  Han® 10B ↔ ADB2 △	Variable length	D/6.0	DRN160△ DRL160△ 
Part number: 18110436 Cable design: 4G6  Han® 10 B ↔ ABB8	Variable length	D/6.0	DRN160 DRL160 
Part number: 18110533 Cable design: 4G6  Han® 10 B ↔ SBB6	Variable length	E/6.0	CMP80 – 100 
Part number: 18122051 Cable design: 4G4  Han® 10 B ↔ SB14	Variable length	E/4.0	CMP63 – 100 

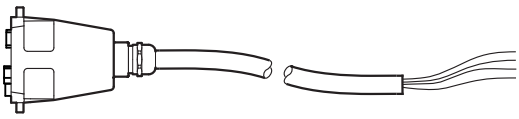
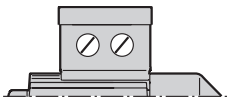
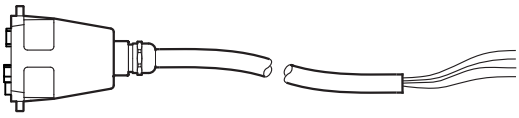
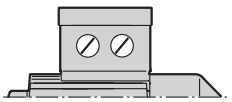
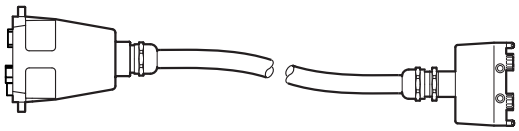
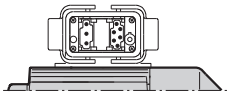
31550126/EN – 11/2023

11 kW device power UL

Cable	Length/installation type	Type	Component
Part number: 18110452 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M5)	Variable length 	D/6.0	DRN180 DRL180 
Part number: 18110479 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M6)	Variable length 	D/6.0	DRN180 DRL180 
Part number: 18110436 Cable design: 4G6  Han® 10 B ↔ ABB8	Variable length 	D/6.0	DRN180 DRL180 
Part number: 18123562⅄ Cable design: 4G6  Han® 10B ↔ ADB2 ⅄	Variable length 	D/6.0	DRN180⅄ DRL180⅄ 
Part number: 18123570△ Cable design: 4G6  Han® 10B ↔ ADB2 △	Variable length 	D/6.0	DRN180△ DRL180△ 

Cable	Length/installation type	Type	Component
Part number: 18110533 Cable design: 4G6  Han® 10 B ↔ SBB6	Variable length	E/6.0	CMP80 – 100 

15 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18110452 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M5)	Variable length	D/6.0	DRN180 DRL180 
Part number: 18110479 Cable design: 4G6  Han® 10 B ↔ open (terminal box connection M6)	Variable length	D/6.0	DRN180 DRL180 
Part number: 18110436 Cable design: 4G6  Han® 10 B ↔ ABB8	Variable length	D/6.0	DRN180 DRL180 

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Cable	Length/installation type	Type	Component
Part number: 18123562⅄ Cable design: 4G6 Han® 10B ↔ ADB2 ⅄	Variable length 	D/6.0	DRN180⅄ DRL180⅄
Part number: 18123570△ Cable design: 4G6 Han® 10B ↔ ADB2 △	Variable length 	D/6.0	DRN180△ DRL180△
Part number: 18110533 Cable design: 4G6 Han® 10 B ↔ SBB6	Variable length 	E/6.0	CMP80 – 100

15 kW device power UL

Cable	Length/installation type	Type	Component
Part number: 18121985 Cable design: 4G10 Han® 10 B ↔ open (terminal box connection IO)	Variable length 	D/10.0	DRN180 DRL180

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Cable	Length/installation type	Type	Component
Part number: 18118208 Cable design: 4G10 Han® 10 B ↔ ABB8/AKB8	Variable length 	D/10.0	DRN180 DRL180
Part number: 18123589人 Cable design: 4G10 Han® 10B ↔ ADB2 人	Variable length 	D/10.0	DRN180人 DRL180人
Part number: 18182151 Cable design: 4G10.0 Han® 10B ↔ SBB10	Variable length 	D/10	CMP80 – 112

22 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18121985 Cable design: 4G10 Han® 10 B ↔ open (terminal box connection IO)	Variable length 	D/10.0	DRN180 DRL180

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Cable	Length/installation type	Type	Component
Part number: 18118208 Cable design: 4G10 Han® 10 B ↔ ABB8/AKB8	Variable length	D/10.0	DRN180 DRL180
Part number: 18123589人 Cable design: 4G10 Han® 10B ↔ ADB2 人	Variable length	D/10.0	DRN180人 DRL180人
Part number: 18182151 Cable design: 4G10.0 Han® 10B ↔ SBB10	Variable length	D/10	CMP80 – 112

Adapter cable 2.2 kW device power

IEC and UL

Cable	Length/installation type	Type	Component
Part number: 18161243 Cable design: 4G2.5 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 (only 2.2 kW).

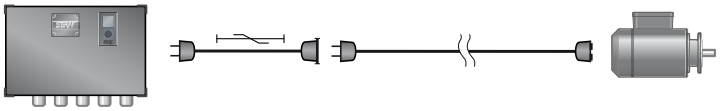
Phase reversal cable

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. To do so, connect an additional phase reversal cable to the MOVIPRO® and the motor cable.

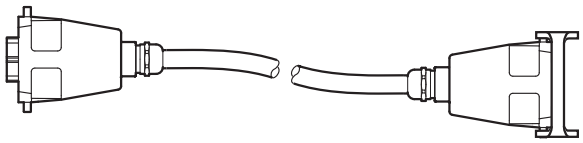
INFORMATION

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" (→ 🗎 100).

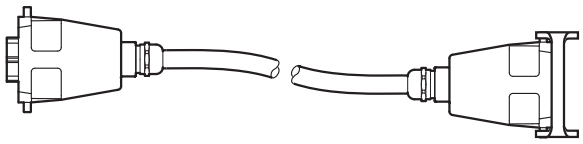
Function:



4 kW device power IEC/UL

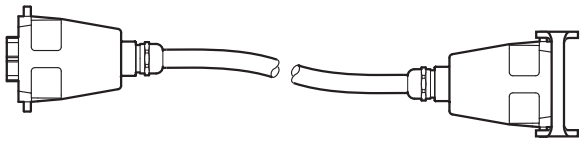
Cable	Length/installation type	Type	Wiring diagram
Part number: 18113737 Cable design: 4G2.5  Han® 6 B ↔ Han® 6 B	Fixed length	D/2.5	**U1 – V1** **V1 – U1** W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

7.5 kW device power IEC

Cable	Length/installation type	Type	Wiring diagram
Part number: 18113737 Cable design: 4G2.5  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-

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7.5 kW device power UL

Cable	Length/installation type	Type	Wiring diagram
Part number: 18122000 Cable design: 4G6  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 kW device power IEC/UL

Cable	Length/installation type	Type	Wiring diagram
Part number: 18119638 Cable design: 4G6  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 kW device power IEC/UL

Cable	Length/installation type	Type	Wiring diagram
Part number: 18113745 Cable design: 4G10  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-

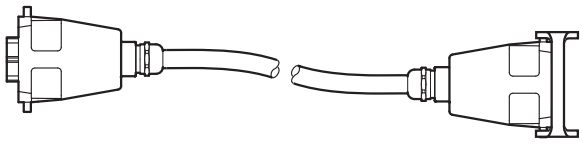
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22 kW device power IEC

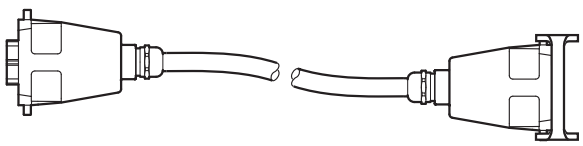
Cable	Length/installation type	Type	Wiring diagram
Part number: 18113745 Cable design: 4G10  Han® 10 B ↔ Han® 10 B	Fixed length	D/10.0	**U1 – V1** **V1 – U1** W1 – W1 13 – 13 14 – 14 15 – 15 TF+ – TF+ TF- – TF-

Extension cable

4 kW device power IEC/UL

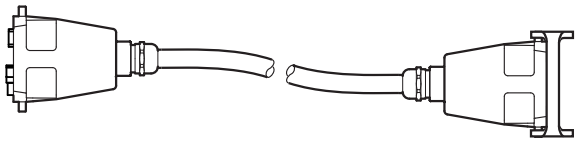
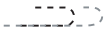
Cable	Length/installation type	Type	Component
Part number: 18157475 Cable design: 4G6  Han® 6 B ↔ Han® 6 B	Variable length	D/6.0	Connection cable: Motor cable with Han® 6B

7.5 kW device power IEC/UL

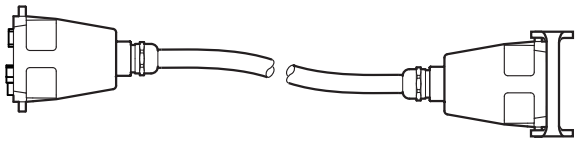
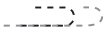
Cable	Length/installation type	Type	Component
Part number: 18157475 Cable design: 4G6  Han® 6 B ↔ Han® 6 B	Variable length	D/6.0	Connection cable: Motor cable with Han® 6B

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11 kW device power IEC/UL

Cable	Length/installation type	Type	Component
Part number: 18164226 Cable design: 4G6  Han® 10 B ↔ Han® 10 B	Variable length 	D/6.0	Connection cable: Motor cable with Han® 10 B

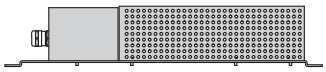
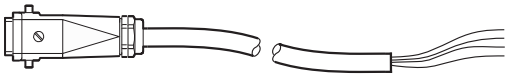
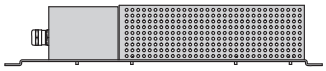
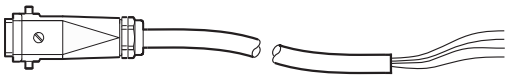
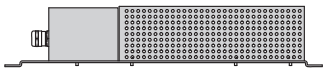
15 kW device power IEC

Cable	Length/installation type	Type	Component
Part number: 18164226 Cable design: 4G6  Han® 10 B ↔ Han® 10 B	Variable length 	D/6.0	Connection cable: Motor cable with Han® 10 B

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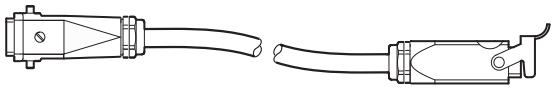
3.14.4 Connection cables for braking resistors

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 mm²  Han®Q 5/0 ↔ Open with conductor end sleeves	Variable length 	External braking resistor  Terminal cross section 6 mm²
Part number: 18166571 (replacement for 18121969) Cable design: (3G2.5) Core cross section: 2.5 mm²  Han®Q 2/0 ↔ Open with conductor end sleeves	Variable length 	External braking resistor  Terminal cross section: 6 mm²
Part number: 18166598 (replacement for 18121977) Cable design: (3G6.0) Core cross section: 6 mm²  Han®Q 2/0 ↔ Open with conductor end sleeves	Variable length 	External braking resistor  Terminal cross section: 6 mm²

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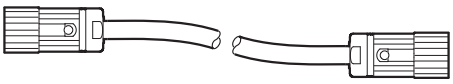
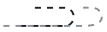
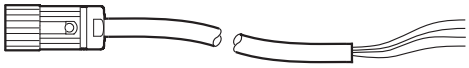
Extension cable

Cable	Length/installation type	Component
Part number: 18121349 Cable design: (3G2.5) Core cross section: 2.5 mm²  Han® Q 5/0 ↔ Han® Q 5/0	Variable length 	Connection cable 18166563

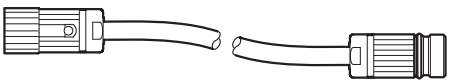
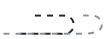
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3.14.5 Connection cables for encoders

Motor encoder (resolver)

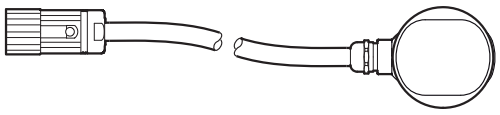
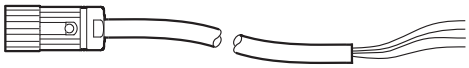
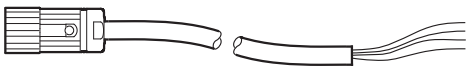
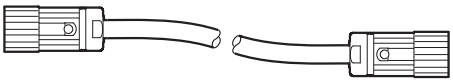
Cable	Length/installation type	Component
Part number: 11724927 Cable design: (4X2X0.25)  M23, 12-pin, 20°-coded ↔ M23, 12-pin, 0°-coded	Variable length 	Resolver RH1M, RH1L
Part number: 11726431 Cable design: (4X2X0.25)  M23, 12-pin, 20°-coded ↔ Open with conductor end sleeves	Variable length 	Resolver RH1M, RH1L

Extension cable

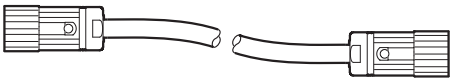
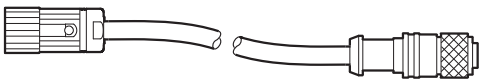
Cable	Length/installation type	Component
Part number: 18156851 Cable design: (6X2X0.25)  M23, 12-pole, 20°-coded ↔ M23, 12-pole, 20°-coded	Variable length 	Connection cables: 11724927 11726431 18110991 18121438 18121446 18121454 18121926 18121934 18121942 18121950

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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
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

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

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

INFORMATION

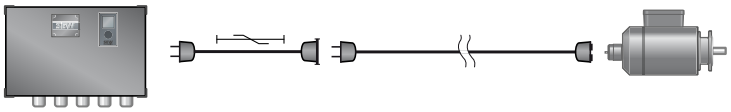
The principle of the encoder signal reversal cable works only with incremental encoders. Do not use the encoder signal reversal cable with absolute encoders.

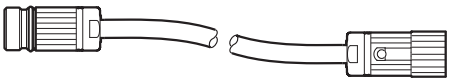
INFORMATION

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

The encoder signal reversal cable is available in flexible lengths. You need this cable if you are already using a phase reversal cable for a motor with motor encoder. In this case, connect the encoder signal reversal cable to the MOVIPRO® and the motor encoder cable.

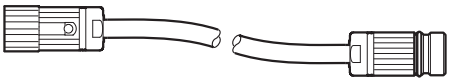
Function:



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

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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

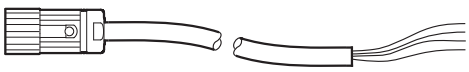
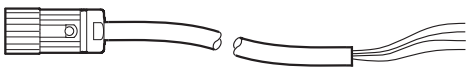
Distance encoder (CANopen)

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

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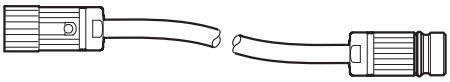
Cable	Length/installation type	Component
Length 1 m: Part number: 13281348 **Length 1.5 m:** Part number: 13281356 **Length 2 m:** Part number: 13281364 **Length 2.5 m:** Part number: 13281372 **Length 3 m:** Part number: 13281380 **Length 4 m:** Part number: 13281399 **Length 5 m:** Part number: 13281402 **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)

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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

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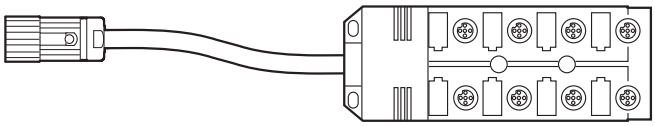
3.14.6 Connection cables for the CAN interface

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 **Order-specific 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 **Order-specific 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	–

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3.14.7 Connection cables for digital inputs and outputs

Cables	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:

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

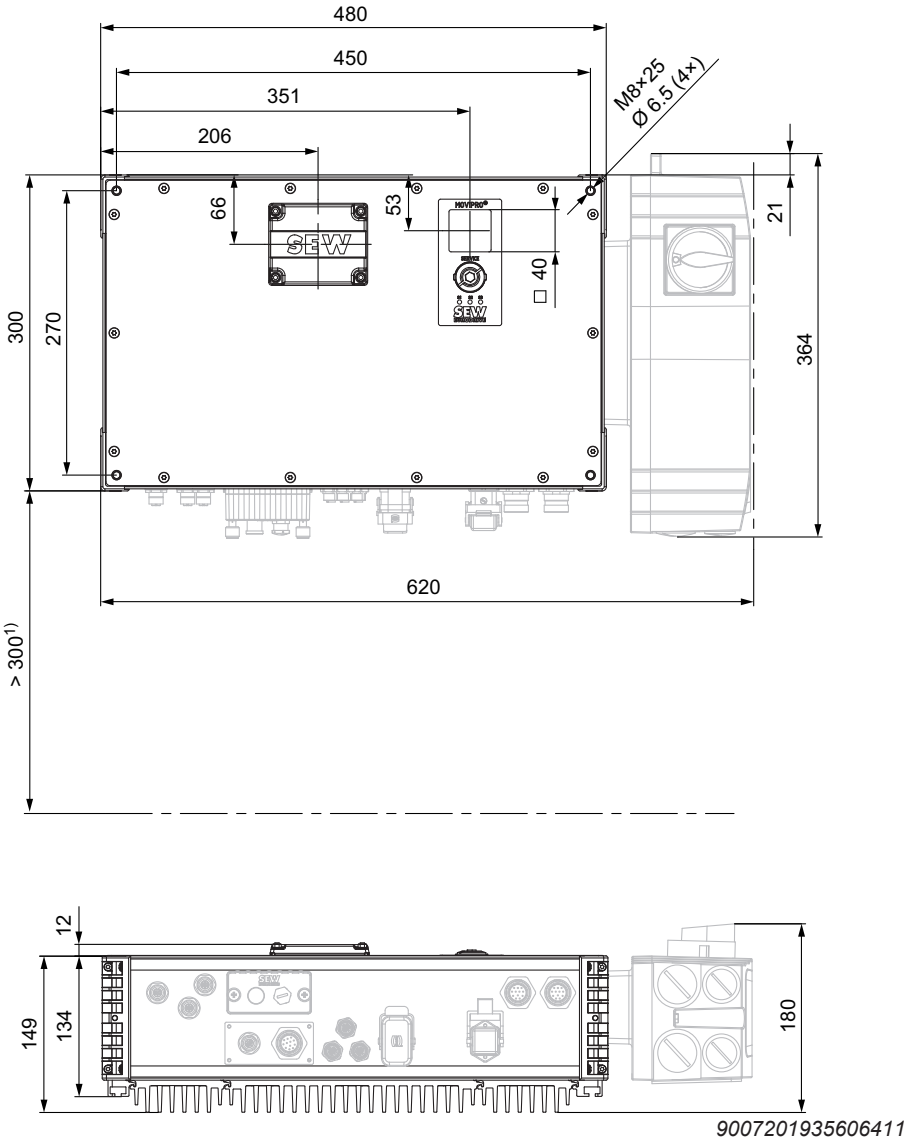
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3.15 Dimension drawings

3.15.1 MOVIPRO® SDC/ADC

2.2 kW

The dimension drawing shows the mechanical dimensions of the device in mm:

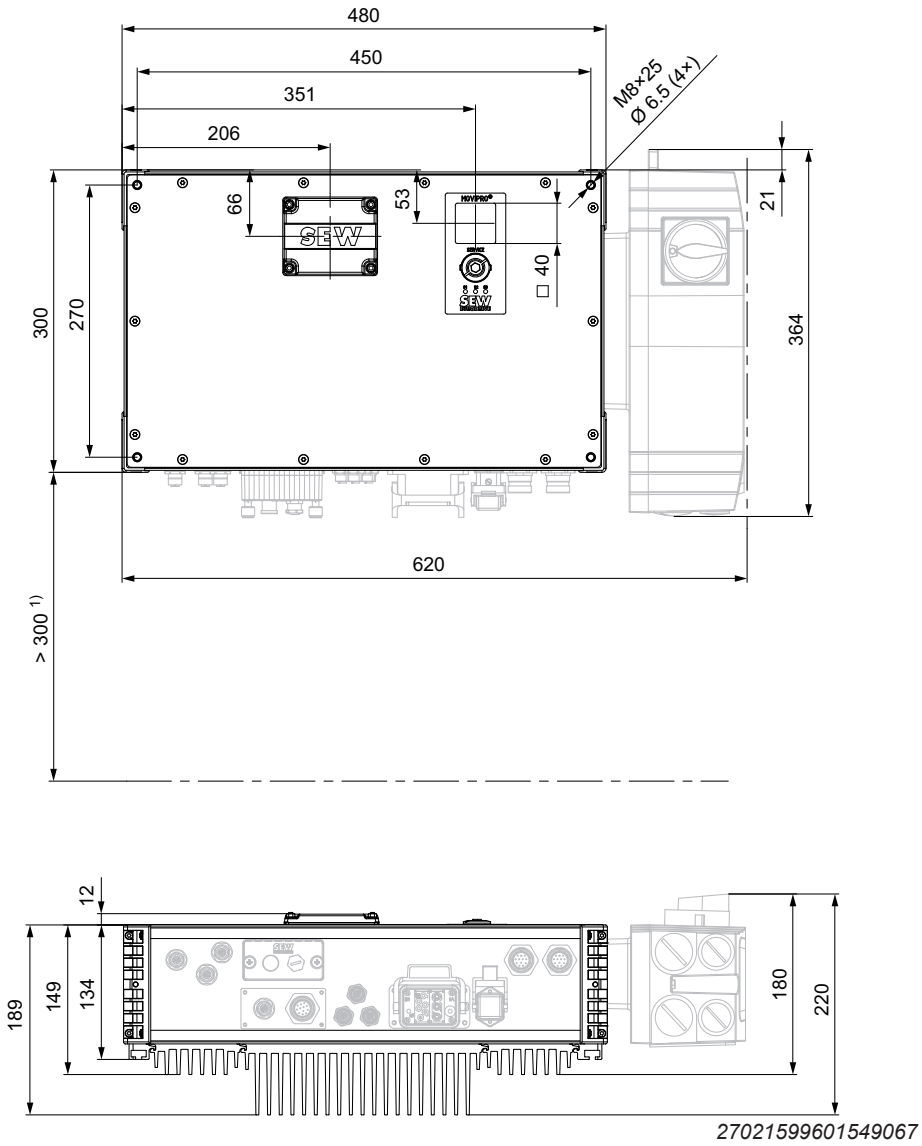


1) Recommended clearance for connection cables (can vary depending on the cables used)

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4 kW, 7.5 kW

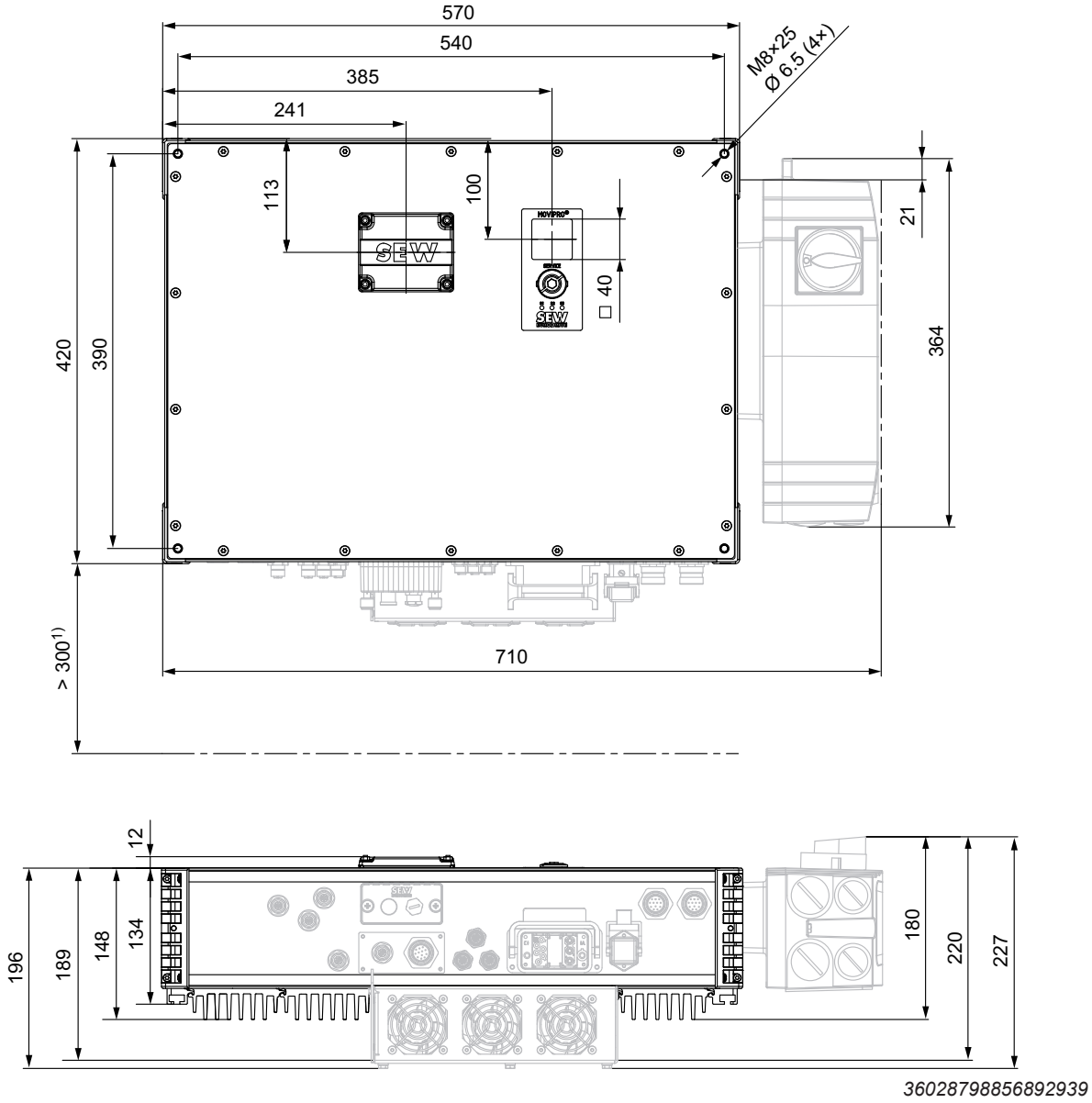
The dimension drawing shows the mechanical dimensions of the device in mm:



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

11 kW, 15 kW, 22 kW

The dimension drawing shows the mechanical dimensions of the device in mm:

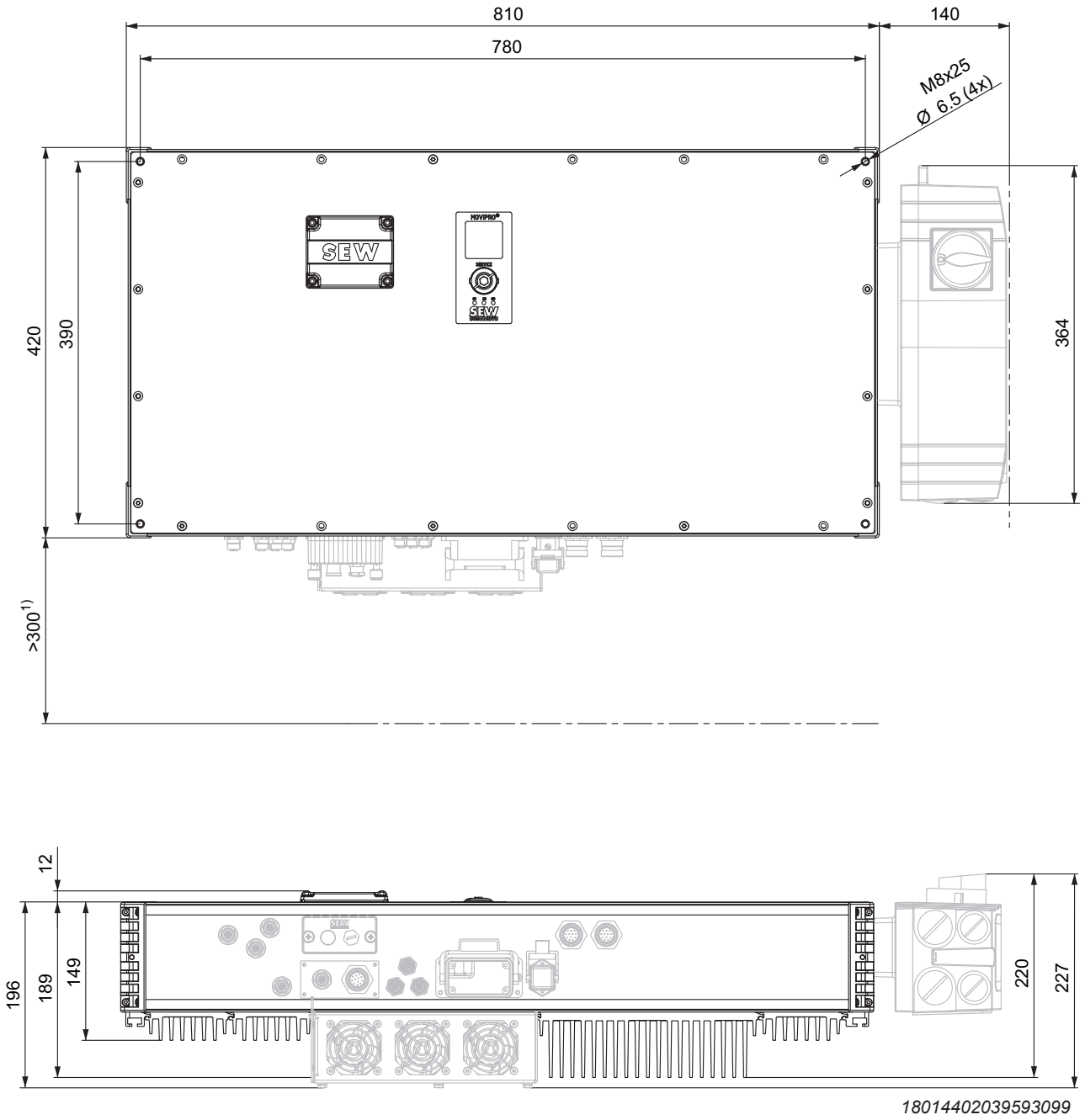


36028798856892939

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

11 kW, 15 kW with R15 regenerative power supply module

The dimension drawing shows the mechanical dimensions of the device in mm:



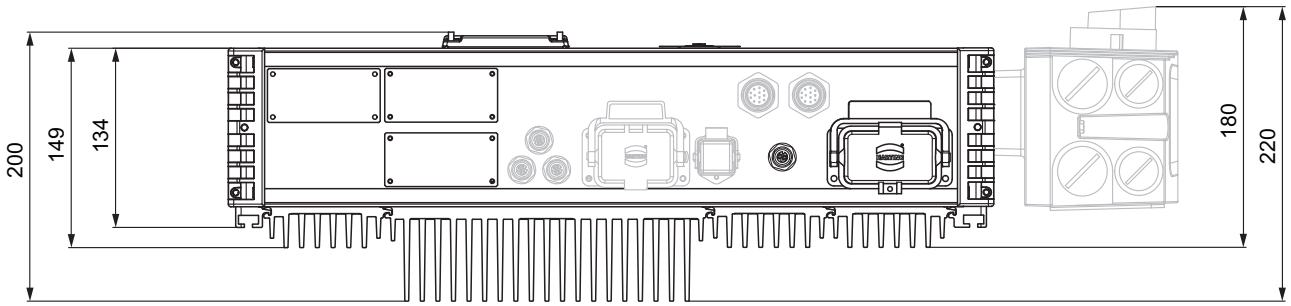
1) Recommended clearance for connection cables (can vary depending on the cables used)

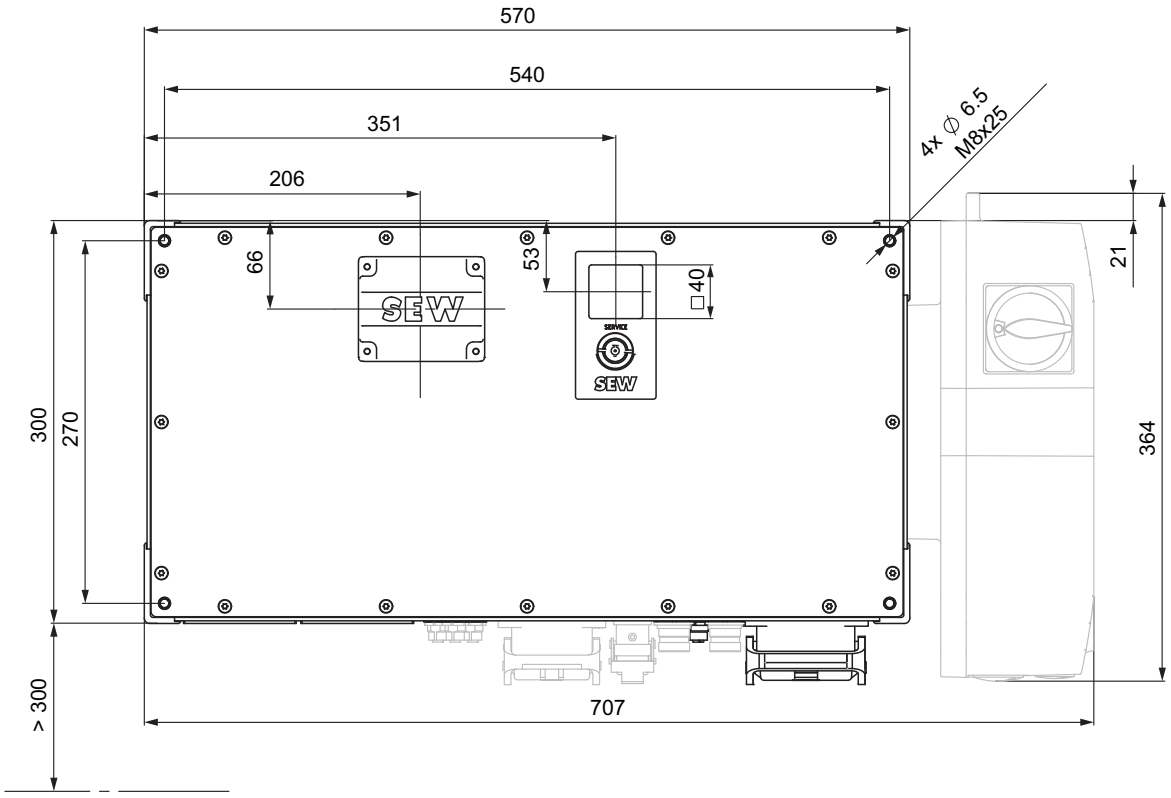
3.15.2 MOVIPRO® ADC only

With energy management interface

4 kW, 7.5 kW

The dimension drawing shows the mechanical dimensions in mm:

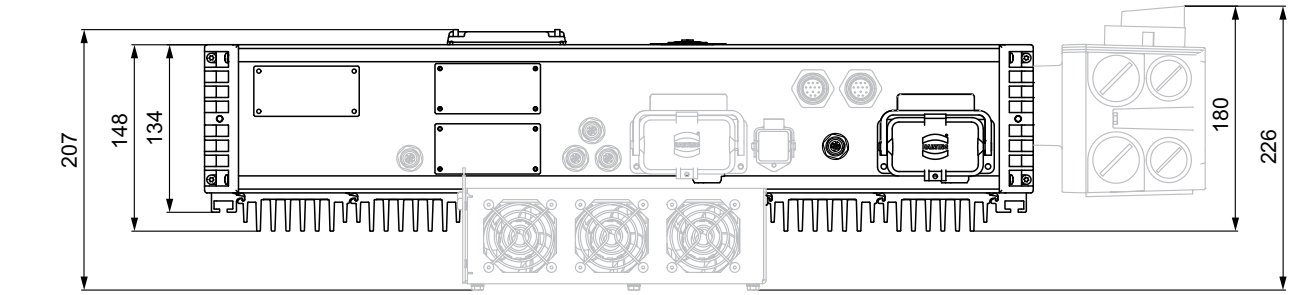


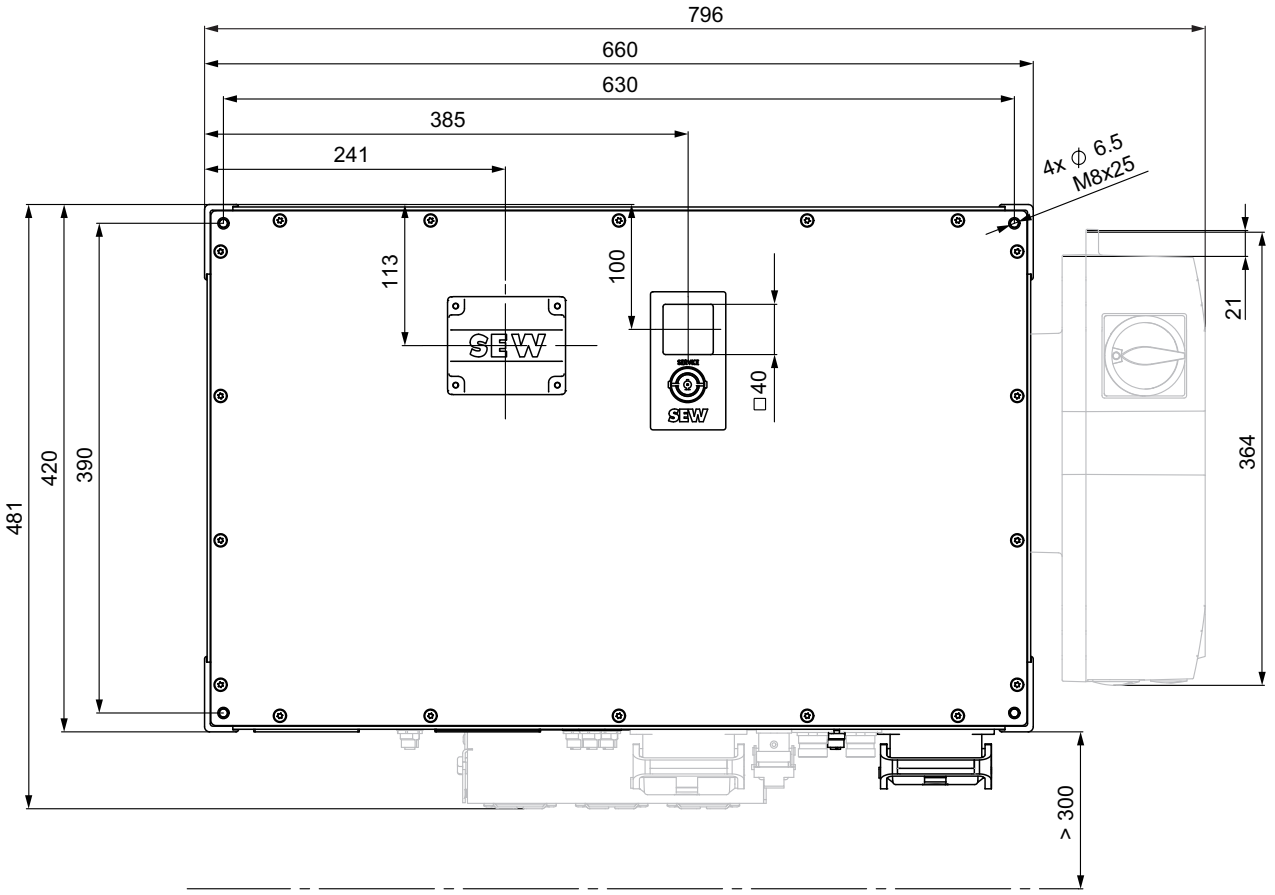


9007208604670347

11 kW, 15 kW

The dimension drawing shows the mechanical dimensions in mm:

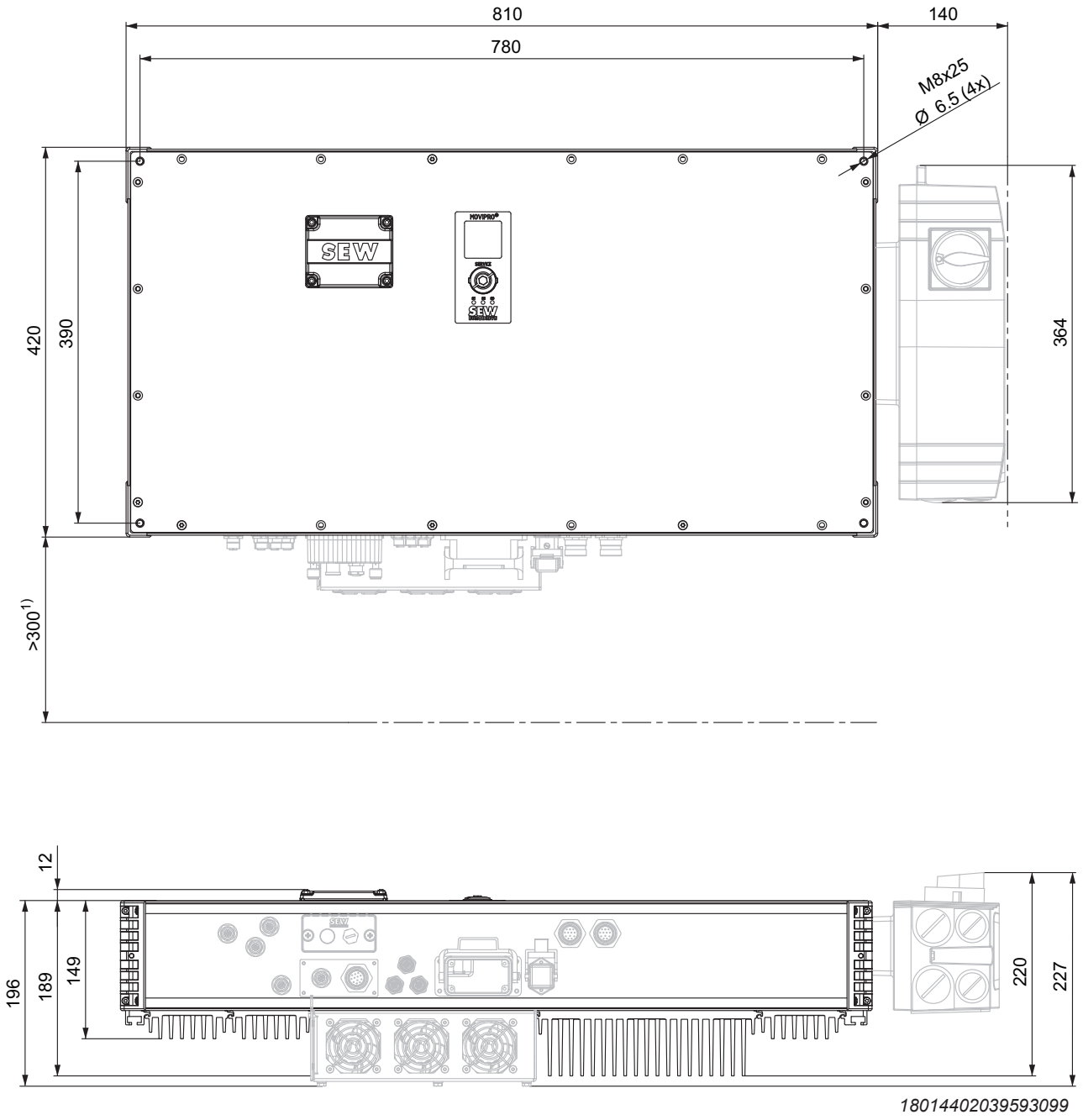




9007208061628171

11 kW, 15 kW with R15 regenerative power supply module

The dimension drawing shows the mechanical dimensions of the device in mm:



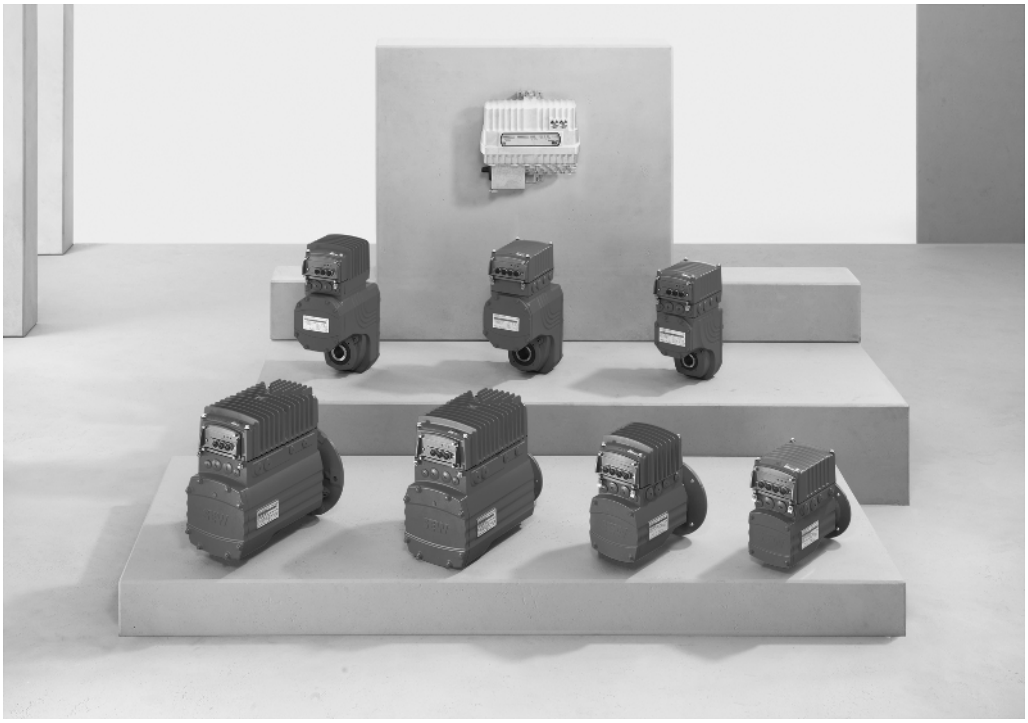
1) Recommended clearance for connection cables (can vary depending on the cables used)

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4 MOVIFIT® FDC

4.1 Description

The following figure shows a MOVIFIT® FDC with assigned MOVIGEAR® and DRC.. drive units.



11929629067

4.1.1 MOVIFIT® FDC device properties

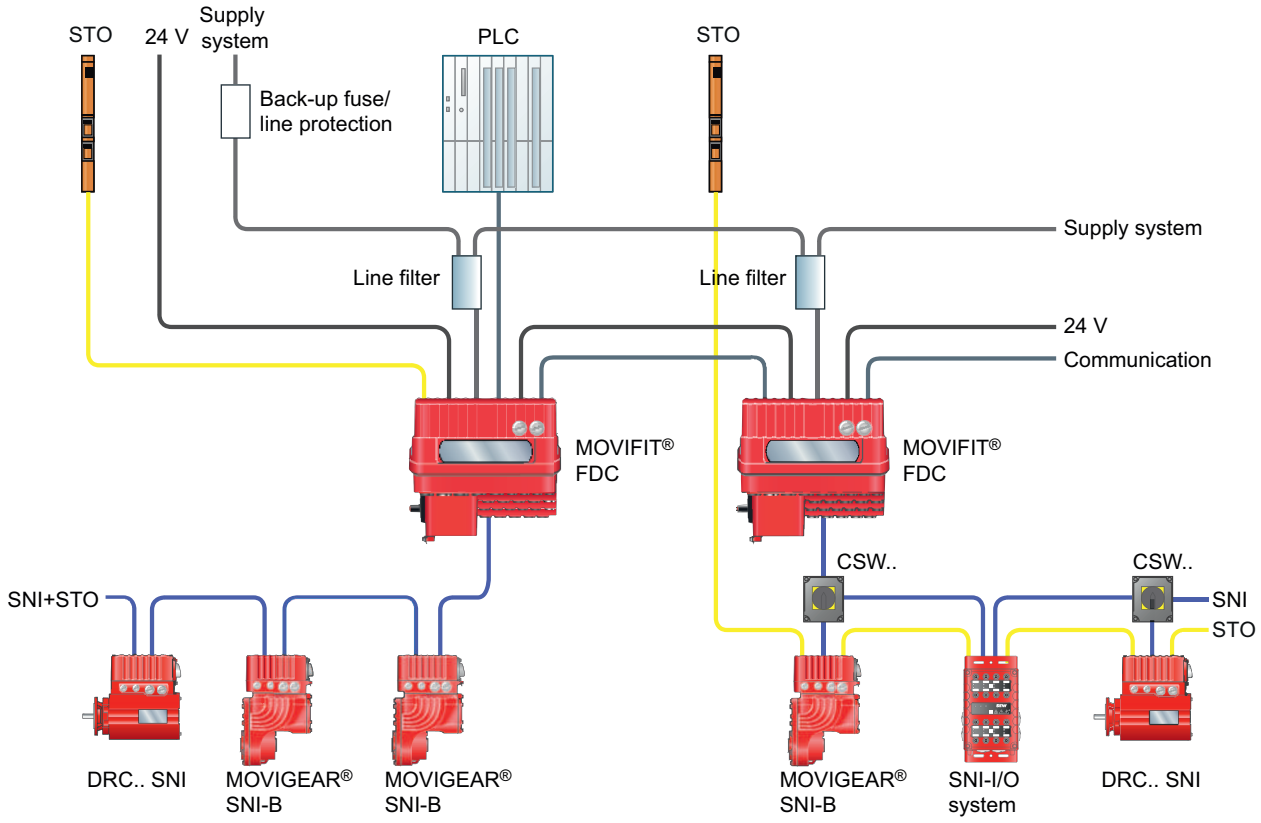
- Up to 10 SNI actuators or 16 SBus actuators can be connected
- **S**ingle Line **N**etwork **I**nstallation (SNI) and/or SBus communication
- Maintenance switch
- Integrated fieldbus interfaces
  - PROFINET IO
  - Modbus TCP
  - EtherNet/IP™
- Service interfaces
  - USB
  - Ethernet
- Digital inputs/outputs
- Configurable application modules
- User-defined programming in accordance with IEC 61131-3
- Easy data management via SD memory card

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4.1.2 Installation topologies

SNI installation topology

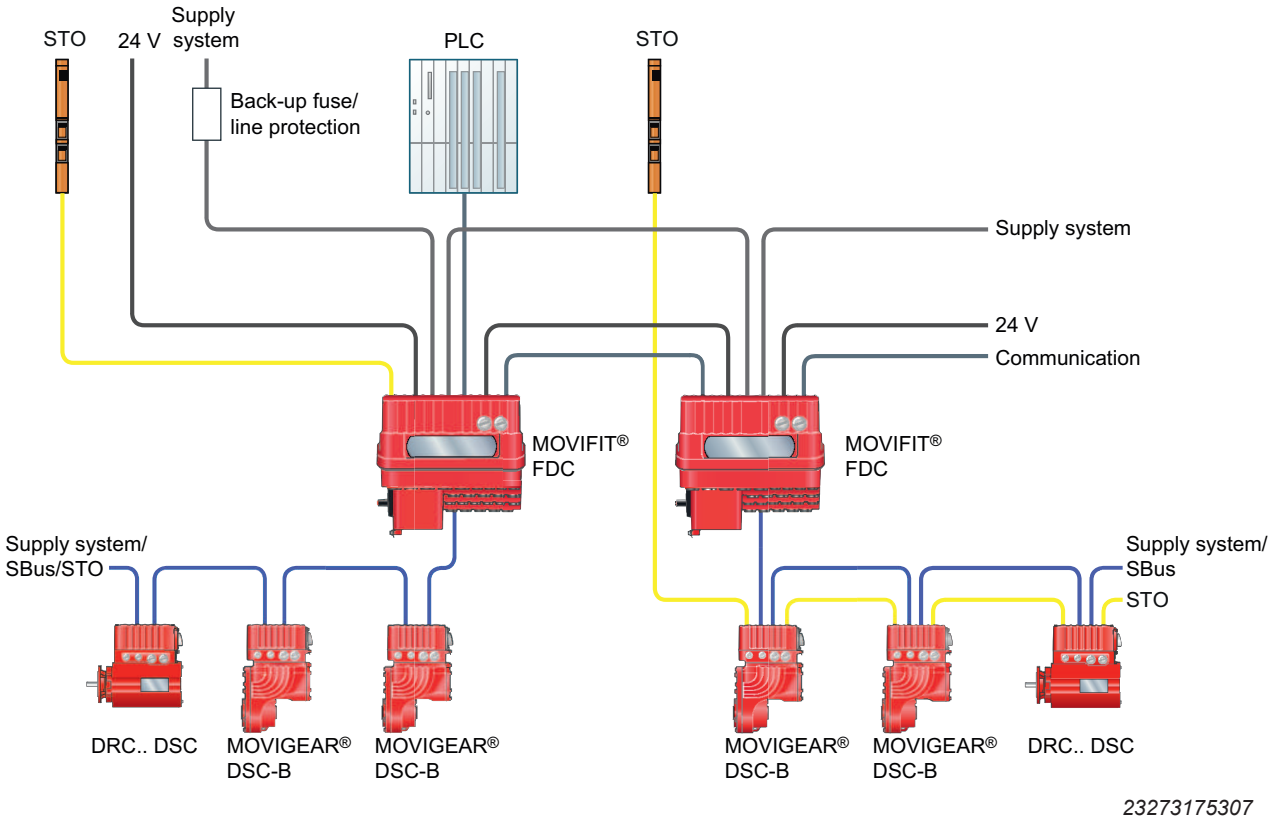
The following figure shows the basic SNI installation topology of MOVIFIT® FDC in conjunction with MOVIGEAR® SNI-B and DRC.. SNI-B drive units:



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DSC installation topology

The following figure shows the basic SBus installation topology of MOVIFIT® FDC in conjunction with MOVIGEAR® DSC-B and DRC.. DSC-B drive units:



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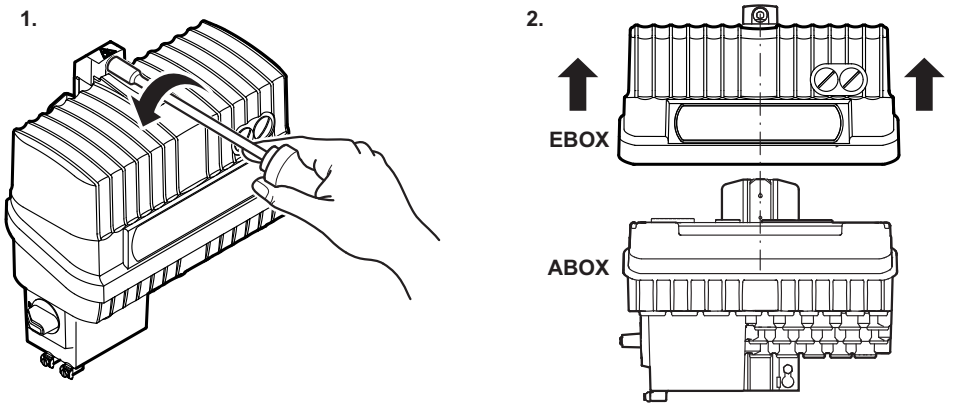
4.2 Type designation and unit concept

4.2.1 Characteristics

The MOVIFIT® FDC housing has the following characteristics:

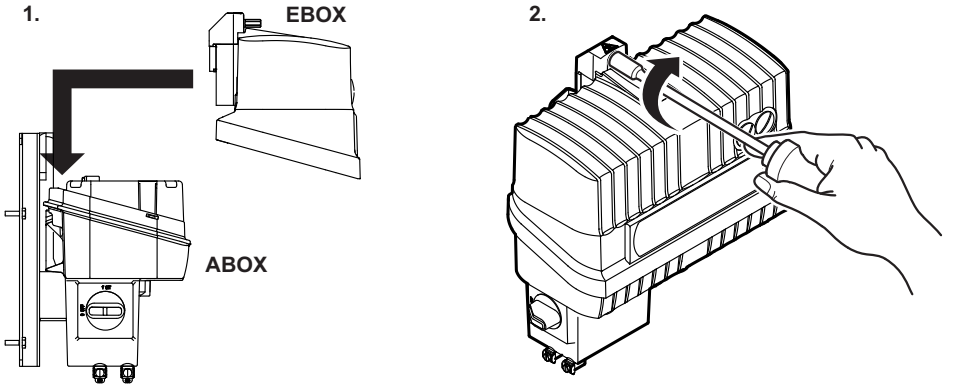
- Aluminum die-cast housing
  - High degree of stability
  - IP65 design for industrial requirements
  - Optional variant for use in wet areas with special surface finish for the food industry.
- Separation of connection unit (ABOX) and electronics (EBOX):
  - No damage to the electronics during installation and maintenance
  - Data backup of user parameters in the SD memory card of the EBOX
  - Fast replacement of electronics without wiring: Only one screw is required to connect the EBOX to the ABOX; see the following figures.

Removing the EBOX



4880603531

- **Placing the EBOX in position and screwing it on**



4880605835

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4.2.2 Sample type designation

EBOX type designation

The following table shows an example of the type designation of the MOVIFIT® **MTC11A000-503-R9500-00** FDC EBOX:

MT	**Series**	MT = MOVIFIT®	
C	**Device type**	C = MOVIFIT® FDC	
11	**Series**	11 = Standard (IP65) 13 = Design for wet areas (IP65)	
A	**Version A**		
000	**Device power**	000 = MTC variant (MOVIFIT® FDC)	
-			
50	**Connection voltage**	50 = 380 V – 500 V	
3	**Connection type**	3 = 3-phase (AC)	
-			
R9500	**Design** **Performance class** **(SD memory card)**	R95.. =	OMC41B-T0 (CCU standard, parameterizable)
		R96.. =	OMH41B-T0 (MOVI-PLC® standard, programmable)
		R97.. =	OMC41B-T0 – OMC41B-T1 (CCU advanced, parameterizable)
		R98.. =	OMH41B-T0 – OMH41B-T2 (MOVI-PLC® advanced, programmable)
-			
00	**EBOX design**	00 = Series	

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ABOX type designation

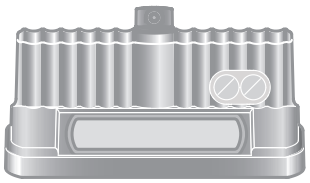
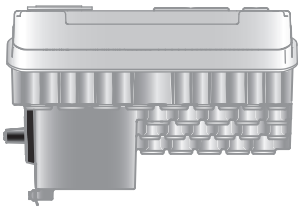
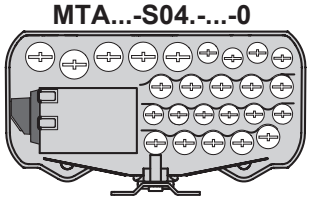
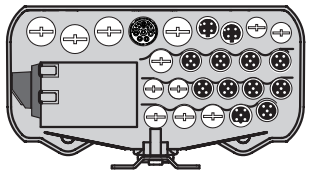
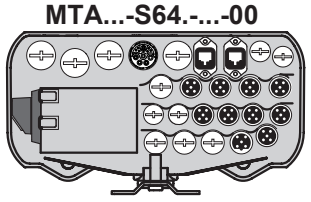
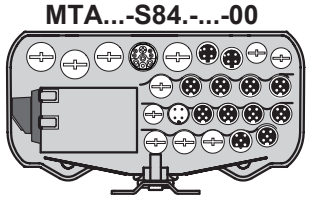
The following table shows an example of the type designation of the MOVIFIT® FDC **MTA11A-503-S043-M16-00/M11** ABOX:

MT	**Type series**	MT = MOVIFIT®
A	**Device type**	A = ABOX (connection box)
11	**Series**	11 = Standard (IP65) 13 = For wet areas (IP65)
A	**Version A**	
-		
50	**Connection voltage**	50 = 380 V – 500 V
3	**Connection type**	3 = 3-phase (AC)
-		
S04	**Connection configuration**	S04 = Standard ABOX with terminals and cable bushings S54 = Hybrid ABOX with M12 for I/Os + bus and plug connector for MOVIGEAR® / DRC.. S64 = Hybrid ABOX with M12 for I/Os push-pull RJ45 for bus and plug connector for MOVIGEAR® / DRC.. S84 = Hybrid ABOX with M12 for I/Os + bus + 24 V subsidiary signal (suitable for STO) and plug connector for MOVIGEAR® / DRC..
3	**Fieldbus**	3 = PROFINET IO, EtherNet/IP™, Modbus TCP
-		
M16	**Maintenance switch**	M16 = Load disconnector and line protection up to 15 A M20 = Load disconnector and line protection up to 20 A
-		
00	**ABOX design**	00 = Series
/		
M11	**ABOX option**	M11 = Stainless steel mounting rail

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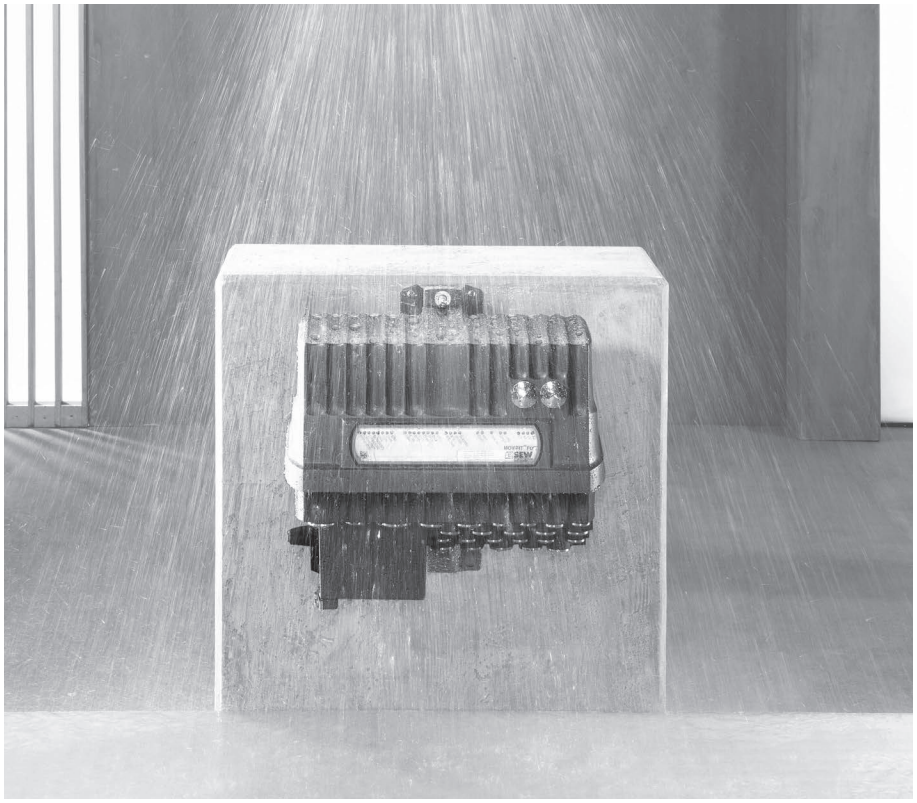
4.2.3 Combinations with MOVIFIT® FDC

The following figures show the MOVIFIT® FDC variants:

EBOX	ABOX	Design
MTC...-...-00  MOVIFIT® FDC for controlling MOVIGEAR® and DRC.. drive units	 ABOX	**MTA...-S04.-...-0**  Standard ABOX with terminals and cable bushings
		MTA...-S54.-...-00  Hybrid ABOX with M23 plug connectors for MOVIGEAR®/ DRC.. and M12 for I/Os and bus
		MTA...-S64.-...-00  Hybrid ABOX with M23 plug connectors for MOVIGEAR®/ DRC.. M12 for I/Os and push-pull RJ45 for bus
		MTA...-S84.-...-00  Hybrid ABOX with M23 plug connectors for MOVIGEAR®/ DRC.. and M12 for I/Os and bus and M12 for 24 V auxiliary signal (suitable for STO)

4.3 Design for use in wet areas

The following figure shows the design for use in wet areas for MOVIFIT® FDC:



6586569227

4.3.1 Features

The design for use in wet areas has the following properties:

- IP65 in accordance with EN 60529 (MOVIFIT® housing closed and all cable bushings sealed according to the relevant degree of protection)
- Easy-to-clean housing (self-draining design)
- Surface coating with anti-stick property (= surface protection HP200)
- High impact resistance of the surface against mechanical damage
- Coated mounting rail with anti-stick properties
- The design for use in wet areas perfectly complements DRC.. drive units in ASEPTIC/ASEPTIC$^{plus®}$ design and MOVIGEAR® drive units with optional package for wet areas.

INFORMATION

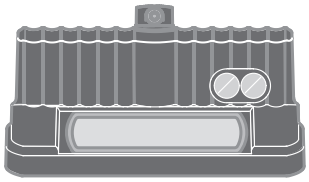
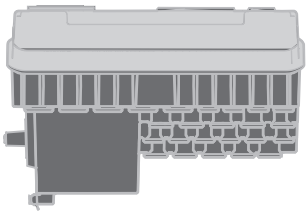
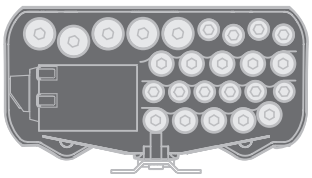
For more information, refer to the "MOVIFIT® FDC" operating instructions.

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4.3.2 Possible combinations in connection with the design for use in wet areas

INFORMATION

The design for use in wet areas is only available in connection with the standard ABOX with terminals and cable bushings.

EBOX	ABOX	Design
MTC13...-...-00  MOVIFIT® FDC for controlling MOVIGEAR® and DRC.. drive units		**MTA13....-S04.-...-00**  Standard ABOX with terminals and cable bushings

All illustrations with ASEPTIC/ASEPTIC$^{plus®}$ design are displayed with a shading (= surface protection) in this documentation

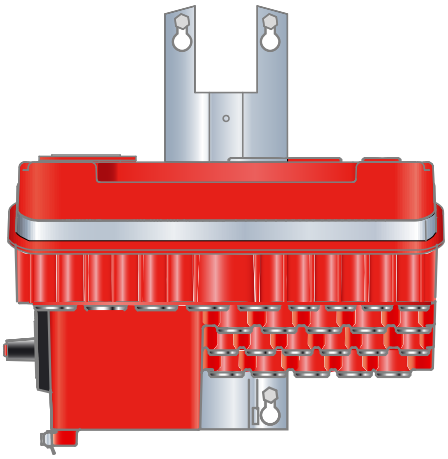
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4.4 Flexible connection technology

4.4.1 Overview

The flexible connection technology of MOVIFIT® FDC allows the unit to be adjusted perfectly to suit various installation philosophies because, in addition to the standard version that has to be wired up, there are also prewired solutions with industry-standard plug connectors.

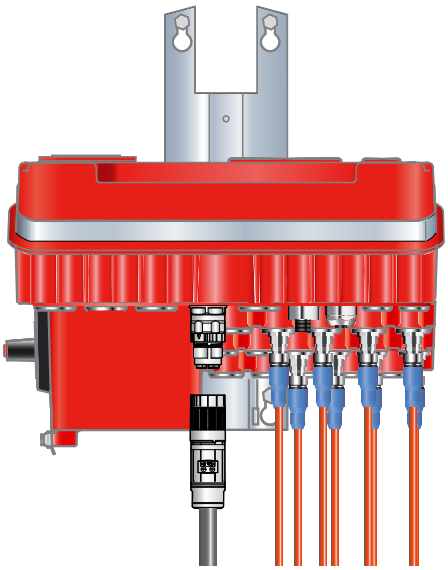
- **Standard ABOX**
  - With terminals and cable bushings



5814688651

- **Hybrid ABOX**
  - with M23 plug connector for MOVIGEAR®/DRC..
  - with M12 for I/Os and bus

    or with M12 for I/Os and push-pull RJ45 for bus



5814690571

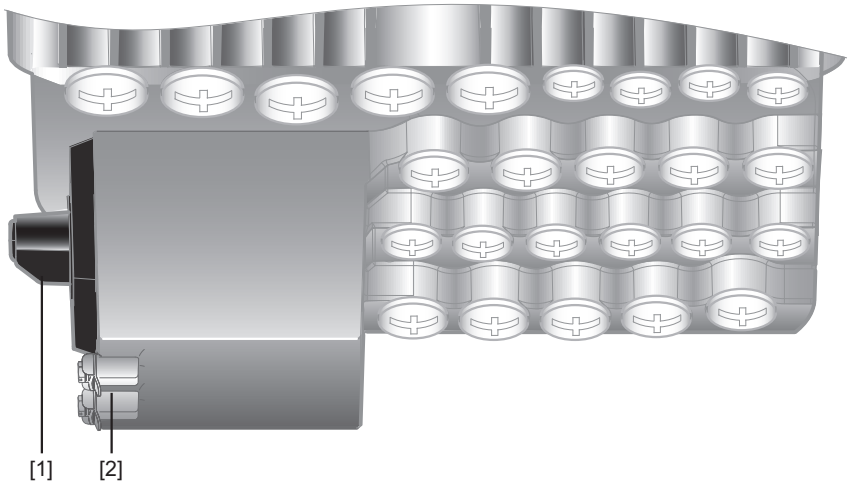
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4.5 Available ABOXes

4.5.1 Standard ABOX "MTA...-S04.-...-00"

Description

The following figure depicts the standard ABOX "MTA...-S04.-...-00" with terminals and cable bushings:



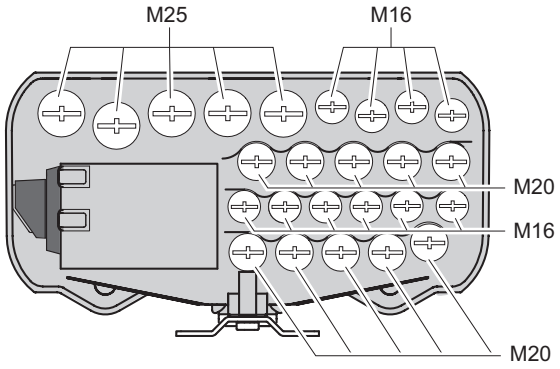
3045820427

[1] Maintenance switch
[2] PE connection

Screw fittings

The following figure depicts the screw fittings of the standard ABOX:

PROFINET MTA11A-503-S043-...-00
EtherNet/IP™ MTA11A-503-S043-...-00
Modbus/TCP MTA11A-503-S043-...-00



36028800064490123

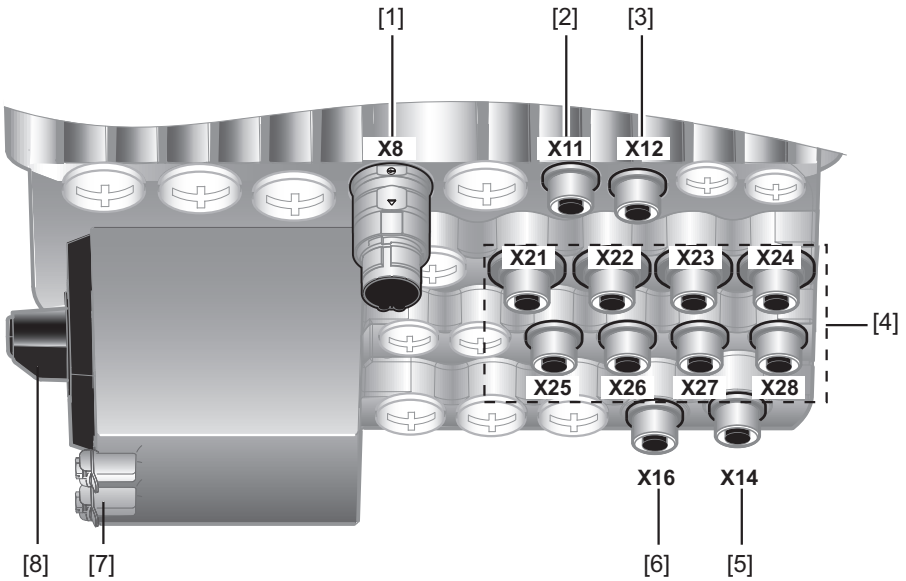
4.5.2 Hybrid ABOX "MTA...-S54.-...-00"

INFORMATION

- The hybrid ABOX is based on the standard ABOX "MTA...-S04.-...-00". The following therefore only describes the additional plug connectors in comparison with the standard ABOX.

Description

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



9007202306223883

[1] X8 Drive unit connection
- AC 400 V output (SNI cable)
- or AC 400 V output and CAN bus (hybrid cable)
- or AC 400 V output

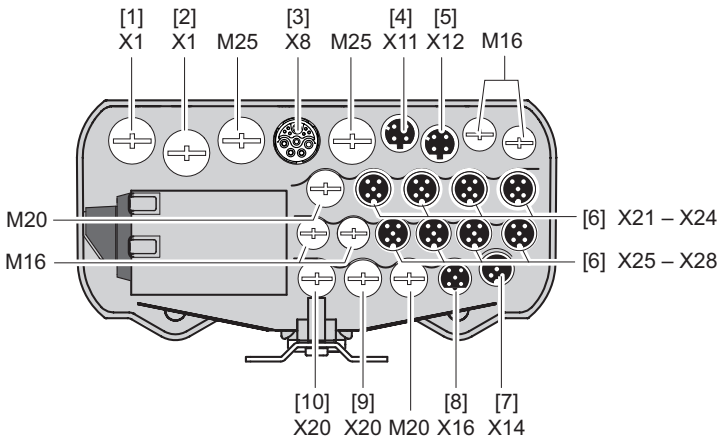
[2] X11 Ethernet fieldbus, port 1
[3] X12 Ethernet fieldbus, port 2
[4] X21 – X28 Digital inputs/outputs
[5] X14 SBus (CAN) – external
[6] X16 RS485 interface – external
[7] PE connection
[8] Maintenance switch

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Plug connector positions

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

PROFINET	MTA11A-503-S543-...-00
EtherNet/IP™	MTA11A-503-S543-...-00
Modbus/TCP	MTA11A-503-S543-...-00



45035999325661707

[1]	X1	AC 400 V input	(terminals underneath the M25 screw fitting)
[2]	X1	Reserved	(M25 screw fitting)
[3]	X8	Drive unit connection • AC 400 V output (SNI cable) • or AC 400 V output and CAN bus (hybrid cable) • or AC 400 V output	(M23, SEW insert, SpeedTec equipment, company: TE/ Intercontec, female, coding ring: red-violet, protected against contact)
[4]	X11	Ethernet fieldbus, port 1	(M12, 4-pole, female, D-coded)
[5]	X12	Ethernet fieldbus, port 2	(M12, 4-pole, female, D-coded)
[6]	X21 – X28	Digital inputs/outputs	(M12, 5-pole, female, A-coded)
[7]	X14	SBus (CAN) – external	(M12, 5-pole, female, A-coded)
[8]	X16	RS485 interface – external	(M12, 5-pole, female, B-coded)
[9]	X20	Reserved	(M20 screw fitting)
[10]	X20	DC 24 V input	(terminals underneath the M20 screw fitting)

You find the pin assignment of the plug connectors in the operating instructions > "Electrical connections" chapter.

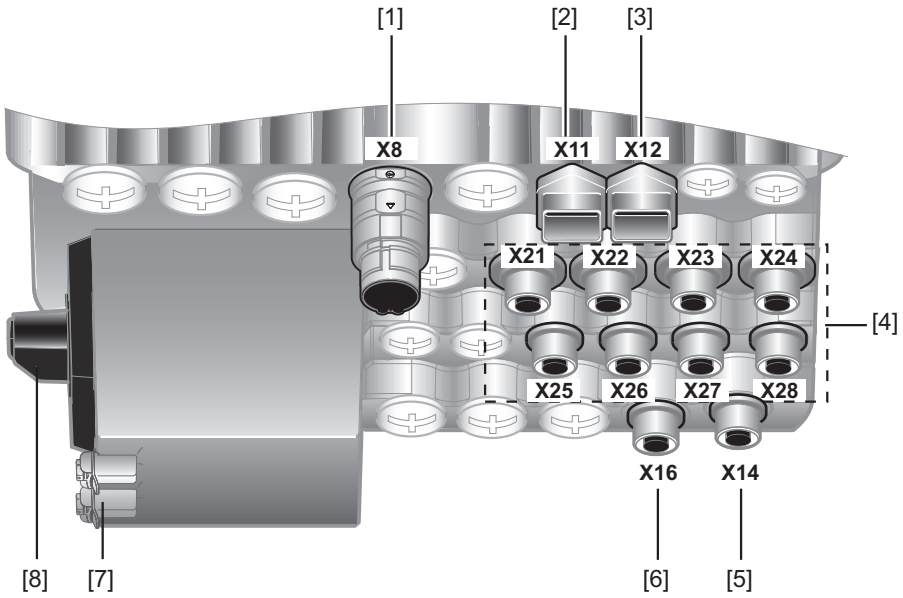
4.5.3 Hybrid ABOX "MTA...-S64.-...-00"

INFORMATION

- The hybrid ABOX is based on the standard ABOX "MTA...-S04.-...-00". The following therefore only describes the additional plug connectors in comparison with the standard ABOX.

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:



9007202308003083

[1] X8 Drive unit connection
- AC 400 V output (SNI cable)
- or AC 400 V output and CAN bus (hybrid cable)
- or AC 400 V output

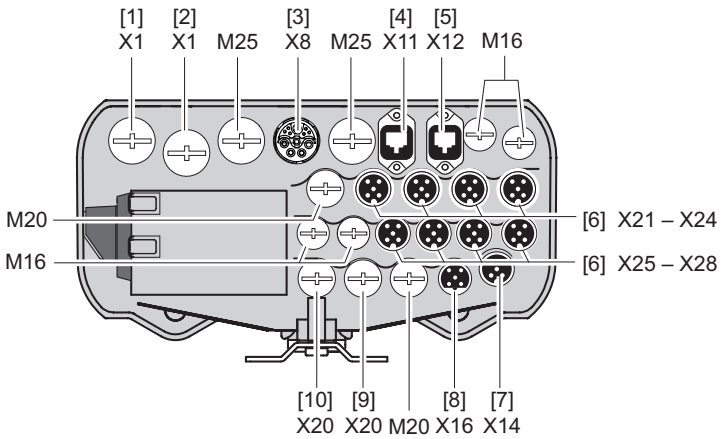
[2] X11 Ethernet fieldbus, port 1
[3] X12 Ethernet fieldbus, port 2
[4] X21 – X28 Digital inputs/outputs
[5] X14 SBus (CAN) – external
[6] X16 RS485 interface – external
[7] PE connection
[8] Maintenance switch

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Plug connector positions

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

PROFINET	MTA11A-503-S643-...-00
EtherNet/IP™	MTA11A-503-S643-...-00
Modbus/TCP	MTA11A-503-S643-...-00



36028800072239627

[1]	X1	AC 400 V input	(terminals underneath the M25 screw fitting)
[2]	X1	Reserved	(M25 screw fitting)
[3]	X8	Drive unit connection • AC 400 V output (SNI cable) • or AC 400 V output and CAN bus (hybrid cable) • or AC 400 V output	(M23, SEW insert, SpeedTec equipment, company: TE/ Intercontec, female, coding ring: red-violet, protected against contact)
[4]	X11	Ethernet fieldbus, port 1	(Han® 3 A RJ45)
[5]	X12	Ethernet fieldbus, port 2	(Han® 3 A RJ45)
[6]	X21 – X28	Digital inputs/outputs	(M12, 5-pole, female, A-coded)
[7]	X14	SBus (CAN) – external	(M12, 5-pole, female, A-coded)
[8]	X16	RS485 interface – external	(M12, 5-pole, female, B-coded)
[9]	X20	Reserved	(M20 screw fitting)
[10]	X20	DC 24 V input	(terminals underneath the M20 screw fitting)

You find the pin assignment of the plug connectors in the operating instructions > "Electrical connections" chapter.

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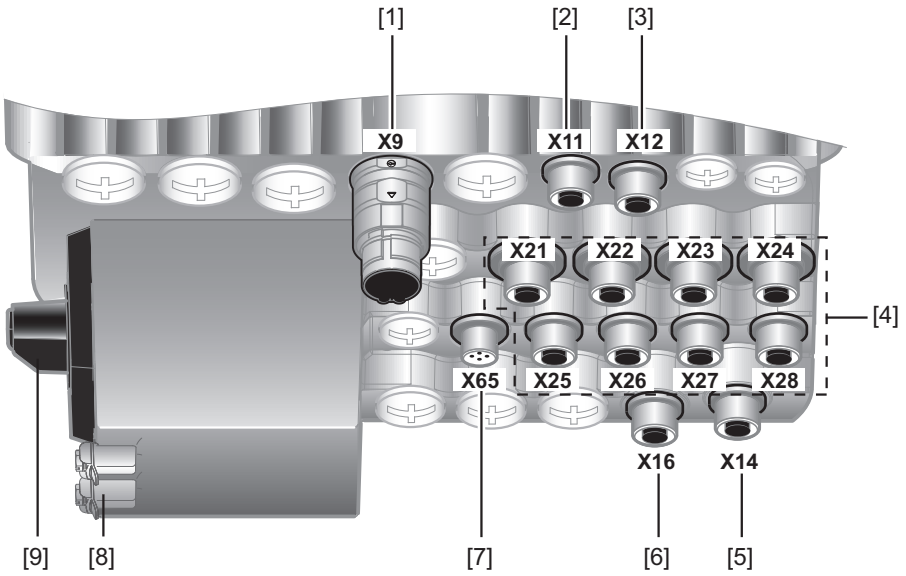
4.5.4 Hybrid ABOX "MTA...-S84.-...-00"

INFORMATION

- The hybrid ABOX is based on the standard ABOX "MTA...-S04.-...-00". The following therefore only describes the additional plug connectors in comparison with the standard ABOX.

Description

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



19812841867

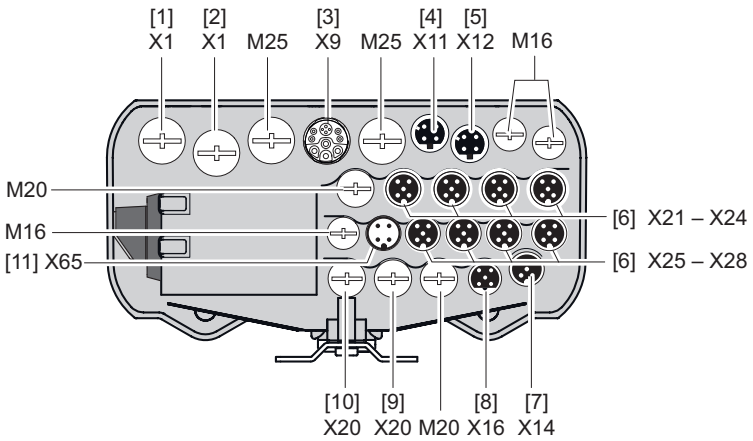
[1] X9 Drive unit connection
AC 400 V output, communication and 24 V subsidiary signal (suitable for STO)
[2] X11 Ethernet fieldbus, port 1
[3] X12 Ethernet fieldbus, port 2
[4] X21 – X28 Digital inputs/outputs
[5] X14 SBus (CAN) – external
[6] X16 RS485 interface – external
[7] X65 DC 24 V input subsidiary signal (suitable for STO)
[8] PE connection
[9] Maintenance switch

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Plug connector positions

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

PROFINET	MTA11A-503-S843-...-00
EtherNet/IP™	MTA11A-503-S843-...-00
Modbus/TCP	MTA11A-503-S843-...-00



19817650059

[1]	X1	AC 400 V input	(terminals underneath the M25 screw fitting)
[2]	X1	Reserved	(M25 screw fitting)
[3]	X9	Drive unit connection AC 400 V output, communication and 24 V auxiliary signal (suitable for STO)	(M23, SEW insert, female, SpeedTec-capable, company: TE/ Intercontec, coding ring: yellow, protected against contact)
[4]	X11	Ethernet fieldbus, port 1	(M12, 4-pole, female, D-coded)
[5]	X12	Ethernet fieldbus, port 2	(M12, 4-pole, female, D-coded)
[6]	X21 – X28	Digital inputs/outputs	(M12, 5-pole, female, A-coded)
[7]	X14	SBus (CAN) – external	(M12, 5-pole, female, A-coded)
[8]	X16	RS485 interface – external	(M12, 5-pole, female, B-coded)
[9]	X20	Reserved	(M20 screw fitting)
[10]	X20	DC 24 V input	(terminals underneath the M20 screw fitting)
[11]	X65	DC 24 V input auxiliary signal (suitable for STO)	(M12, 4-pole, male, A-coded)

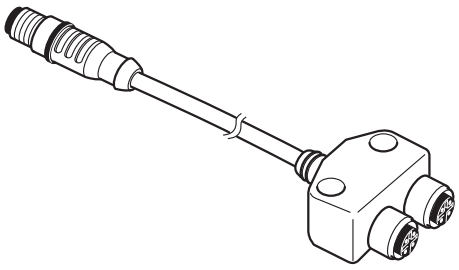
You find the pin assignment of the plug connectors in the operating instructions > "Electrical connections" chapter.

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4.5.5 Recommended Y adapter for the hybrid ABOX

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

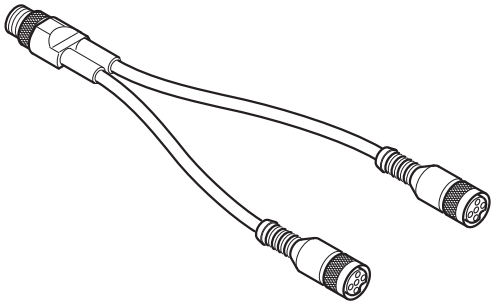
The Y adapter is available from different manufacturers:



9007200170035339

Manufacturer: Escha

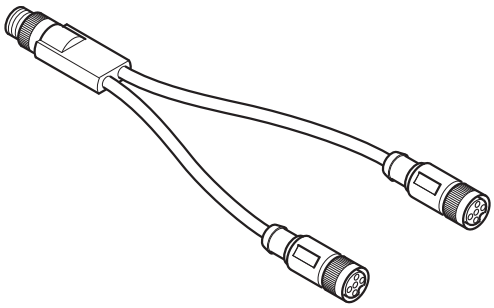
Type: WAS4-0,3-2FKM3/..



9007200435121675

Manufacturer: Binder

Type: 79 5200..

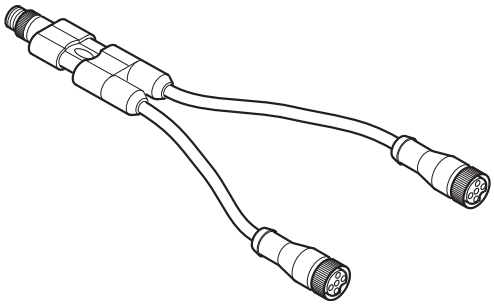


1180375179

Manufacturer: Phoenix Contact

Type: SAC-3P-Y-2XFS SCO/.../...

The cable sheath is made of PVC. Provide suitable UV protection.



1180386571

Manufacturer: Murrelektronik

Type: 7000-40721-..

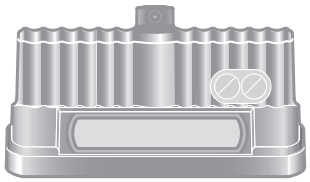
31550126/EN – 11/2023

4.6 Selection tables

4.6.1 MOVIFIT® FDC in connection with standard ABOX MTA...-S04.-...-00

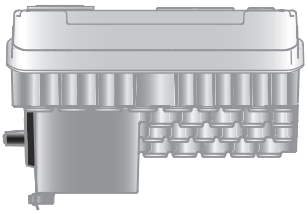
EBOX

MTC...-...-00

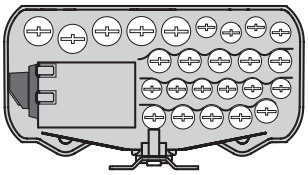


MOVIFIT® FDC for controlling MOVIGEAR® and DRC..

ABOX



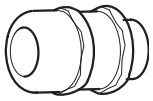
MTA...-S04.-...-00



Standard ABOX with terminals and cable bushings

Performance class	Fieldbus	Type of EBOX	Type of ABOX
CCU standard (R95..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9500-00	MTA11A-503-S043-M16-00 MTA11A-503-S043-M20-00
MOVI-PLC® standard (R96..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9600-00	MTA11A-503-S043-M16-00 MTA11A-503-S043-M20-00
CCU advanced (R97..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9700-00	MTA11A-503-S043-M16-00 MTA11A-503-S043-M20-00
MOVI-PLC® advanced (R98..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9800-00	MTA11A-503-S043-M16-00 MTA11A-503-S043-M20-00

Accessories

Type	Image	Contents	Size	Ø cable	Part number
EMC cable gland (brass, nickel plated)		10 pieces	M16 × 1.5	5 to 9 mm	18204783
		10 pieces	M20 × 1.5	9 to 13 mm	18204791
		10 pieces	M25 × 1.5	11 to 16 mm	18204805
Screw plug for interfaces on the EBOX		1 piece	M25 × 1.5		18130623

Option

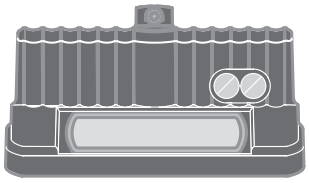
Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11

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4.6.2 MOVIFIT® FDC in connection with standard ABOX and design for use in wet areas

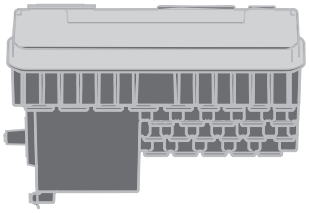
EBOX

MTC13...-...-00
(design for use in wet areas)

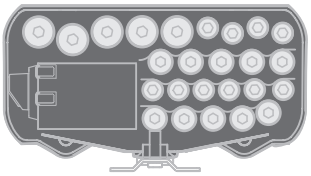


MOVIFIT® FDC for controlling MOVIGEAR® and DRC..

ABOX



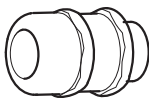
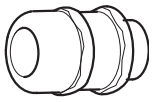
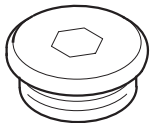
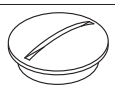
MTA13...-S04.-...-00
(design for use in wet areas)



Standard ABOX
with terminals and cable bushings

Performance class	Fieldbus	Type of EBOX	Type of ABOX
CCU standard (R95..)	PROFINET EtherNet/IP™ Modbus TCP	MTC13A000-503-R9500-00	MTA13A-503-S043-M16-00 MTA13A-503-S043-M20-00
CCU standard (R96..)	PROFINET EtherNet/IP™ Modbus TCP	MTC13A000-503-R9600-00	MTA13A-503-S043-M16-00 MTA13A-503-S043-M20-00
MOVI-PLC® advanced (R97..)	PROFINET EtherNet/IP™ Modbus TCP	MTC13A000-503-R9700-00	MTA13A-503-S043-M16-00 MTA13A-503-S043-M20-00
MOVI-PLC® advanced (R98..)	PROFINET EtherNet/IP™ Modbus TCP	MTC13A000-503-R9800-00	MTA13A-503-S043-M16-00 MTA13A-503-S043-M20-00

Accessories

Type	Image	Contents	Size	Ø cable	Part number
EMC cable gland (brass, nickel plated)		10 pieces	M16 × 1.5	5 to 9 mm	18204783
		10 pieces	M20 × 1.5	9 to 13 mm	18204791
		10 pieces	M25 × 1.5	11 to 16 mm	18204805
EMC cable gland (stainless steel)		10 pieces	M16 × 1.5	5 to 9 mm	18216366
		10 pieces	M20 × 1.5	9 to 13 mm	18216374
		10 pieces	M25 × 1.5	11 to 16 mm	18216382
Stainless steel screw plugs		10 pieces	M16 × 1.5		18202233
		10 pieces	M20 × 1.5		18202241
		10 pieces	M25 × 1.5		18202268
Screw plug for interfaces on the EBOX		1 piece	M25 × 1.5		18130623

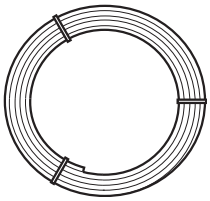
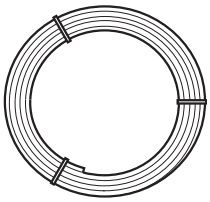
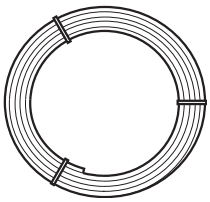
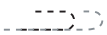
Option

Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11

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4.6.3 Required cables for connecting MOVIFIT® FDC and the SNI actuator

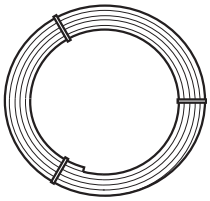
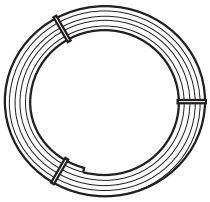
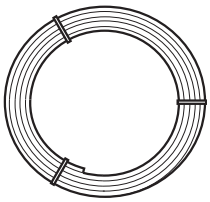
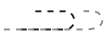
Cable cross-section 2.5 mm²

MOVIFIT® FDC	SNI line connection cable				
	Lengths that can be preassembled	**Conformity/ part number**	**Cable type** 1)	**Length/ installation type**	**Cable cross-section/ operating voltage**
Standard ABOX: **MTA...-S04.-...-00**	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	CE: 13303309	HELUKABEL TOPFLEX® – EMV-UV-2YSLCYK-J	Fixed 	2.5 mm² / AC 500 V
	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	UL: 19092156	HELUKABEL TOPFLEX® – EMV-UV-2YSLCYK-J-UL/CSA	Fixed 	
	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	CE/UL: 19095090	HELUKABEL TOPSERV® – 109	Fixed 	

1) See also technical data

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Cable cross-section 4 mm²

MOVIFIT® FDC	SNI line connection cable				
	Lengths that can be preassembled	**Conformity/ part number**	**Cable type** 1)	**Length/ installation type**	**Cable cross-section/ operating voltage**
Standard ABOX: **MTA...-S04.-...-00**	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	CE: 13305506	HELUKABEL TOPFLEX® – EMV-UV-2YSLCYK-J	Fixed 	4 mm² / AC 500 V
	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	UL: 19092164	HELUKABEL TOPFLEX® – EMV-UV-2YSLCYK-J-UL/CSA	Fixed 	
	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	CE/UL: 19095104	HELUKABEL TOPSERV® – 109	Fixed 	

1) See also technical data

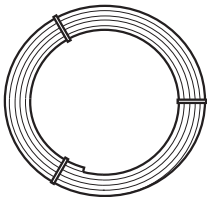
INFORMATION

You can find more permitted SNI cables (e.g. for UL-compliant installation) in chapter "Required connection cables for single line installation".

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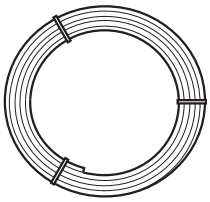
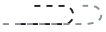
4.6.4 Hybrid cables for connecting MOVIFIT® FDC and the SBus actuator

Cable cross-section 2.5 mm²

MOVIFIT® FDC	Recommended hybrid cables				
	Lengths that can be preassembled	Conformity/ part number 1)	Cable type	Length/ installation type	Cable cross-section/ operating voltage
Standard ABOX: **MTA...-S04.-...-00**	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	CE/UL: 19129173	LEONI Type: LEHC 005221	Fixed 	2.5 mm² / AC 500 V

1) See also technical data

Cable cross-section 4 mm²

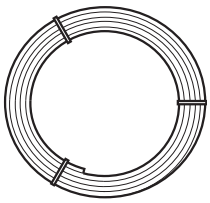
MOVIFIT® FDC	Recommended hybrid cables				
	Lengths that can be preassembled	Conformity/ part number 1)	Cable type	Length/ installation type	Cable cross-section/ operating voltage
Standard ABOX: **MTA...-S04.-...-00**	Cable reel 100 m Cable reel 200 m  Open cable end (not pre-fabricated)	CE/UL: 19122489	LEONI Type: LEHC 005211	Fixed 	4 mm² / AC 500 V

1) See also technical data

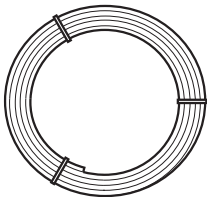
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4.6.5 Hybrid cables for connecting MOVIFIT® FDC and the drive unit with STO

Cable cross-section 2.5 mm²

Hybrid cable				
Lengths that can be preassembled	**Conformity/ part number**	**Cable type see also technical data**	**Length/ Installation type**	**Cable cross-section/operating voltage**
Cable reel 100 m Cable reel 200 m  Open cable end (not prefabricated)	CE/UL: 19162812	LEONI Type: LEHC 005295	Fixed 	2.5 mm² / AC 500 V

Cable cross-section 4 mm²

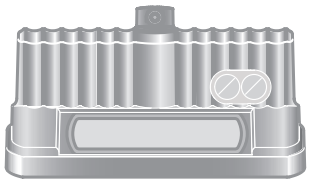
Hybrid cable				
Lengths that can be preassembled	**Conformity/ part number**	**Cable type see also technical data**	**Length/ Installation type**	**Cable cross-section/operating voltage**
Cable reel 100 m Cable reel 200 m  Open cable end (not prefabricated)	CE/UL: 19162820	LEONI Type: LEHC 005296	Fixed 	4 mm² / AC 500 V

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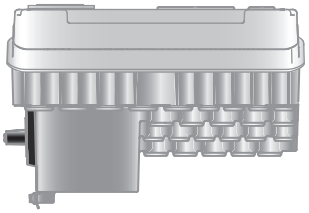
4.6.6 MOVIFIT® FDC in connection with hybrid ABOX MTA...-S54.-...-00

EBOX | **ABOX**

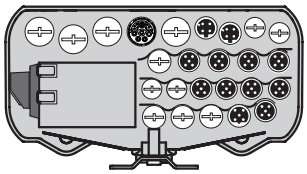
MTC...-...-00



MOVIFIT® FDC for controlling MOVIGEAR® and DRC..



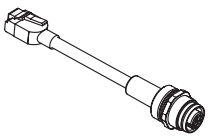
MTA...-S54.-...-00



Hybrid ABOX
with M23 for SNI/SBus actuators
and M12 for I/Os and bus

Performance class	Fieldbus	Type of EBOX	Type of ABOX
CCU standard (R95..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9500-00	MTA11A-503-S543-M16-00 MTA11A-503-S543-M20-00
MOVI-PLC® standard (R96..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9600-00	MTA11A-503-S543-M16-00 MTA11A-503-S543-M20-00
CCU advanced (R97..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9700-00	MTA11A-503-S543-M16-00 MTA11A-503-S543-M20-00
MOVI-PLC® advanced (R98)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9800-00	MTA11A-503-S543-M16-00 MTA11A-503-S543-M20-00

Accessories

Type	Image	Contents	Part number
RJ45-M12 Ethernet adapter RJ45 (inside of device) M12 (outside of device) 2 required for each device.		1 piece	13281682
Screw plug for interfaces on the EBOX		1 piece	18130623

Option

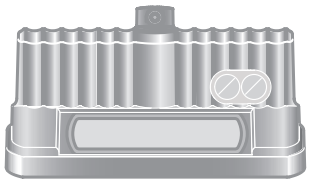
Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11

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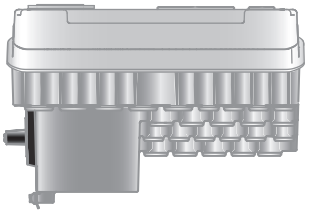
4.6.7 MOVIFIT® FDC in connection with hybrid ABOX MTA...-S64.-...-00

EBOX | **ABOX**

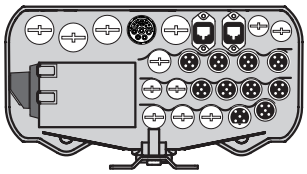
MTC...-...-00



MOVIFIT® FDC for controlling MOVIGEAR® and DRC..



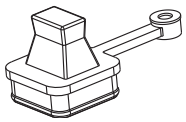
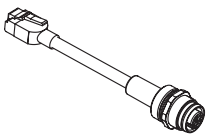
MTA...-S64.-...-00



Hybrid ABOX
with M23 for SNI/SBus actuators,
M12 for I/Os, and push-pull RJ45 for bus

Performance class	Fieldbus	Type of EBOX	Type of ABOX
CCU standard (R95..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9500-00	MTA11A-503-S643-M16-00 MTA11A-503-S643-M20-00
MOVI-PLC® standard (R96..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9600-00	MTA11A-503-S643-M16-00 MTA11A-503-S643-M20-00
CCU advanced (R97..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9700-00	MTA11A-503-S643-M16-00 MTA11A-503-S643-M20-00
MOVI-PLC® advanced (R98..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9800-00	MTA11A-503-S643-M16-00 MTA11A-503-S643-M20-00

Accessories

Type	Image	Contents	Part number
Ethernet closing plug for push-pull RJ45 socket		10 pieces	18223702
		30 pieces	18223710
RJ45-M12 Ethernet adapter RJ45 (inside of device) M12 (outside of device) 2 required for each device.		1 piece	13281682
Screw plug for interfaces on the EBOX		1 piece	18130623

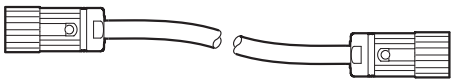
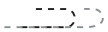
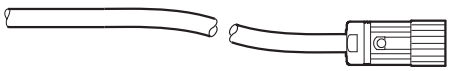
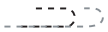
Option

Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11

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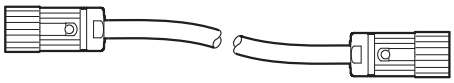
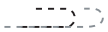
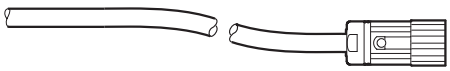
4.6.8 Cables for connecting MOVIFIT® FDC and the SNI actuator

Cable cross-section 2.5 mm²

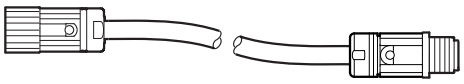
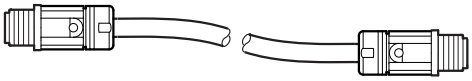
MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type see also technical data	Length/ installation type	Cable cross-section/ operating voltage
Hybrid ABOX: **MTA...-S54.-...-00** **MTA...-S64.-...-00**	 M23, coding ring: red, male — M23, coding ring: red, male	CE: 18127509	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J	Variable 	2.5 mm² / AC 500 V
		UL: 18150381	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J-UL/CSA	Variable 	
		CE/UL: 18120679	HELU KABEL® TOPSERV® – 109	Variable 	
	 Open — M23, coding ring: red, male	CE: 18127517	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J	Variable 	2.5 mm² / AC 500 V
		UL: 18150403	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J-UL/CSA	Variable 	
		CE/UL: 18120687	HELU KABEL® TOPSERV® – 109	Variable 	

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Cable cross-section 4 mm²

MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type, see also technical data	Length/installation type	Cable cross-section/operating voltage
Hybrid ABOX: **MTA...-S54.-...-00** **MTA...-S64.-...-00**	 M23, coding ring: red, male — M23, coding ring: red, male	CE: 18127525	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J	Variable 	4 mm² / AC 500 V
		UL: 18150411	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J-UL/CSA	Variable 	
		CE/UL: 18120695	HELU KABEL® TOPSERV® – 109	Variable 	
	 Open — M23, coding ring: red, male	CE: 18127533	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J	Variable 	4 mm² / AC 500 V
		UL: 18153259	HELU KABEL® TOPFLEX® – EMV-UV-2YSLCYK-J-UL/CSA	Variable 	
		CE/UL: 18120709	HELU KABEL® TOPSERV® – 109	Variable 	

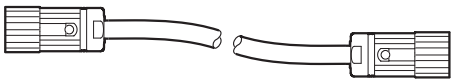
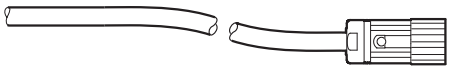
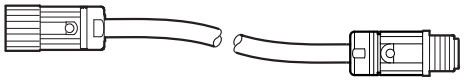
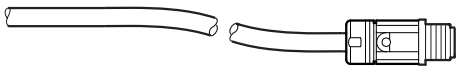
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MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type, see also technical data	Length/ installation type	Cable cross-section/ operating voltage
	 M23, coding ring: red, male — M23, coding ring: red, female	CE/UL: 18166296	HELU KABEL® TOPSERV® – 109	Variable	4 mm² / AC 500 V
	 M23, coding ring: red, female — M23, coding ring: red, female	CE/UL: 18191444	HELU KABEL® TOPSERV® – 109	Variable	4 mm² / AC 500 V

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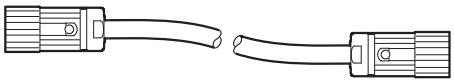
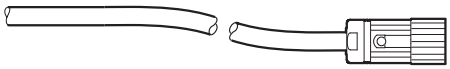
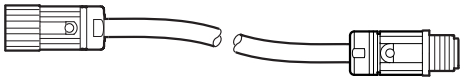
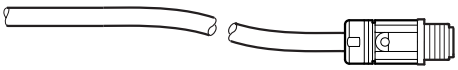
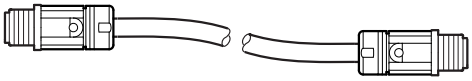
4.6.9 Hybrid cables for connecting MOVIFIT® FDC and the SBus actuator

Cable cross-section 2.5 mm²

MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type see also technical data	Length/ installation type	Cable cross-section/ operating voltage
Hybrid ABOX: **MTA...-S54.-...-00** **MTA...-S64.-...-00**	 M23, coding ring: violet, male — M23, coding ring: violet, male	CE/UL: 18127428	LEONI Type: LEHC 005221	Variable	2.5 mm² / AC 500 V
	 Open — M23, coding ring: violet, male	CE/UL: 18127436	LEONI Type: LEHC 005221	Variable	2.5 mm² / AC 500 V
	 M23, coding ring: violet, male — M23, coding ring: violet, female	CE/UL: 18166199	LEONI Type: LEHC 005221	Variable	2.5 mm² / AC 500 V
	 Open — M23, coding ring: violet, female	CE/UL: 18166490	LEONI Type: LEHC 005221	Variable	2.5 mm² / AC 500 V

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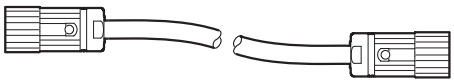
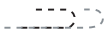
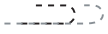
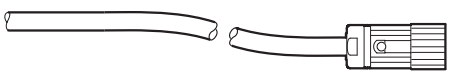
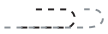
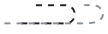
Cable cross-section 4 mm²

MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type, see also technical data	Length/ installation type	Cable cross-section/ operating voltage
Hybrid ABOX: **MTA...-S54.-...-00** **MTA...-S64.-...-00**	 M23, coding ring: violet, male — M23, coding ring: violet, male	CE/UL: 18127444	LEONI Type: LEHC 005211	Variable	4 mm² / AC 500 V
	 Open — M23, coding ring: violet, male	CE/UL: 18127452	LEONI Type: LEHC 005211	Variable	4 mm² / AC 500 V
	 M23, coding ring: violet, male — M23, coding ring: violet, female	CE/UL: 18166202	LEONI Type: LEHC 005211	Variable	4 mm² / AC 500 V
	 Open — M23, coding ring: violet, female	CE/UL: 18166504	LEONI Type: LEHC 005211	Variable	4 mm² / AC 500 V
	 M23, coding ring: violet, female — M23, coding ring: violet, female	CE/UL: 18189652	LEONI Type: LEHC 005211	Variable	4 mm² / AC 500 V

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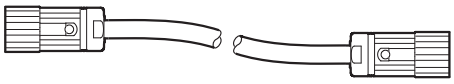
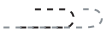
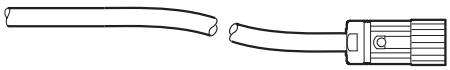
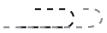
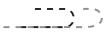
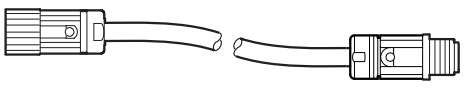
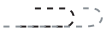
4.6.10 Power supply cable

Cable cross-section 2.5 mm²

MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type	Length/ installation type	Cable cross-section/ operating voltage
Hybrid ABOX: **MTA...-S54.-...-00** **MTA...-S64.-...-00**	 M23, coding ring: black, male — M23, coding ring: black, male	CE: 18127460	HELU KABEL® TOPFLEX® – 600-PVC	Variable 	2.5 mm² / AC 500 V
		CE: 18133959 Halogen-free	HELU KABEL® TOPFLEX® – 611-PUR	Variable 	
		UL: 18153267	HELU KABEL® – JZ-602	Variable 	
		UL: 18153275	HELU KABEL® MULTIFLEX® – 512	Variable 	
	 Open — M23, coding ring: black, male	CE: 18127479	HELU KABEL® TOPFLEX® – 600-PVC	Variable 	2.5 mm² / AC 500 V
		CE: 18133967 Halogen-free	HELU KABEL® TOPFLEX® – 611-PUR	Variable 	
		UL: 18153283	HELU KABEL® – JZ-602	Variable 	
		UL: 18153291	HELU KABEL® MULTIFLEX® – 512	Variable 	

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Cable cross-section 4 mm²

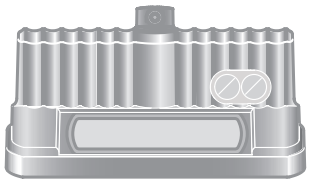
MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type	Length/ installation type	Cable cross-section/ operating voltage
Hybrid ABOX: **MTA...-S54.-...-00** **MTA...-S64.-...-00**	 M23, coding ring: black, male — M23, coding ring: black, male	CE: 18127487	HELU KABEL® TOPFLEX® – 600-PVC	Variable 	4 mm² / AC 500 V
		CE: 18133975 Halogen-free	HELU KABEL® TOPFLEX® – 611-PUR	Variable 	
		UL: 18153305	HELU KABEL® – JZ-602	Variable 	
		UL: 18153313	HELU KABEL® MULTIFLEX® – 512	Variable 	
	 Open — M23, coding ring: black, male	CE: 18127495	HELU KABEL® TOPFLEX® – 600-PVC	Variable 	4 mm² / AC 500 V
		CE: 18133983 Halogen-free	HELU KABEL® TOPFLEX® – 611-PUR	Variable 	
		UL: 18153321	HELU KABEL® – JZ-602	Variable 	
		UL: 18153348	HELU KABEL® MULTIFLEX® – 512	Variable 	
	 M23, coding ring: black, male — M23, coding ring: black, female	UL: 18166318	HELU KABEL® MULTIFLEX® – 512	Variable 	4 mm² / AC 500 V

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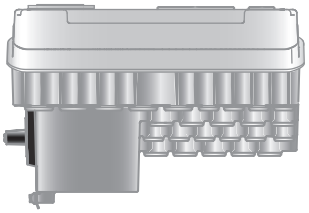
4.6.11 MOVIFIT® FDC in connection with hybrid ABOX MTA...-S84.-...-00

EBOX | **ABOX**

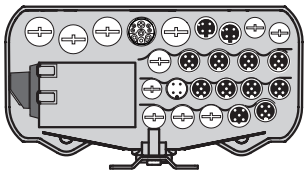
MTC...-...-00



MOVIFIT® FDC for controlling MOVIGEAR® and DRC..



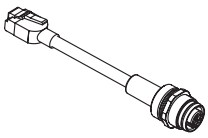
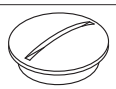
MTA...-S84.-...-00



Hybrid ABOX
with M23 for SBus actuators
and M12 for I/Os, bus,
and 24 V auxiliary signal (suitable for STO)

Performance class	Fieldbus	Type of EBOX	Type of ABOX
CCU standard (R95..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9500-00	MTA11A-503-S843-M16-00 MTA11A-503-S843-M20-00
MOVI-PLC® standard (R96..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9600-00	MTA11A-503-S843-M16-00 MTA11A-503-S843-M20-00
CCU advanced (R97..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9700-00	MTA11A-503-S843-M16-00 MTA11A-503-S843-M20-00
MOVI-PLC® advanced (R98..)	PROFINET EtherNet/IP™ Modbus TCP	MTC11A000-503-R9800-00	MTA11A-503-S843-M16-00 MTA11A-503-S843-M20-00

Accessories

Type	Image	Contents	Part number
RJ45-M12 Ethernet adapter RJ45 (inside of device) M12 (outside of device) 2 required for each device.		1 piece	13281682
Screw plug for interfaces on the EBOX		1 piece	18130623

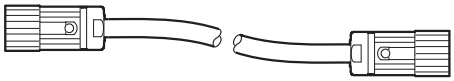
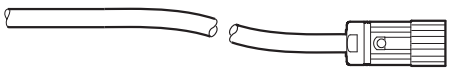
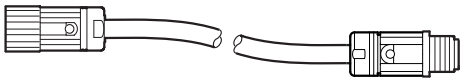
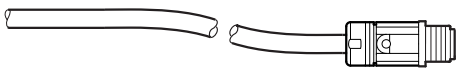
Option

Option	Integrated in	Type
Stainless steel mounting rail	ABOX	/M11

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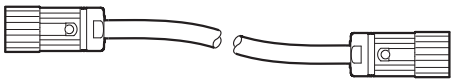
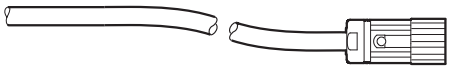
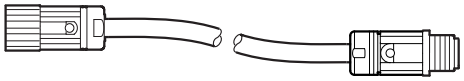
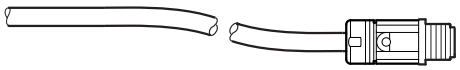
4.6.12 Hybrid cables for connecting MOVIFIT® FDC and the SBus actuators with 24 V auxiliary signal (STO)

Cable cross-section 2.5 mm²

MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type, see also technical data	Length/ installation type	Cable cross-section/ operating voltage
Hybrid ABOX: **MTA...-S84.-...-00**	 M23, coding ring: yellow, male — M23, coding ring: yellow, male	CE/UL: 18177867	LEONI Type: LEHC 005295	Variable	2.5 mm² / AC 500 V
	 Open — M23, coding ring: yellow, female	CE/UL: 18191134	LEONI Type: LEHC 005295	Variable	2.5 mm² / AC 500 V
	 M23, coding ring: yellow, male — M23, coding ring: yellow, female	CE/UL: 18177883	LEONI Type: LEHC 005295	Variable	2.5 mm² / AC 500 V
	 Open — M23, coding ring: yellow, female	CE/UL: 18191401	LEONI Type: LEHC 005295	Variable	2.5 mm² / AC 500 V

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Cable cross-section 4 mm²

MOVIFIT® FDC	Connection cables	Conformity/part number	Cable type, see also technical data	Length/ installation type	Cable cross-section/ operating voltage
Hybrid ABOX: **MTA...-S84.-...-00**	 M23, coding ring: yellow, male — M23, coding ring: yellow, male	CE/UL: 18177875	LEONI Type: LEHC 005296	Variable	4 mm² / AC 500 V
	 Open — M23, coding ring: yellow, male	CE/UL: 18191142	LEONI Type: LEHC 005296	Variable	4 mm² / AC 500 V
	 M23, coding ring: yellow, male — M23, coding ring: yellow, female	CE/UL: 18177891	LEONI Type: LEHC 005296	Variable	4 mm² / AC 500 V
	 Open — M23, coding ring: yellow, female	CE/UL: 18191428	LEONI Type: LEHC 005296	Variable	4 mm² / AC 500 V

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4.6.13 CAN connection cables

Connection cables

The following table provides an overview of the cables available for this connection:

MOVIFIT® FDC	External CAN bus connection cable	Conformity/part number	Length/ installation type	Operating voltage
Hybrid ABOX: **MTA...-S54.-...-00** **MTA...-S64.-...-00** **MTA...-S84.-...-00**	 M12, 5-pin, A-coded, female — M12, 5-pin, A-coded, male	CE: 13286331	5 m	DC 60 V
		CE: 13286358	10 m	
		CE: 13286366	15 m	
	 M12, 5-pin, A-coded, female — Open	CE: 13295810	5 m	DC 60 V
		CE: 19129270	10 m	
		CE: 19129289	15 m	

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4.7 Connection cables

4.7.1 Required connection cables for single line installation (SNI)

INFORMATION

Compare the outer diameter of the specified connection cables for single-line installation with the technical data of the EMC cable glands supplied with certain products.

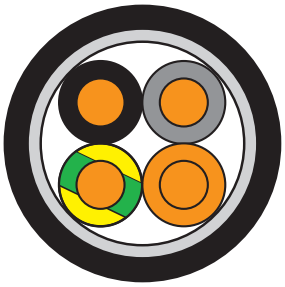
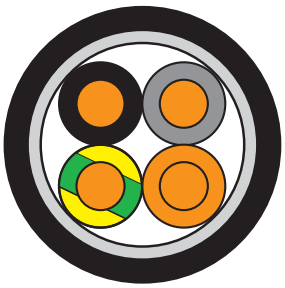
INFORMATION

SEW-EURODRIVE recommends using approved, cable-carrier-suited connection cables for single-line installation **only** in areas where this property is actually needed.

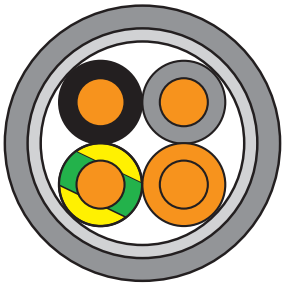
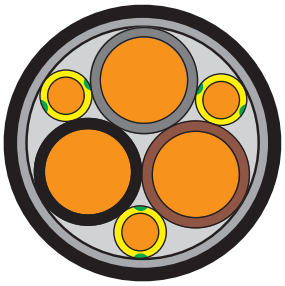
SEW-EURODRIVE specifies the following cable types for connecting SNI drive units and SNI controller:

A high signal quality is achieved due to the low operating capacitance of the specified cables. The shielding prevents interference emission resulting from the data transmission modulated onto the line.

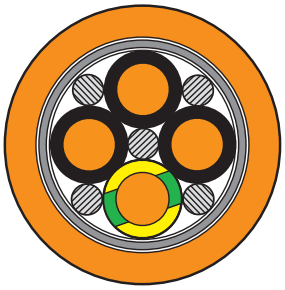
HELUKABEL TOPFLEX®

Cable type	Outer cable sheath	Conformity	Properties
HELUKABEL TOPFLEX®– EMV-UV-2YSLCYK-J 	**Color:** • Black **Diameter:** • 12.3 mm (2.5 mm²) • 14.5 mm (4.0 mm²)	CE	• UV resistant • Not suitable for cable carriers 
HELUKABEL TOPFLEX®– EMV-UV-2YSLCYK-J/ UL/CSA 	**Color:** • Black **Diameter:** • 12.5 mm (2.5 mm²) • 14.2 mm (4.0 mm²)	CE/UL	• UV resistant • Not suitable for cable carriers 

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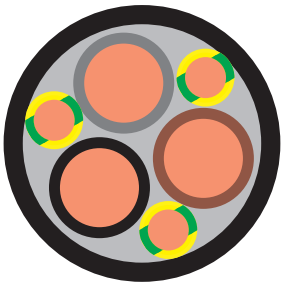
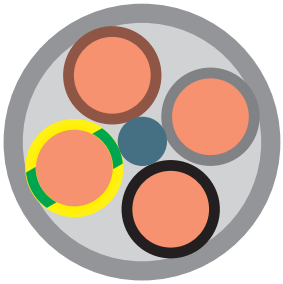
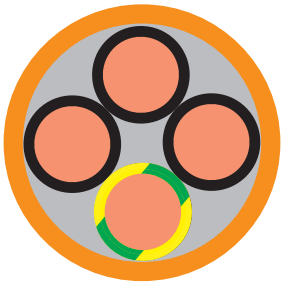
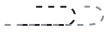
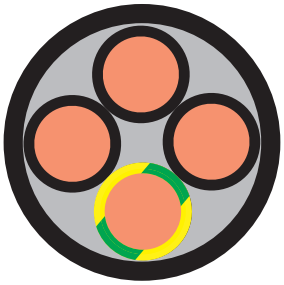
Cable type	Outer cable sheath	Conformity	Properties
HELUKABEL TOPFLEX®– EMV-2YSLCY-J 	**Color:** • Transparent **Diameter:** • 11.9 mm (2.5 mm²) • 13.6 mm (4.0 mm²)	CE	• Not suitable for cable carriers 
HELUKABEL TOPFLEX®– EMV-UV-3 PLUS 2YSLCYK-J 	**Color:** • Black **Diameter:** • 10.8 mm (2.5 mm²) • 12.3 mm (4.0 mm²)	CE	• UV resistant • Not suitable for cable carriers 

HELUKABEL TOPSERV®

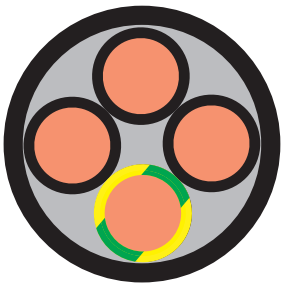
Cable type	Outer cable sheath	Conformity	Properties
HELUKABEL TOPSERV® – 109 PUR 	**Color:** • Orange **Diameter:** • 10.6 mm (2.5 mm²) • 11.9 mm (4.0 mm²)	CE/UL	• Halogen-free • UV resistant • Suitable for cable carriers 

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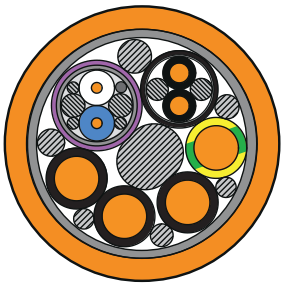
LAPP ÖLFLEX®

Cable type	Outer cable sheath	Conformity	Properties
LAPP ÖLFLEX® **SERVO 2YSLCYK-JB** 	**Color:** • Black **Diameter:** • 12.2 mm (2.5 mm²) • 14.4 mm (4.0 mm²)	CE	• UV resistant • Not suitable for cable carriers 
LAPP ÖLFLEX® **SERVO 2YSLCY-JB** 	**Color:** • Transparent **Diameter:** • 12.4 mm (2.5 mm²) • 15.6 mm (4.0 mm²)	CE	• Not suitable for cable carriers 
LAPP ÖLFLEX® **SERVO FD796 CP** 	**Color:** • Orange **Diameter:** • 10.6 mm (2.5 mm²) • 11.9 mm (4.0 mm²)	CE/UL	• Halogen-free • UV resistant • Suitable for cable carriers 
LAPP ÖLFLEX® **VFD XL** 	**Color:** • Black **Diameter:** • 14.8 mm (2.5 mm²) • 16.5 mm (4.0 mm²)	• CE/UL	• UV resistant • TC-ER approval • Not suitable for cable carriers 

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Cable type	Outer cable sheath	Conformity	Properties
LAPP ÖLFLEX® **VFD 2XL** 	**Color:** • Black **Diameter:** • 14.8 mm (2.5 mm²) • 16.7 mm (4.0 mm²)	• CE/UL	• UV resistant • TC-ER approval • Not suitable for cable carriers 

Leoni LEHC

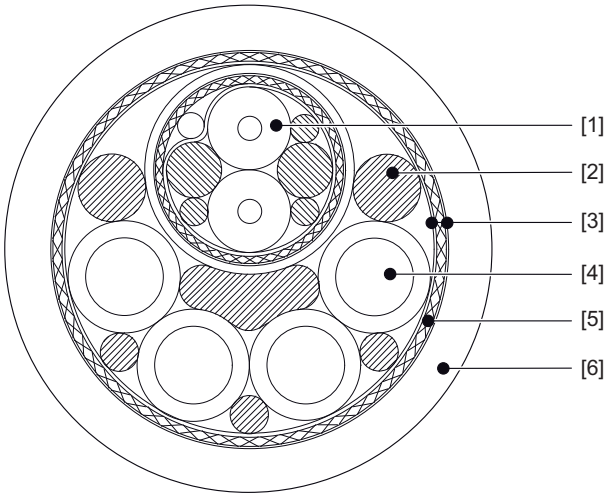
Cable type	Outer cable sheath	Conformity	Properties[1)]
Leoni **LEHC 005295 Rev.2** **LEHC 005296 Rev.2** 	**Color:** • Orange **Diameter:** • LEHC 00529**5** Rev.2: 15.6 mm (2.5 mm²) • LEHC 00529**6** Rev.2: 16.7 mm (4.0 mm²)	CE/UL	• Halogen-free • UV resistant • Suitable for cable carriers 

1) See also chapter "Specification of hybrid cables AC 400 V, communication (DSC or SNI) and safe disconnection (STO)"

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4.7.2 Specification of recommended hybrid cables AC 400 V and communication (DSC)

SEW-EURODRIVE recommends the following hybrid cables for connecting DSC drive units and controllers. The following figure shows the structure of the hybrid cable:



19915242379

	Type: Leoni LEHC 005221 Rev.0		**Type: Leoni LEHC 005211 Rev.0**	
[1]	1 conductor pair	2 × 0.24 mm²		
	Conductor	Stranded copper wire, 19 × 0.127 mm		
	Insulation	Polypropylene		
	Colors	White and blue		
	Shield	Banding		
	Drain wire	0.34 mm²		
	Conductor	Stranded copper wire, 19 × 0.15 mm		
	Shield	Braided copper wire, 0.10 mm, tinned		
	Optical coverage	min. 85%		
	Sheath	TPE		
	Color	Violet		
[2]	Filler			
[3]	Banding			
[4]	4 cores	2.5 mm²	4 cores	4.0 mm²
	Conductor	Stranded copper wire, 147 × 0.15 mm	Conductor	Stranded copper wire, 224 × 0.15 mm
	Insulation	Polypropylene	Insulation	Polypropylene
	Colors	Green/yellow, black with lettering 1; 2; 3	Colors	Green/yellow, black with lettering 1; 2; 3
[5]	Shield	Braided tinned copper wires, 0.128 mm		
	Optical coverage	min. 85%		

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	Type: Leoni LEHC 005221 Rev.0		Type: Leoni LEHC 005211 Rev.0
[6]	Outer cable sheath	Polyurethane	
	Color	Black matte (similar to RAL9005)	

Technical data of hybrid cables

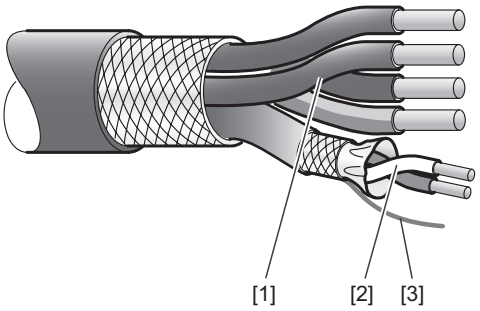
The following table shows the technical data of the hybrid cable:

Properties	Type: Leoni LEHC 005221 Rev.0	Type: Leoni LEHC 005296 Rev.2
UL features	UL style 20234, 80 °C, 1000 V E47543-LIL c UL us certified	
Test voltage core/core	4.0 kV 50 Hz AC	
Test voltage core/shield	3.0 kV 50 Hz AC	
Operating voltage **Position [4]**	1000 V	
Wave impedance **Position [1]**	120 Ω ± 10%	
Attenuation **Position [1]**	Nom. 2.0 dB/100 m at 1 MHz Nom. 5.5 dB/100 m at 10 MHz	
Runtime **Position [1]**	Nom. 5 ns/m	
Operating temperature	-30 °C to +80 °C (fixed installation) -25 °C to +80 °C (cable carrier)	
Weight of cable	Nom. 279 g/m	Nom. 428 g/m
Bending radii	Min. 5 × outer diameter (fixed installation) Min. 10 × outer diameter (cable carrier)	
Cable diameter	13.5 mm	14.9 mm
Chemical properties	Flame retardant Halogen-free	

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Notes on connection

The following figure shows the cable design and use of connections:



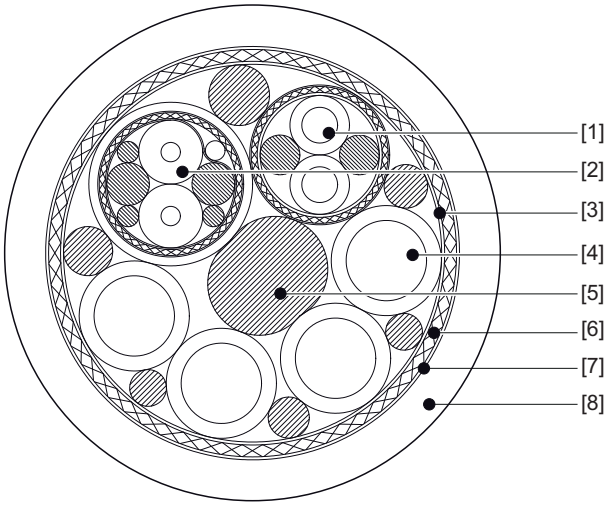
6580241163

[1] Connection for supply system/PE
[2] CAN_H/CAN_L connection
[3] CAN_GND connection via drain wire

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4.7.3 Specification of hybrid cables AC 400 V, communication (DSC or SNI) and safe disconnection (STO)

The following figure shows the structure of the hybrid cable:



9007219046263179

	Type: Leoni LEHC 005295 Rev.2		**Type: Leoni LEHC 005296 Rev.2**
[1]	1 core pair	0.75 mm²	
	Conductor	Stranded copper wire, 42 × 0.15 mm	
	Insulation	Polypropylene	
	Colors	Black cores with white digits 1, 2	
	Shield	Braided copper wire, 0.1 mm, tinned	
	Optical coverage	min. 85%	
	Sheath	Banding	
[2]	1 core pair	2 × 0.24 mm²	
	Conductor	Stranded copper wire, blank, 19 × 0.127 mm	
	Insulation	Polypropylene	
	Colors	White and blue	
	Shield	Banding	
	Drain wire	0.34 mm²	
	Conductor	Stranded copper wire, blank, 19 × 0.15 mm	
	Shield	Braided copper wire, 0.10 mm, tinned	
	Optical coverage	min. 85%	
	Sheath	TPE	
	Color	Violet	
[3]	Banding		

	Type: Leoni LEHC 005295 Rev.2		Type: Leoni LEHC 005296 Rev.2	
[4]	4 cores	2.5 mm²	4 cores	4.0 mm²
	Conductor	Stranded copper wire, blank, 147 × 0.15 mm	Conductor	Stranded copper wire, blank, 224 × 0.15 mm
	Insulation	Polypropylene	Insulation	Polypropylene
	Colors	Green/yellow, black with lettering U/L1; V/L2; W/L3	Colors	Green/yellow, black with lettering U/L1; V/L2; W/L3
[5]	Filler			
[6]	Shield	Braided tinned copper wires, 0.15 mm	Shield	Braided tinned copper wires, 0.20 mm
	Optical coverage	min. 87%	Optical coverage	min. 87%
[7]	Banding	EMC fleece		
[8]	Outer cable sheath	Polyurethane		
	Color	Orange (similar to RAL2003)		

Technical data of hybrid cables

The following table shows the technical data of the hybrid cable:

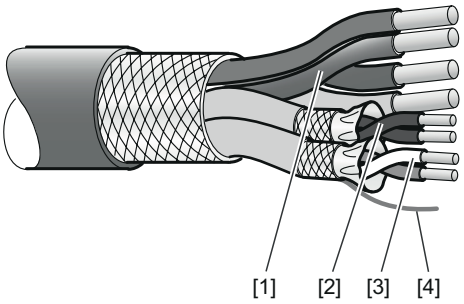
Properties	Type: Leoni LEHC 005295 Rev.2	Type: Leoni LEHC 005296 Rev.2
UL properties	UL style 20234, 80 °C, 1000 V E47543-LIL c UL us certified	
Test voltage core/core	4.0 kV 50 Hz AC	
Test voltage core/shield	3.0 kV 50 Hz AC	
Operating voltage **Position [4]**	1000 V	
Surge impedance **Position [2]**	125 Ω ±10%	
Damping **Position [2]**	Nom. 2.5 dB/100 m at 1 MHz Nom. 6.5 dB/100 m at 10 MHz	
Runtime **Position [2]**	Nom. 5 ns/m	
Operating temperature	-30 °C to +80 °C (fixed installation) -25 °C to +80 °C (cable carrier)	
Weight of cable	Nom. 342 g/m	Nom. 428 g/m
Bending radiuses	Min. 5 × outer diameter (fixed installation) Min. 10 × outer diameter (cable carrier)	

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Properties	Type: Leoni LEHC 005295 Rev.2	Type: Leoni LEHC 005296 Rev.2
Cable diameter	15.6 mm ± 0.5 mm	16.7 mm ± 0.5 mm
Chemical properties	• Oil resistance according to DIN VDE 0282-10/ HD 22.10 S2 • General fuel resistance (e.g. diesel, gasoline) • Flame retardant according to UL 1581 section 1060 Vertical Flame Test (FT1) • Flame retardant according to CSA C22.2 No.3-92 Vertical Flame Test (FT1) • Flame retardant according to IEC 60332-1-2 • Halogen-free according to IEC 60754-1 • General resistance to acids, alkalis, and cleaning agents • Generally hydrolysis-resistant • General resistance against UV radiation • Free of paint-wetting impairment substances	

Notes on connection

The following figure shows the cable design and use of connections:



19800410891

[1] Connection for supply system/PE
[2] STO connection
[3] CAN_H/CAN_L connection
[4] CAN_GND connection via drain wire

4.8 Prescribed accessories

4.8.1 Line filter

The NF.. line filter is used to suppress interference emission on the line side.

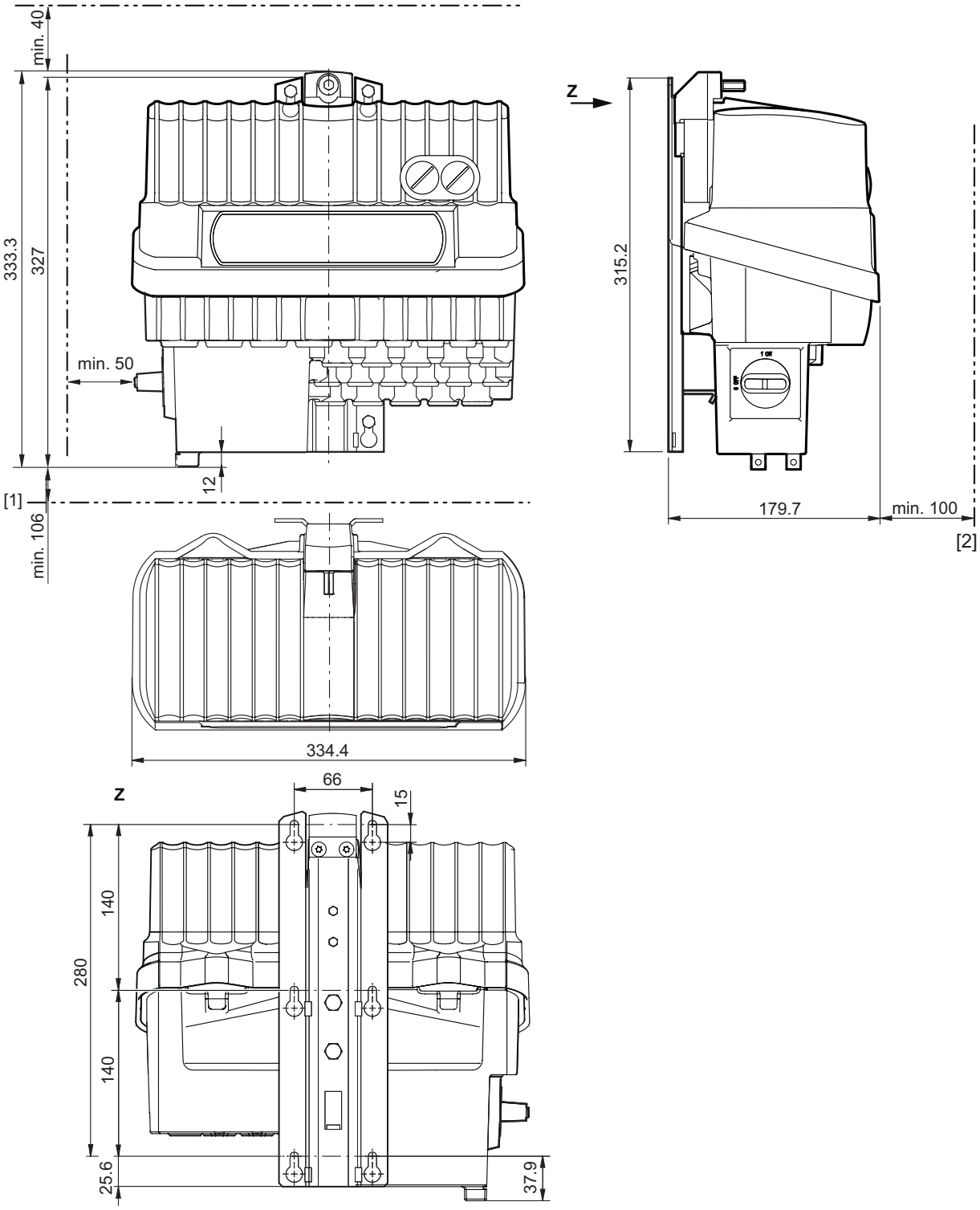
The following line filters are available:

Line filter Type	Maximum permitted current A	Part number
NF018-503	18	08274134
NF035-503	35	08271283
NF048-503	48	08271178
NF018-503-UOH66A	18	19501684

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4.9 Dimension drawings

4.9.1 MOVIFIT® FDC with standard mounting rail

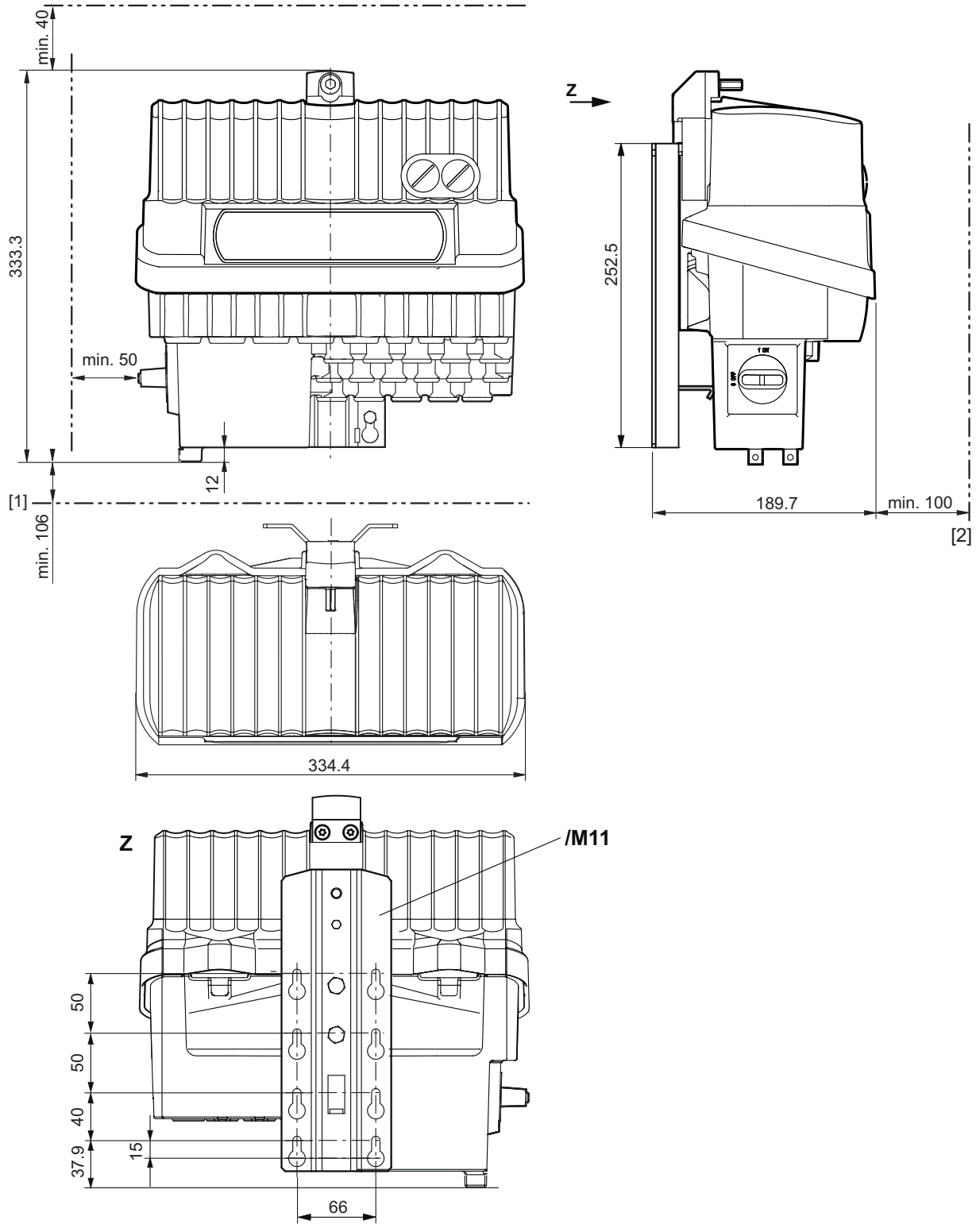


18014401553937803

[1] The distance of 106 mm below is necessary only for ABOXes with plug connector for connecting the drive unit.

[2] The distance of 100 mm at the front is necessary for the connection to the EBOX interfaces.

4.9.2 MOVIFIT® FDC with optional stainless steel mounting rail M11



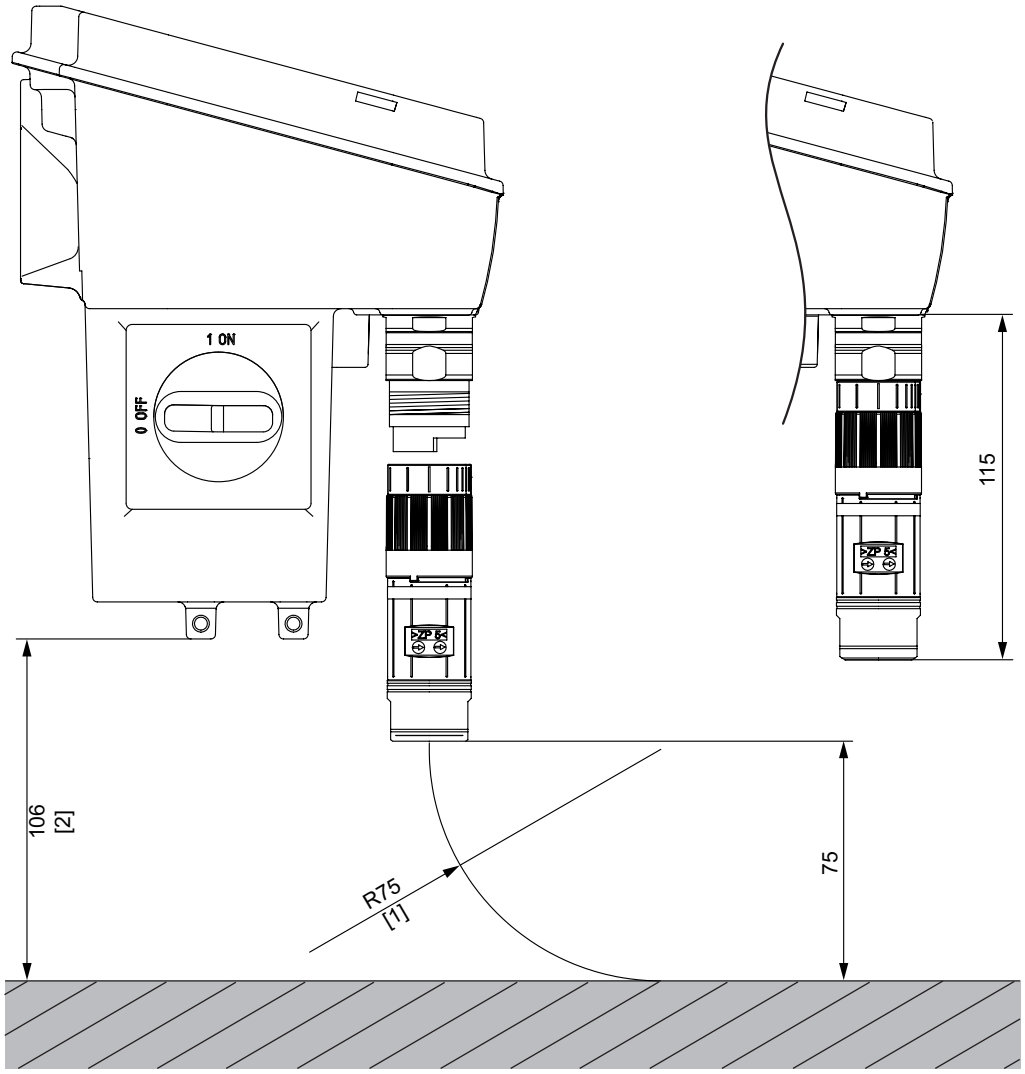
[1] The distance of 106 mm below is necessary only for ABOXes with plug connector for connecting the drive unit.

[2] The distance of 100 mm at the front is necessary for the connection to the EBOX interfaces.

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4.9.3 ABOX with plug connector for connecting the drive units

The following figure shows the minimum installation distance of the hybrid ABOX with plug connector for connecting the drive units:



9007204888624011

[1] Minimum permitted bending radius of bulk cable: 75 mm
[2] Minimum distance to the bottom of the ABOX: 106 mm

5 MOVIFIT® MC/SC/FC

5.1 MOVIFIT® MC for controlling MOVIMOT® drives

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



12839703819

5.1.1 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

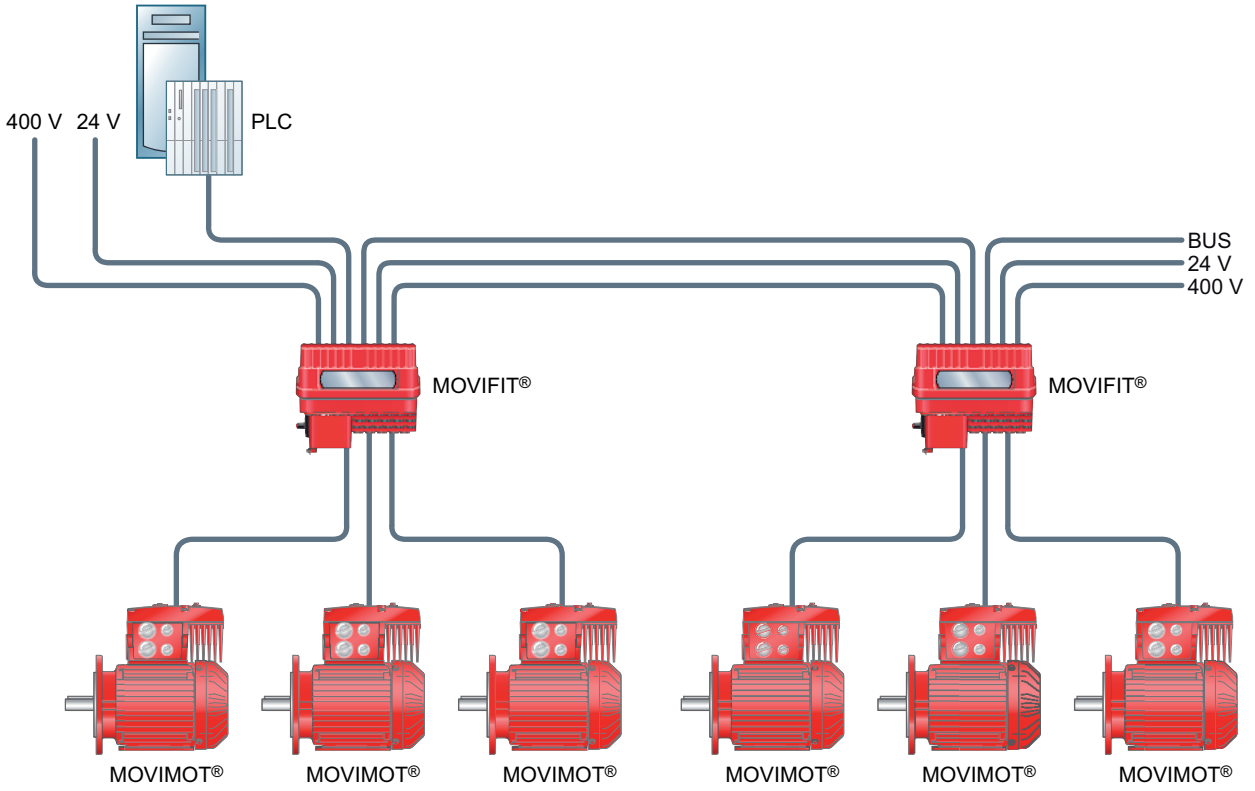
PROFIBUS	EtherNet/IP™
PROFINET IO	Modbus/TCP
PROFINET POF	DeviceNet™

- 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

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5.1.2 MOVIFIT® MC installation topology

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



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5.2 MOVIFIT® SC with integrated motor starter

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



13828642315

5.2.1 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

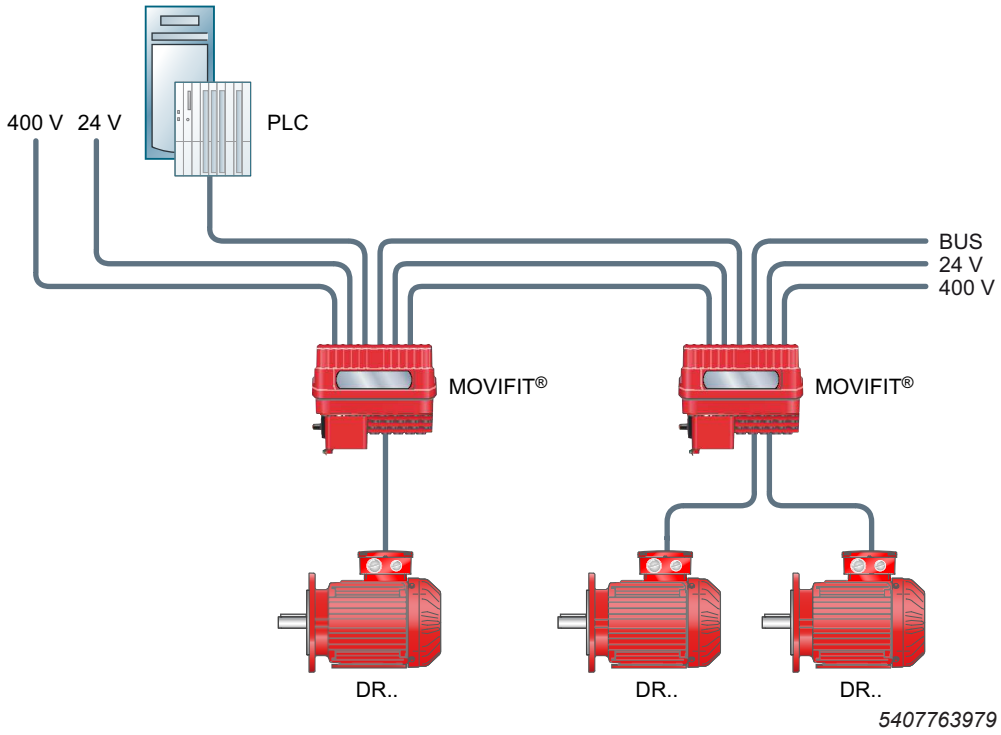
PROFIBUS	EtherNet/IP™
PROFINET IO	Modbus/TCP
PROFINET POF	DeviceNet™

- 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)

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5.2.2 MOVIFIT® SC installation topology

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



5.3 MOVIFIT® FC with integrated frequency inverter

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

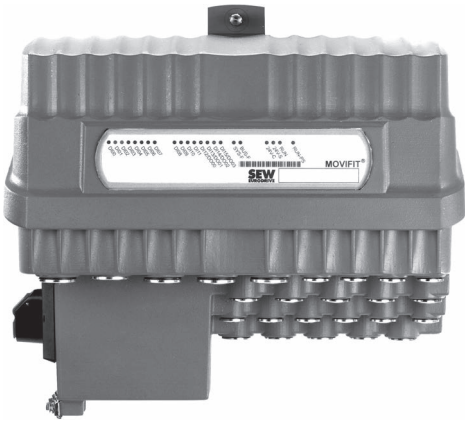


12781282315

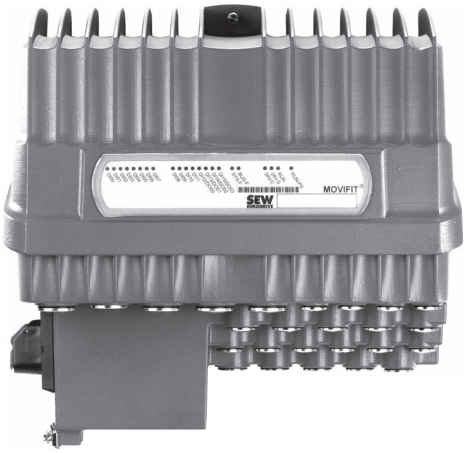
5.3.1 Sizes

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

0.37 – 1.5 kW



2.2 – 4 kW



1514058635

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5.3.2 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

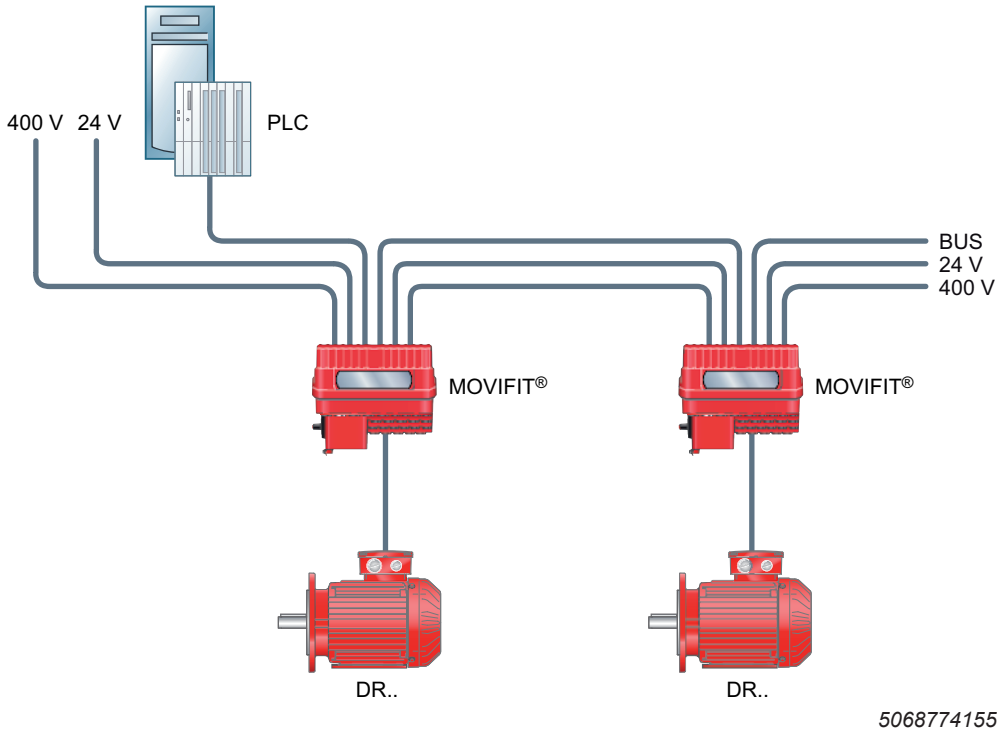
PROFIBUS	EtherNet/IP™
PROFINET IO	Modbus/TCP
PROFINET POF	DeviceNet™

- 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)

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5.3.3 MOVIFIT® FC installation topology

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



5.4 Functional safety

5.4.1 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.

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5.4.2 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

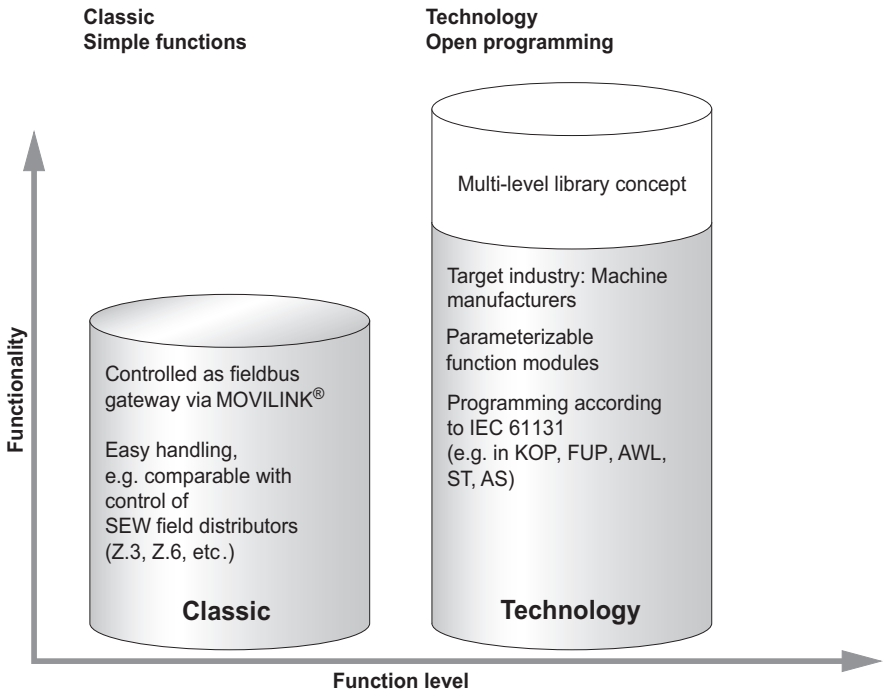
Only components marked with the FS logo for functional safety may be installed in safety applications. For combinations of units without FS logo (consisting of individual EBOX and ABOX), the safety function must be described in the documentation.

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5.5 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:



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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

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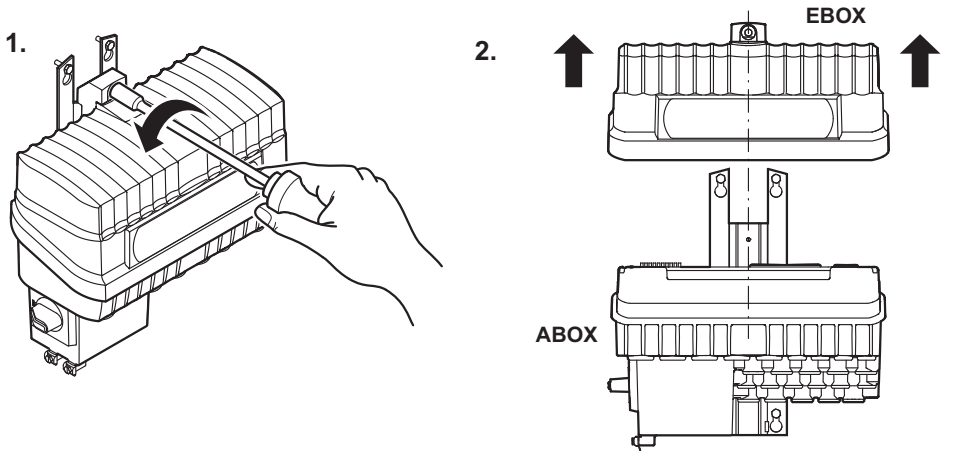
5.6 Type designation and unit concept

5.6.1 Properties

MOVIFIT® units have the following characteristics:

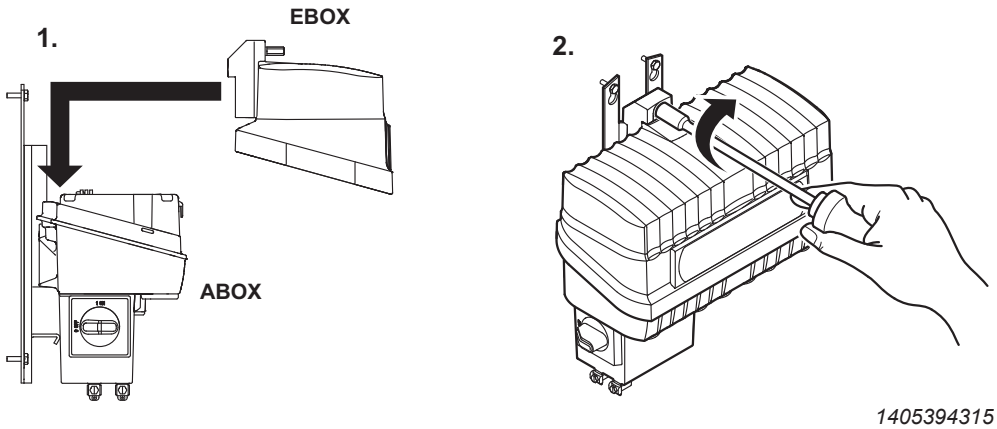
- Aluminum die cast housing
  - High rigidity
  - IP65 design for industrial requirements
  - Hygienic design with increased degree of protection and special surface treatment for the food industry
- Separation of connection unit (ABOX) and electronics (EBOX)
  - No damage/contamination to the EBOX during 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



1405396235

Place EBOX on top of ABOX and screw it on



1405394315

5.6.2 Sample type designation

Example EBOX

The following table shows an example of the type designation of the MOVIFIT® EBOX **MTF11A015-503-P10A -00/S12A**:

	MOVIFIT® MC	MOVIFIT® SC	MOVIFIT® FC
MT	**Series** MT = MOVIFIT®	**Series** MT = MOVIFIT®	**Series** MT = MOVIFIT®
F	**Device type** M = MOVIFIT® MC (MOVIMOT® control)	**Device type** S = MOVIFIT® SC (motor starters)	**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	**Device power** 000 = MOVIFIT® MC	**Device power** 015 = 1.5 kW 030 = 3.0 kW	**Device 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	**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**

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-			
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 18 = DRN motor 400 V, 50 Hz 19 = DRN motor 460 V, 60 Hz 20 = DRS-DRN motor 50 – 60 Hz 22 = 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

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Example: ABOX

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

	MOVIFIT® MC	MOVIFIT® SC	MOVIFIT® FC
MT	**Series** MT = MOVIFIT®	**Series** MT = MOVIFIT®	**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	**Port configuration** S01 = Standard ABOX S41 = Hybrid ABOX S51 = Hybrid ABOX S61 = Hybrid ABOX I51 = Hybrid ABOX I61 = Hybrid ABOX	**Port 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	**Port 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 = Load disconnector and line protection up to 12 A[3)] M14 = Load disconnector and line protection up to 9 A[4)] M15 = Load disconnector and line protection up to 12 A[4)]	**Maintenance switch** D01 = Load disconnector M12 = Load disconnector and line protection up to 9 A[5)]	**Maintenance switch** D01 = Load disconnector M11 = Load disconnector and line protection up to 4 A[4)] M12 = Load disconnector and line protection up to 9 A[4)]

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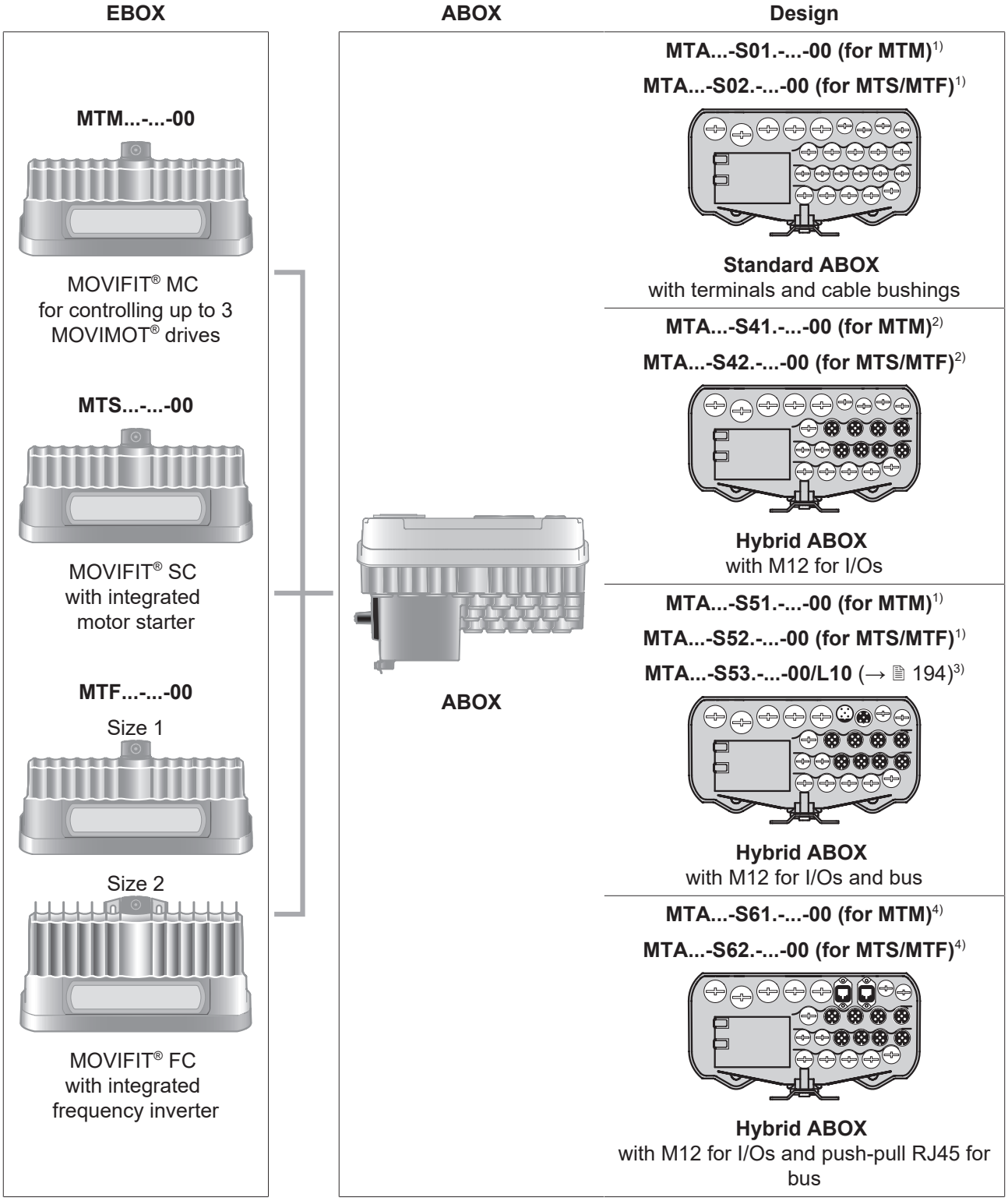
-			
00	**ABOX design** 00 = Series	**ABOX design** 00 = Series	**ABOX design** 00 = Series 30 = Dual-motor operation 33 = Dual-motor group drive
/			
BW1	–	–	**ABOX option 1** BW1/BW2 = Integrated braking resistor
/			
M11	**ABOX option** 00S = Plug connector STO M11 = Stainless steel mounting rail (standard length) M1S = Stainless steel mounting rail (standard length) and plug connector STO M2A = Corrosion-resistant mounting rail (short) M2S = Corrosion-resistant mounting rail (short) and plug connector STO	**ABOX option** M11 = Stainless steel mounting rail (standard length) M2A = Corrosion-resistant 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 = Corrosion-resistant mounting rail (short) M2S = Corrosion-resistant 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 port configuration are available only 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 load disconnector.
4) Only available in connection with UL.
5) For units with UL, the maintenance switch M12 is mandatory.

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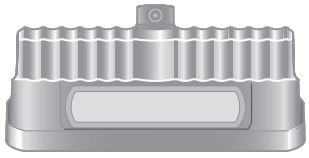
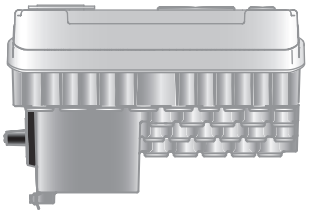
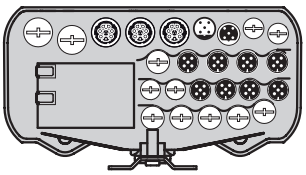
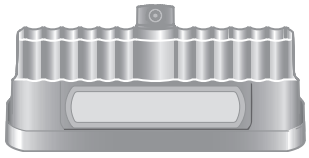
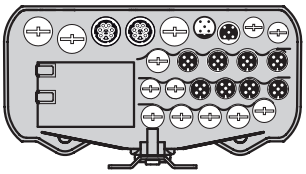
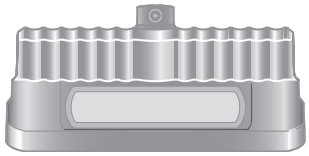
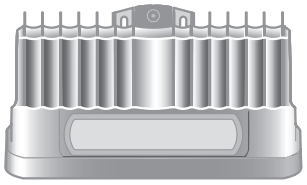
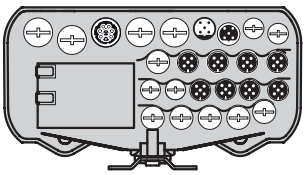
5.6.3 Combination options with MOVIFIT® MC, SC, and FC

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



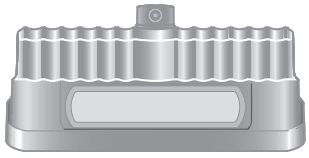
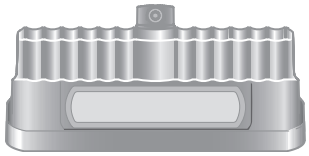
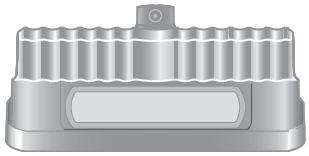
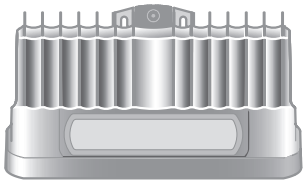
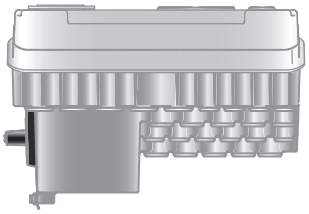
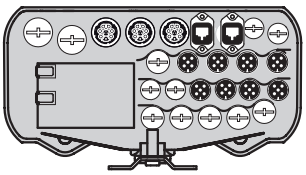
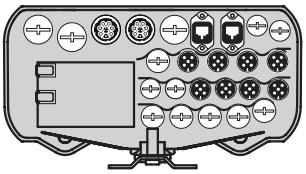
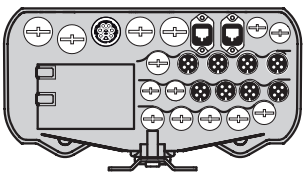
1) In connection with DeviceNet™: Micro-style connector for DeviceNet™ connection
2) Not available in connection with DeviceNet™
3) Only in connection with MTS/MTF and the PROFINET interface L10 SCRJ/POF. The MTA...-53. ABOX has an additional M12 plug connector to supply the PROFINET interface L10 SCRJ/POF with 24 V
4) Not available in connection with DeviceNet™ and PROFIBUS

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EBOX	ABOX	Design
MTM...-...-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives	 **ABOX**	**MTA...-I51.-...-00 (for MTM)**  **Hybrid ABOX** with 3 circular connectors (TE/ Intercontec) (3 × downward MOVIMOT® output), and M12 for I/Os and bus
MTS...-...-00  MOVIFIT® SC with integrated motor starter		**MTA...-I52.-...-00 (for MTS)**[1]  **Hybrid ABOX** with 2 circular connectors (TE/ Intercontec) (2 × downward motor output), and M12 for I/Os and bus
MTF...-...-00 Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter		**MTA...-I55.-...-00 (for MTS/MTF)**[1]  **Hybrid ABOX** with 1 circular connector (TE/Intercontec) (1 × downward motor output), and M12 for I/Os and bus

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

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EBOX	ABOX	Design
MTM...-...-00  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives **MTS...-...-00**  MOVIFIT® SC with integrated motor starter **MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	 **ABOX**	**MTA...-I61.-...-00 (for MTM)**[1]  **Hybrid ABOX** with 3 circular connectors (TE/ Intercontec) (3 × downward MOVIMOT® output), M12 for I/Os, push-pull RJ45 for bus **MTA...-I62.-...-00 (for MTS/MTF)**[1]  **Hybrid ABOX** with 2 circular connectors (TE/ Intercontec) (2 × downward motor output), M12 for I/Os, push-pull RJ45 for bus **MTA...-I65.-...-00 (for MTS/MTF)**[1]  **Hybrid ABOX** with 1 circular connector (TE/Intercontec) (1 × downward motor output), M12 for I/Os, push-pull RJ45 for bus

1) Not available in connection with DeviceNet™ and PROFIBUS

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5.7 Hygienic^{plus} design

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



9007200097472651

5.7.1 Properties

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

- IP66 in accordance with EN 60529 and IP69K according to 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 cleansing agents having the following properties:
  - Alkaline
  - Acidic
  - Disinfectant
- Resistant to temperature fluctuations
- Resistant to condensation due to connection boards with a special surface coating

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

INFORMATION

Further information can be found in the following documentation:

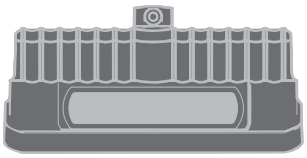
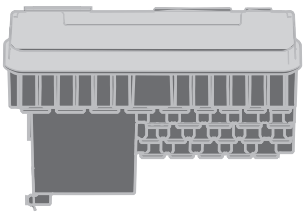
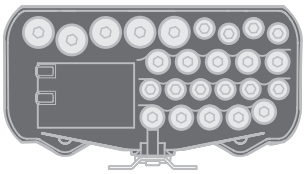
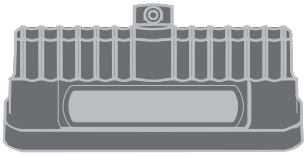
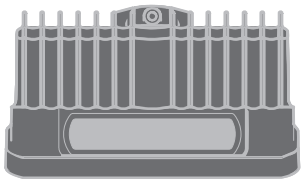
- "MOVIFIT® SC" and "MOVIFIT® FC" operating instructions

5.7.2 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

EBOX	ABOX	Design
MTS12.-...-00  MOVIFIT® SC with integrated motor starter		**MTA12.-S02.-...-..**[1)]  **Standard ABOX** with terminals and cable bushings
MTF12.-...-00 Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter		

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

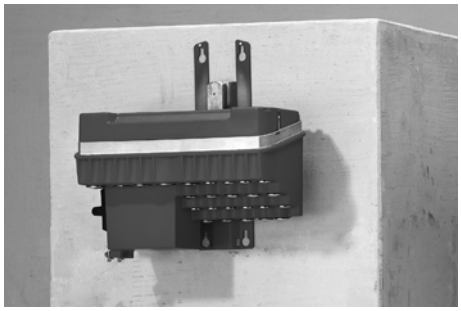
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5.8 Flexible connection technology

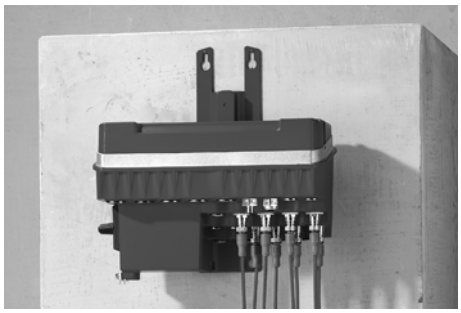
5.8.1 Overview

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.

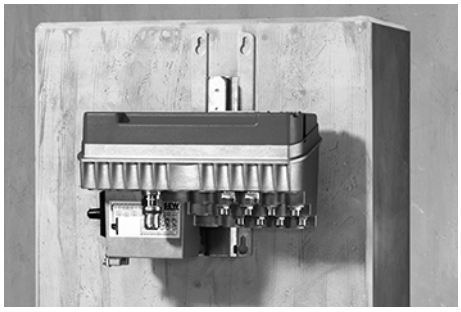
- **Standard ABOX**
  - With terminals and cable bushings



- **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



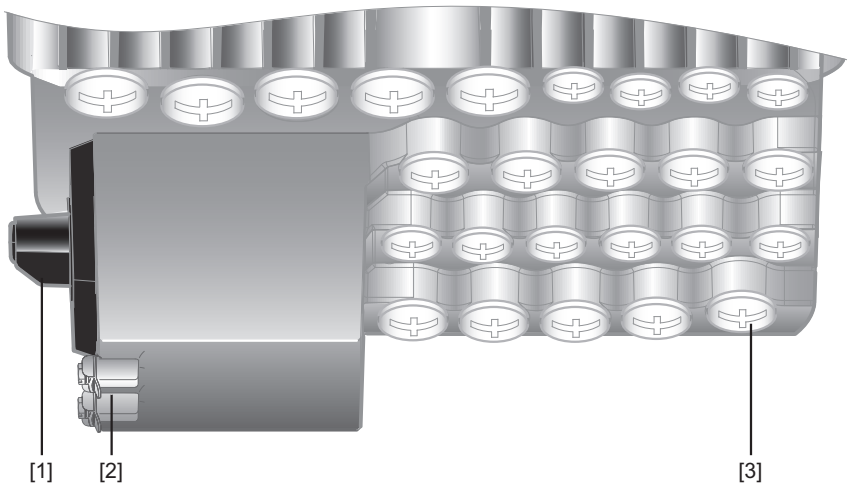
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5.9 Available ABOXes

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

Description

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

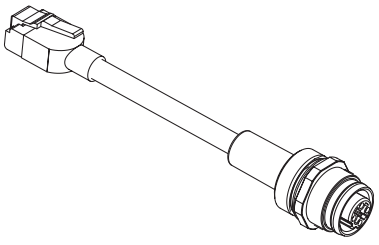


9007200067288715

[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 adapter RJ45 (internal) M12 (external) 2 required for each unit.		1 piece	13281682

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Variants

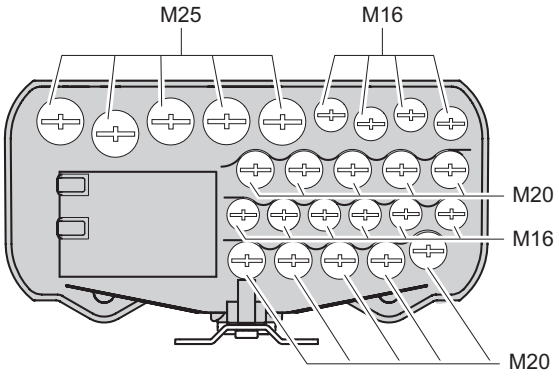
The Standard ABOX is available in the following variants:

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

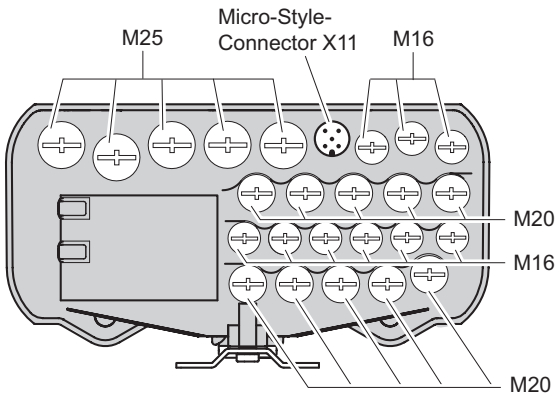
The following figure shows the cable glands and plug connectors of the Standard ABOX depending on the fieldbus interface:

PROFIBUS MTA11A-503-S0.**1**-...-00

PROFINET
Ethernet/IP™
Modbus/TCP } MTA11A-503-S0.**3**-...-00



DeviceNet™ MTA11A-503-S0.**2**-...-00



18014400027313675

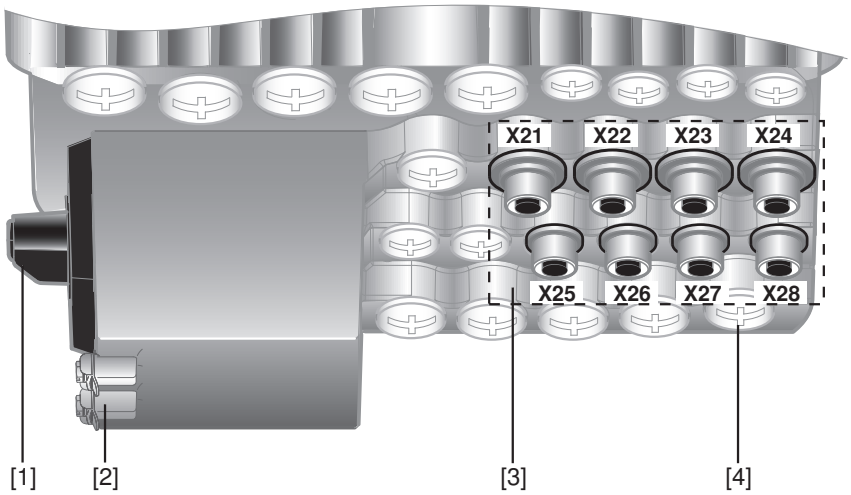
5.9.2 Hybrid ABOX "MTA...-S41.-...-00", "MTA...-S42.-...-00"

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.

Description

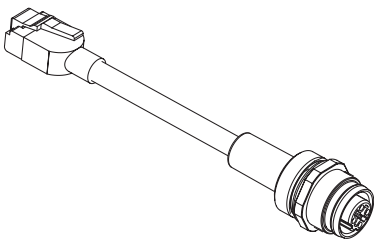
The following figure shows the hybrid ABOX with M12 plug connectors for connecting digital I/Os:



9007200170028939

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

Ethernet adapter, optional

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

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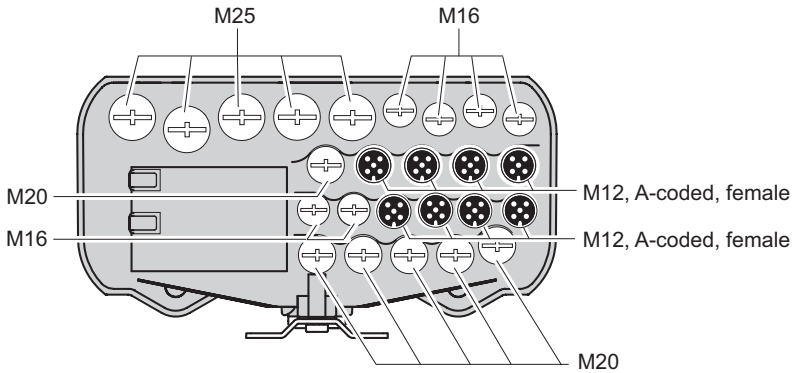
Variants

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
EtherNet/IP™ } MTA11A-503-S4.**3**-...-00
Modbus/TCP



9007204194244235

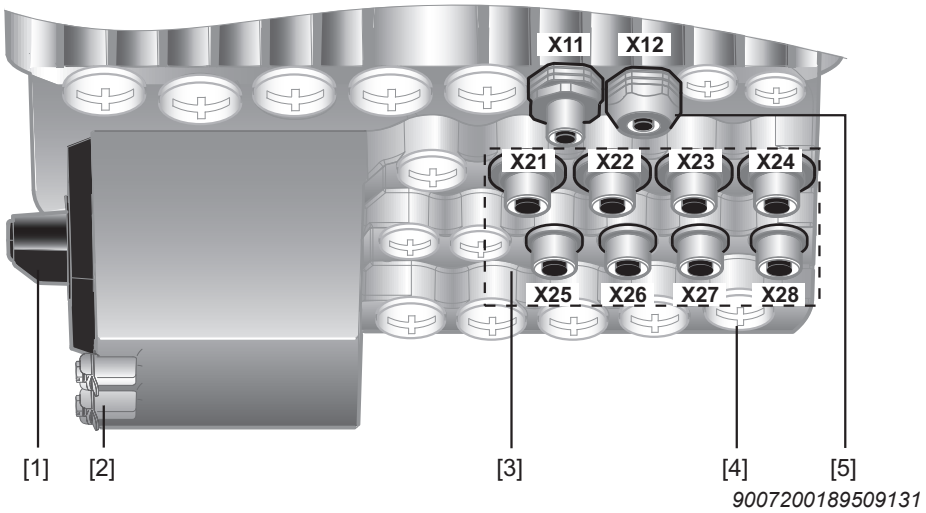
5.9.3 Hybrid ABOX "MTA...-S51.-...-00", "MTA...-S52.-...-00"

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.

Description

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



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

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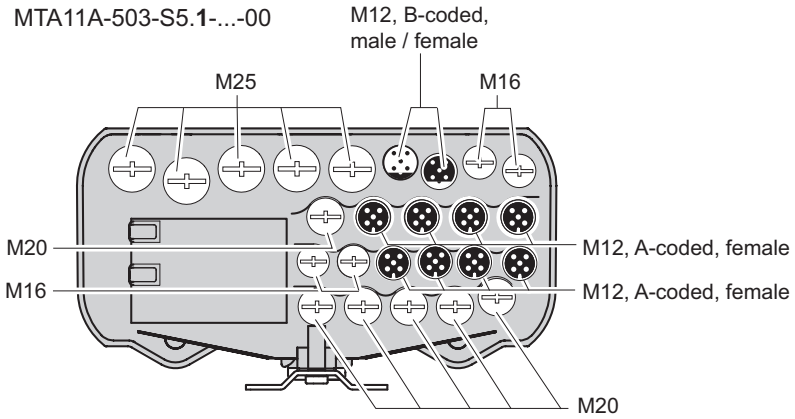
Variants

The hybrid ABOX is available in the following variants:

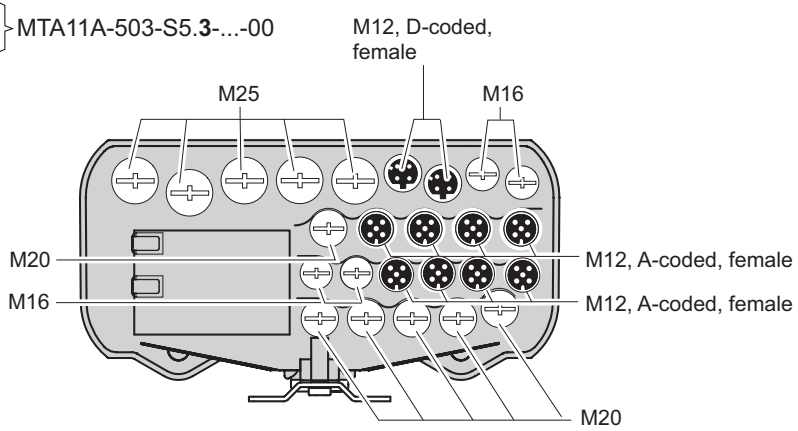
- MTA11A-503-**S51**.-...-00: Hybrid ABOX for MOVIFIT® MC (MTM)
- MTA11A-503-**S52**.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS) and FC (MTF)

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

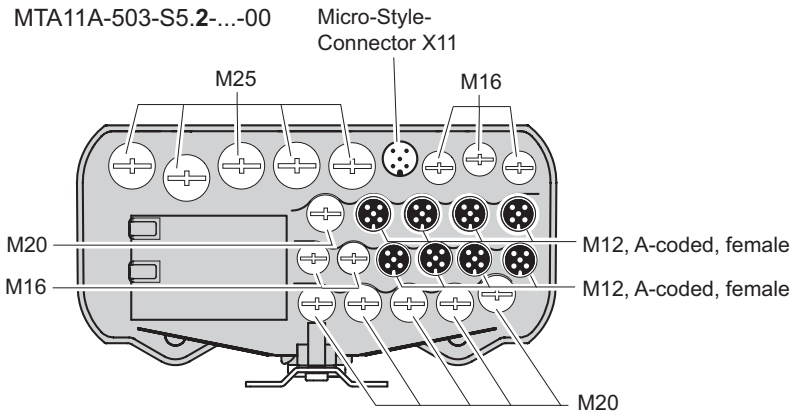
PROFIBUS MTA11A-503-S5.**1**-...-00



PROFINET
EtherNet/IP™
Modbus/TCP
MTA11A-503-S5.**3**-...-00



DeviceNet™ MTA11A-503-S5.**2**-...-00



18014400029371787

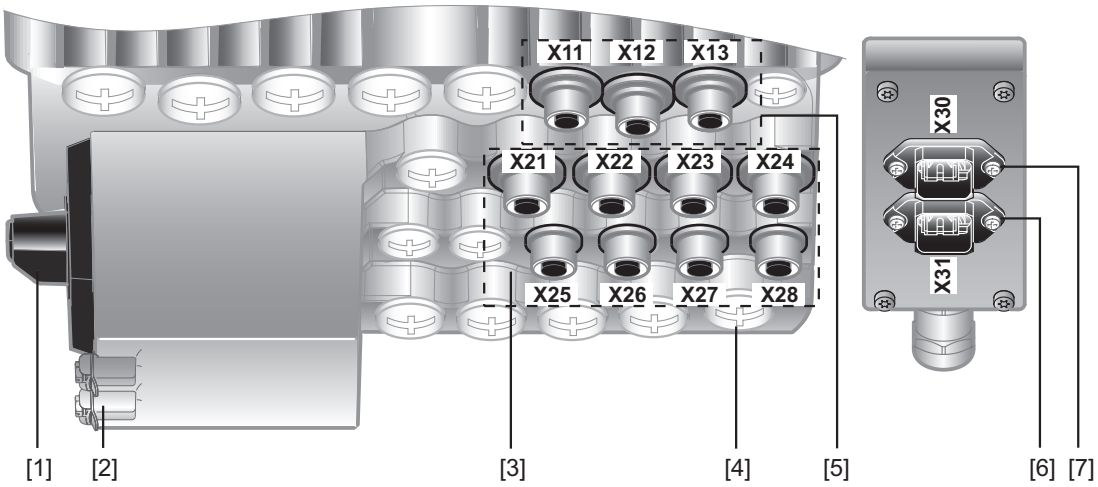
5.9.4 Hybrid ABOX "MTA...-S53.-...-00/L10"

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.

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:



18014403568045579

[1] Maintenance switch (optional)
[2] PE connection
[3] M12 plug connectors for I/Os
[4] Diagnostics socket (RJ10) under the screw plug
[5] M12 plug connectors 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 = **P**olymere **O**ptical **F**iber

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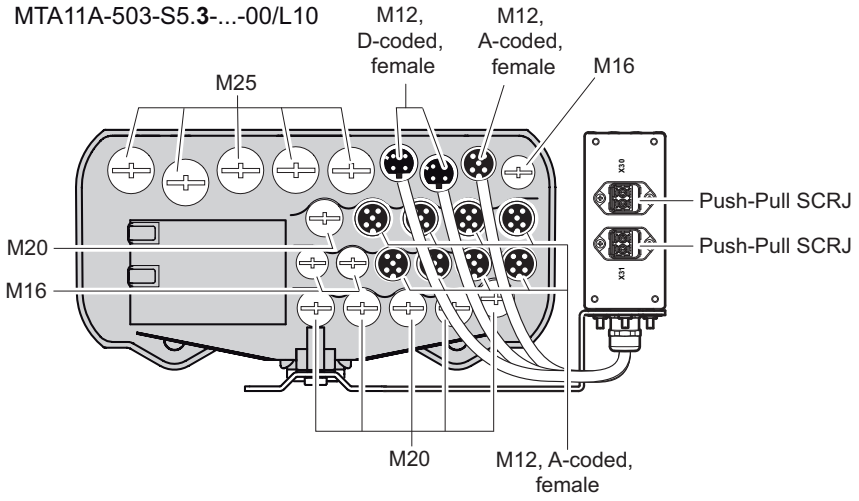
Variants

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

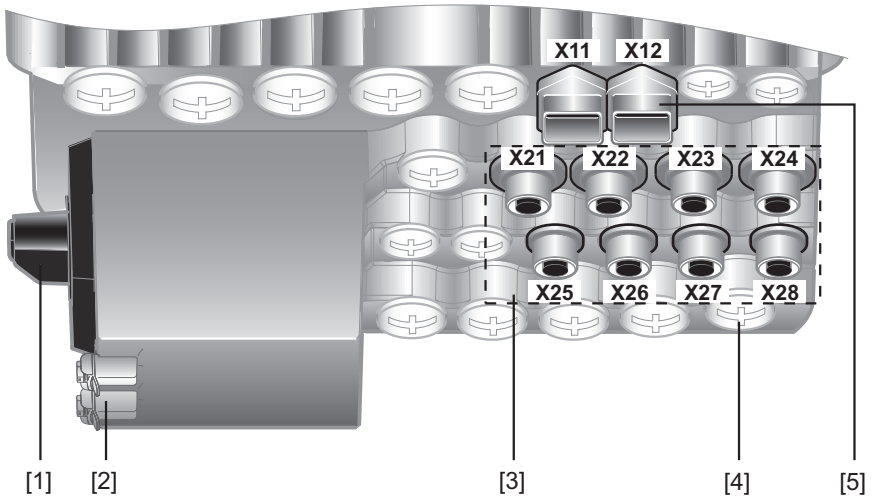
5.9.5 Hybrid ABOX "MTA...-S61.-...-00", "MTA...-S62.-...-00"

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.

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:

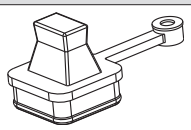


[1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
[2] PE connection
[3] M12 plug connectors for I/Os
[4] Diagnostics socket (RJ10) underneath the screw plug
[5] Push-pull RJ45 plug connectors for Ethernet connection

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

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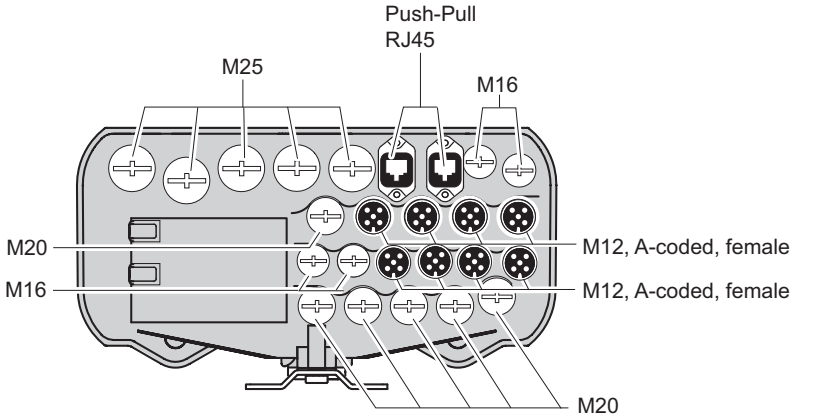
Variants

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

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

INFORMATION

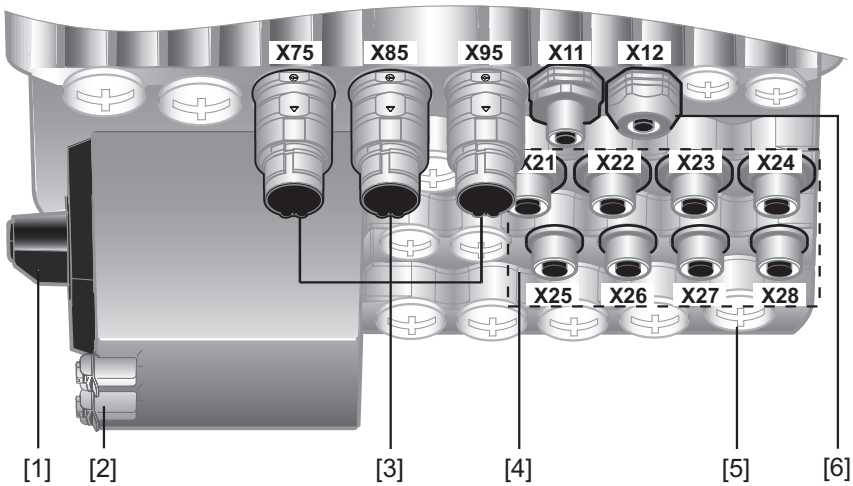
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

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

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



14328834315

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

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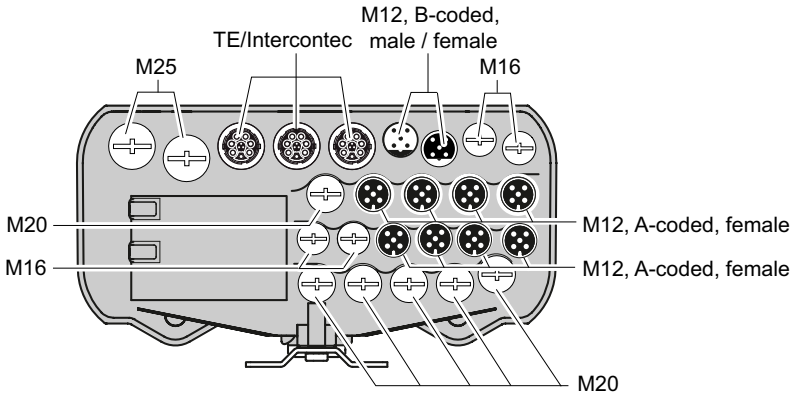
Variants

The hybrid ABOX is available in the following variants:

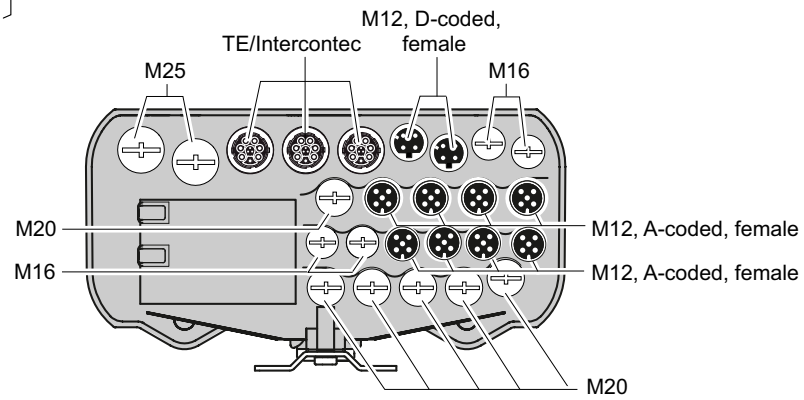
- MTA11A-503-**I51**.-...-00: Hybrid ABOX for MOVIFIT® MC (MTM)

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

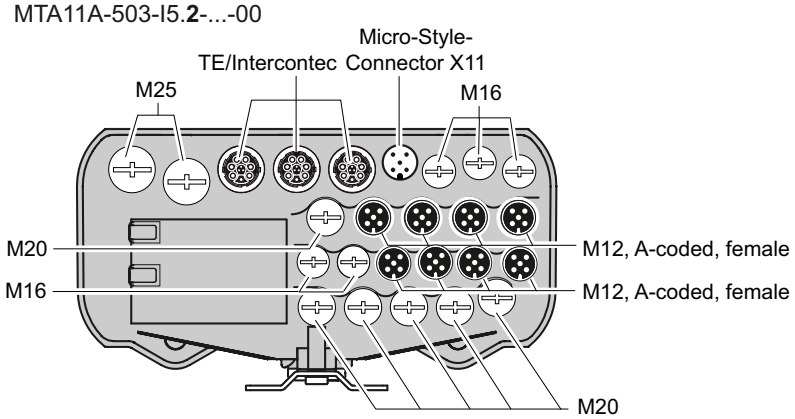
PROFIBUS MTA11A-503-I5.**1**-...-00



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



DeviceNet™ MTA11A-503-I5.**2**-...-00



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

INFORMATION

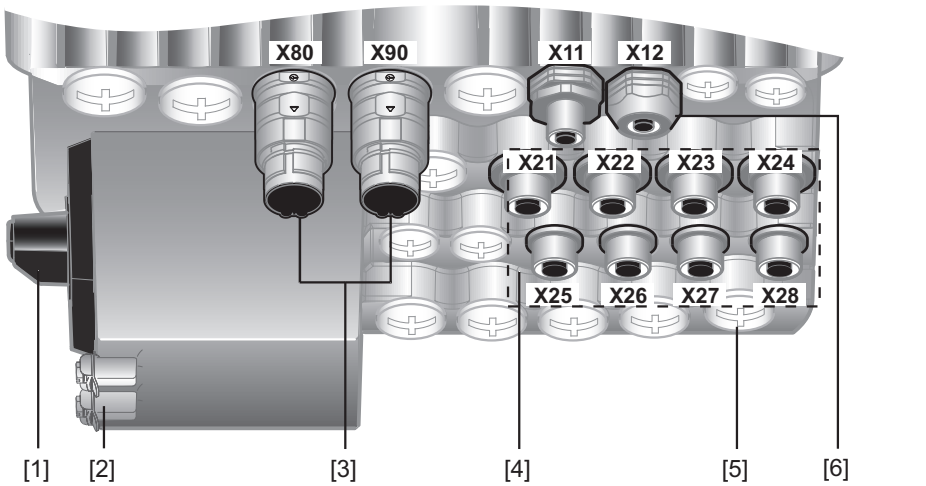
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

- 2 circular connectors (TE/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 port
[3] Round connectors (TE/Intercontec), motor output
[4] M12 plug connectors for I/Os
[5] Diagnostics socket (RJ10) underneath the screw plug
[6] M12 plug connectors for fieldbus connection

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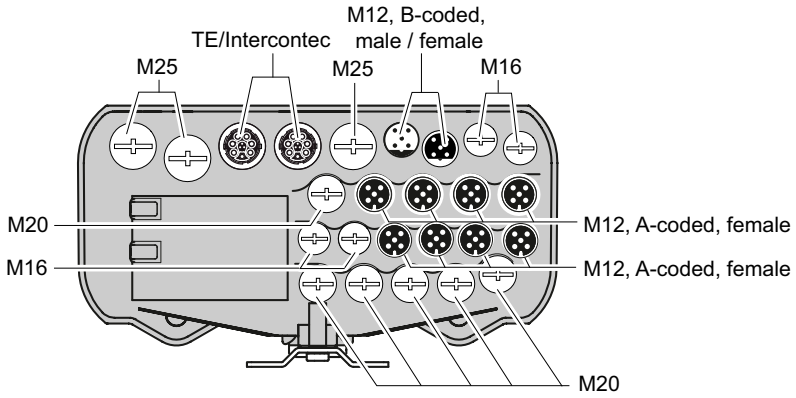
Variants

The hybrid ABOX is available in the following variants:

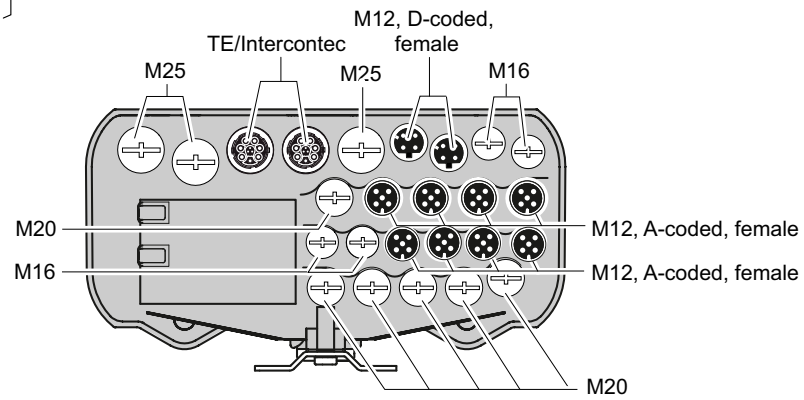
- MTA11A-503-**I52**.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS)

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

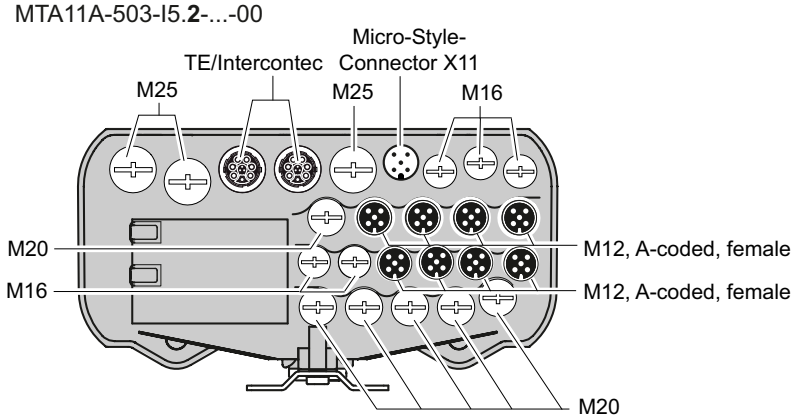
PROFIBUS MTA11A-503-I5.**1**-...-00



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



DeviceNet™ MTA11A-503-I5.**2**-...-00



18014403454523915

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

INFORMATION

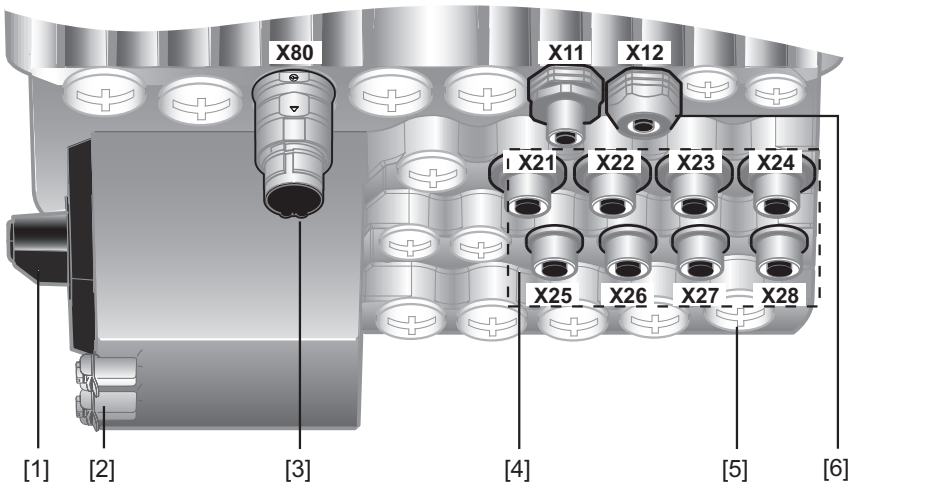
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

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

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



14329275019

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

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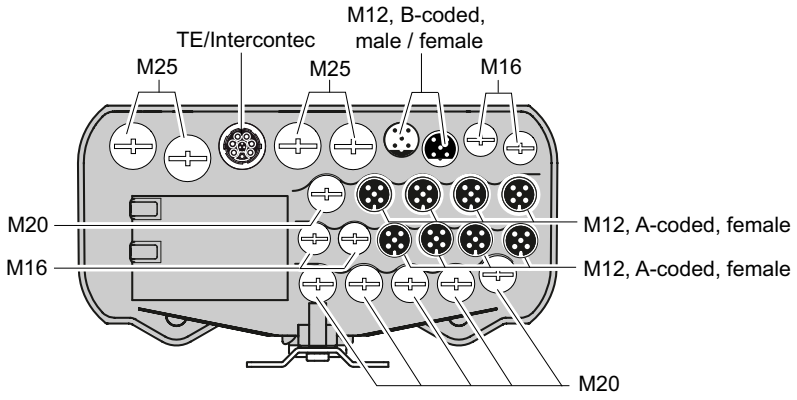
Variants

The hybrid ABOX is available in the following variants:

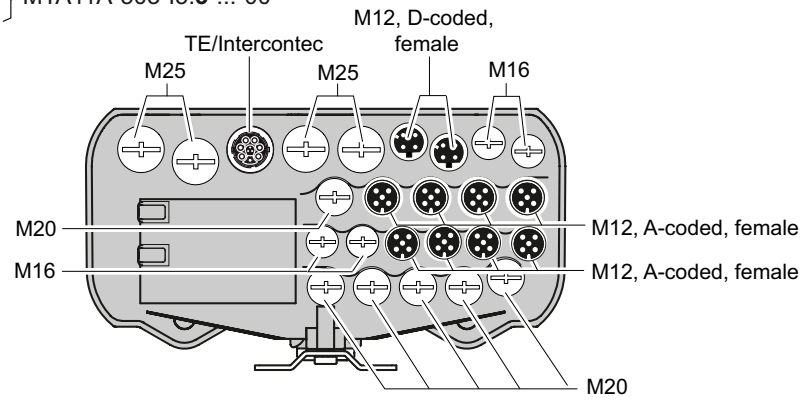
- MTA11A-503-**I55**.-...-00: Hybrid ABOX for MOVIFIT® SC (MTS) and FC (MTF)

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

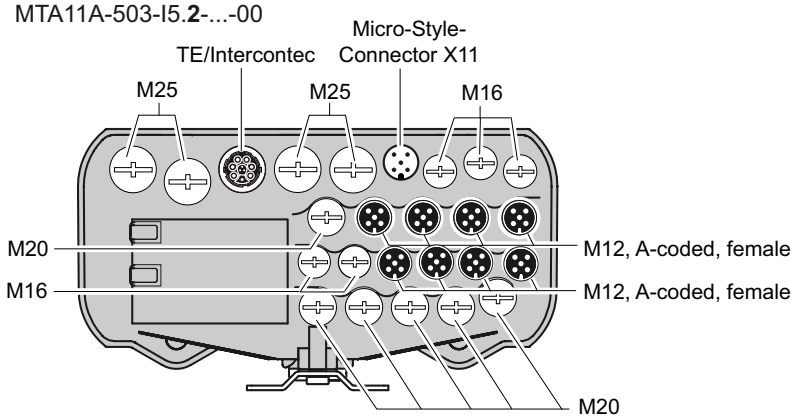
PROFIBUS MTA11A-503-I5.**1**-...-00



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



DeviceNet™ MTA11A-503-I5.**2**-...-00



18014402811450123

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

INFORMATION

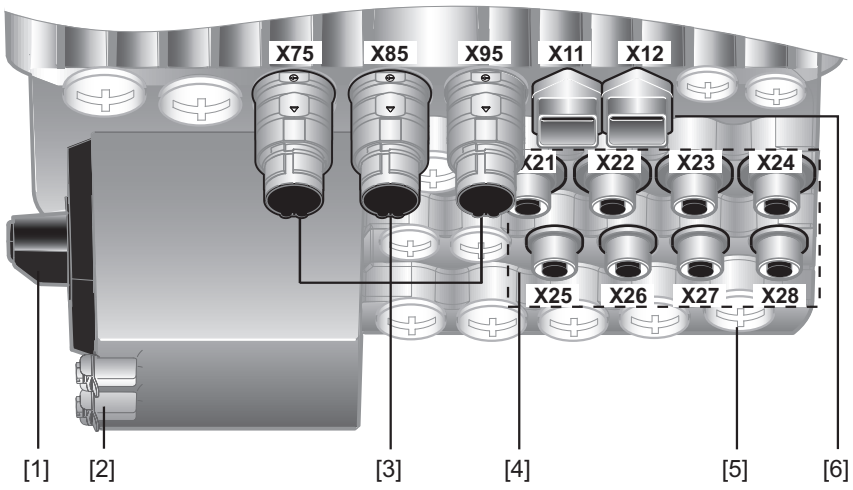
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

- 3 circular connectors (TE/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



14329417483

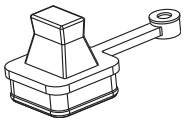
[1] Maintenance switch (integrated as standard in connection with MOVIFIT® MC)
[2] PE port
[3] Round connectors (TE/Intercontec), MOVIMOT® output
[4] M12 plug connectors for I/Os
[5] Diagnostics socket (RJ10) underneath the screw plug
[6] Push-pull RJ45 plug connectors for Ethernet connection

INFORMATION

Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector in accordance with 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 suitable.

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Optional closing plug

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

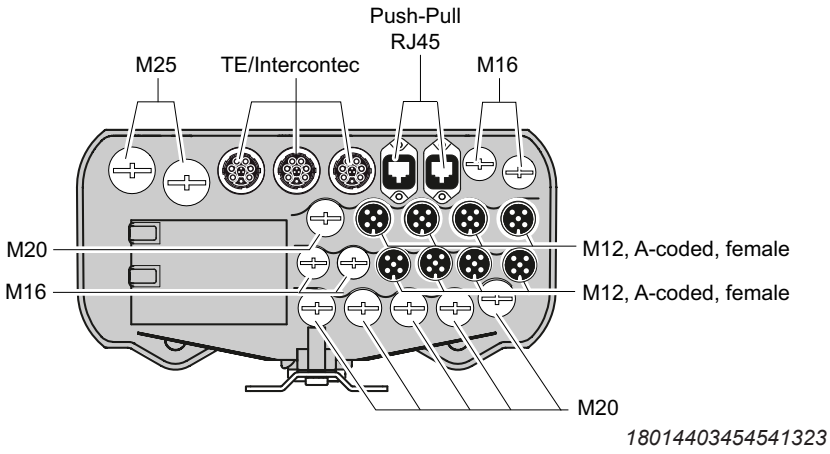
Variants

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™ } MTA11A-503-I6.**3**-...-00
Modbus/TCP



18014403454541323

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

INFORMATION

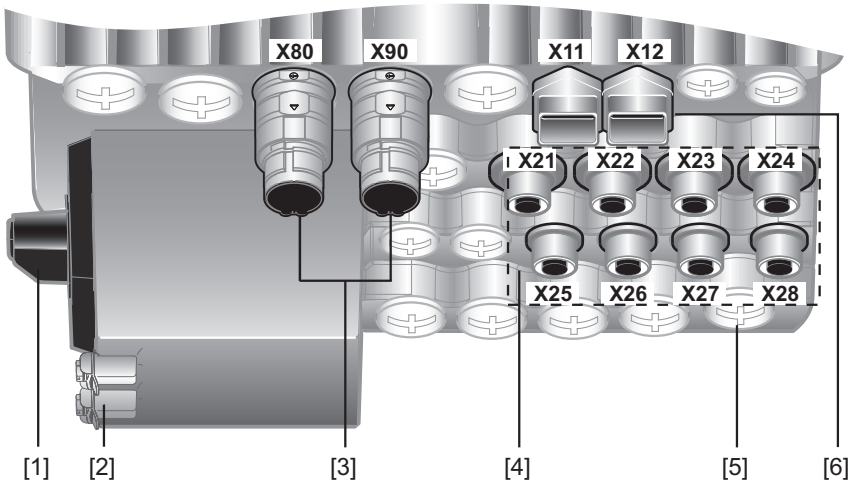
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

- 2 circular connectors (TE/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



14329451915

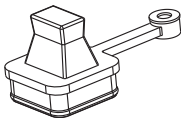
[1] Maintenance switch (optional)
[2] PE port
[3] Round connectors (TE/Intercontec), motor output
[4] M12 plug connectors for I/Os
[5] Diagnostics socket (RJ10) underneath the screw plug
[6] Push-pull RJ45 plug connectors for Ethernet connection

INFORMATION

Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector in accordance with 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 suitable.

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Optional closing plug

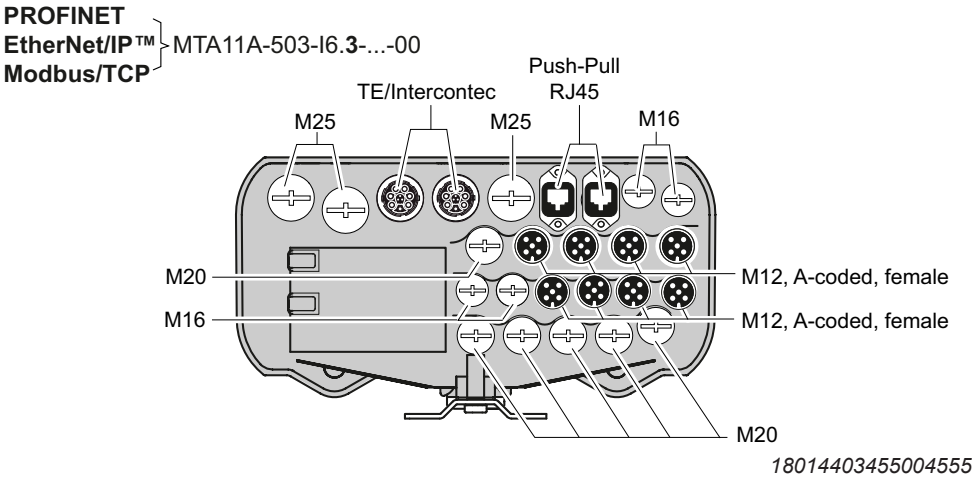
Type	Figure	Contents	Part number
Ethernet closing plug for Push pull RJ45 socket		10 pieces	18223702
		30 pieces	18223710

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:



18014403455004555

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

INFORMATION

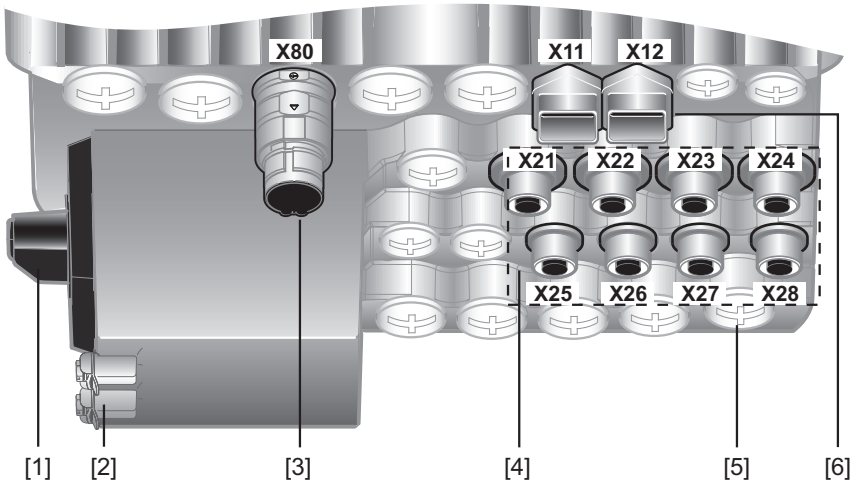
- The hybrid ABOX is based on the standard ABOX. The following therefore only describes the additional plug connectors in comparison with the standard ABOX.
- The built-in M12 plug connectors have no specific alignment. This is why you should only use straight M12 mating connectors.

Description

The following figure shows the hybrid ABOX with:

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

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



14329675403

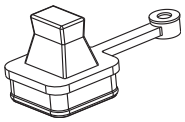
[1] Maintenance switch (optional)
[2] PE port
[3] Round connector (TE/Intercontec), motor output
[4] M12 plug connectors for I/Os
[5] Diagnostics socket (RJ10) underneath the screw plug
[6] Push-pull RJ45 plug connectors for Ethernet connection

INFORMATION

Do not use push-pull RJ45 sockets without the mating push-pull RJ45 connector in accordance with 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 suitable.

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Optional closing plug

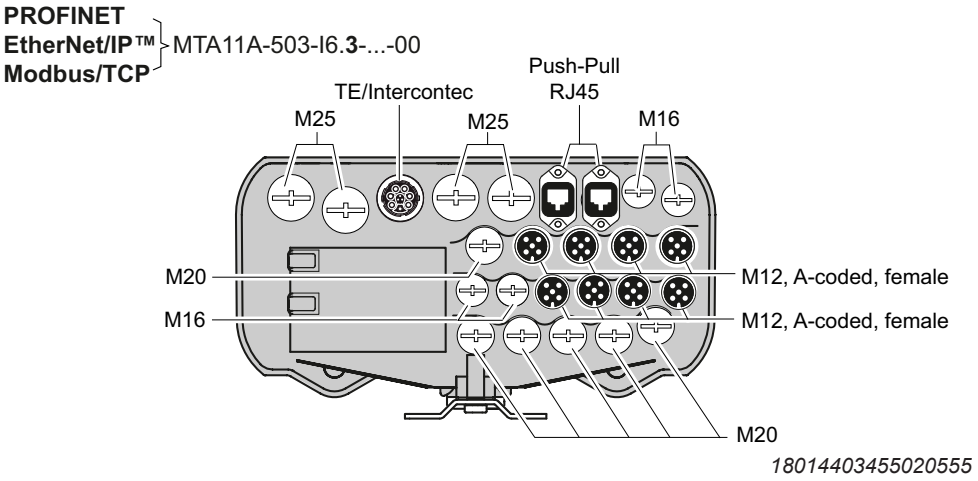
Type	Figure	Contents	Part number
Ethernet closing plug for Push pull RJ45 socket		10 pieces	18223702
		30 pieces	18223710

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:

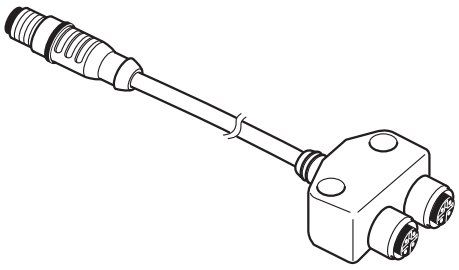


18014403455020555

5.9.12 Recommended Y adapter for the hybrid ABOX

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

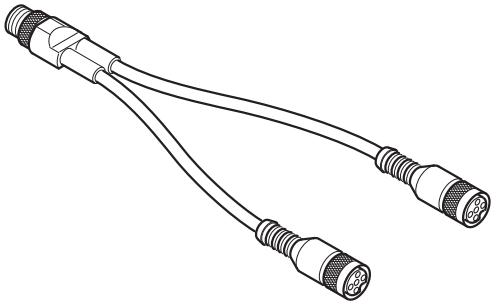
The Y adapter is available from different manufacturers:



9007200170035339

Manufacturer: Escha

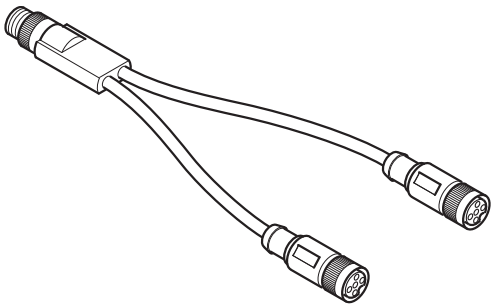
Type: WAS4-0,3-2FKM3/..



9007200435121675

Manufacturer: Binder

Type: 79 5200..

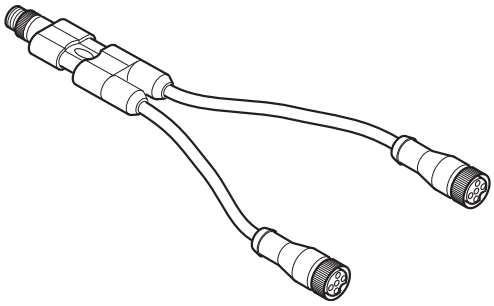


1180375179

Manufacturer: Phoenix Contact

Type: SAC-3P-Y-2XFS SCO/.../...

The cable sheath is made of PVC. Provide suitable UV protection.



1180386571

Manufacturer: Murrelektronik

Type: 7000-40721-..

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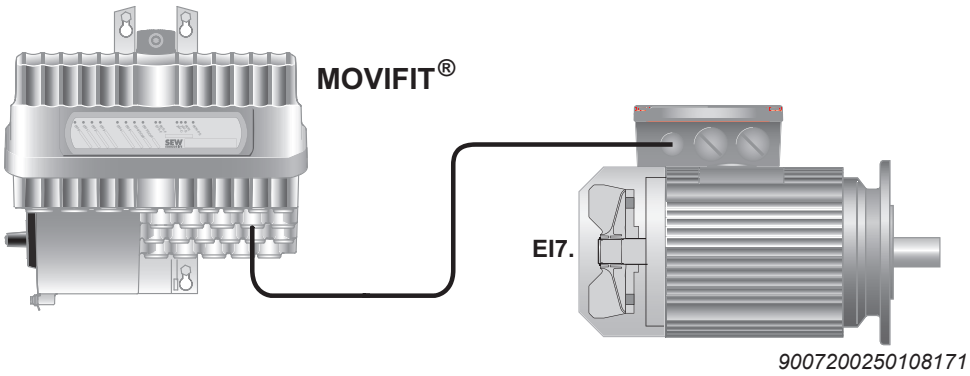
5.10 Connection options for encoders

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.

5.10.1 Example: EI7. incremental encoder

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



9007200250108171

5.10.2 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

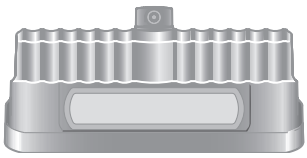
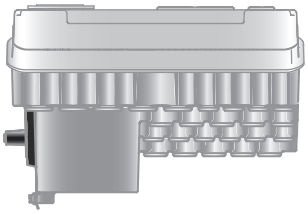
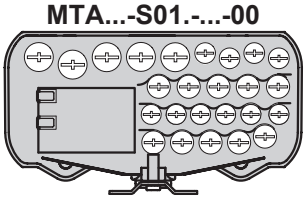
- Encoder monitoring and evaluation is possible with MOVIFIT® "Technology" function level.

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5.11 Selection tables

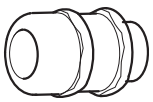
5.11.1 Available combinations for MOVIFIT® MC

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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

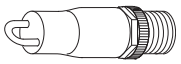
Maintenance switch	Integrated in	Type
Switch disconnector and line protection	ABOX	MTA...-...-....-**M01**-00 (up to 12 A)[1)] MTA...-...-....-**M14**-00 (up to 9 A)[2)] MTA...-...-....-**M15**-00 (up to 12 A)[2)]

1) For UL only switch disconnector
2) Only available in connection with UL

Option

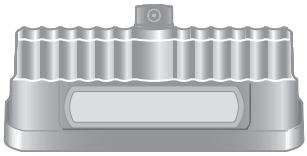
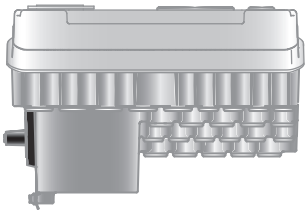
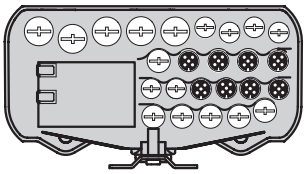
Option	Integrated in	Type
S12A safety option	EBOX	**/S12A**
S12B safety option		**/S12B**
STO pluggable (M12)	ABOX	**/00S**, **/M1S** or **/M2S**

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

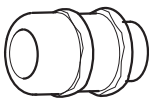
31550126/EN – 11/2023

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

	EBOX	ABOX
	MTM...-...-00	
MC	 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

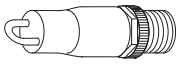
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnector 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)]

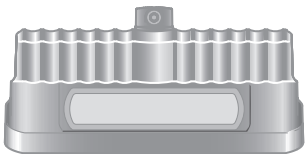
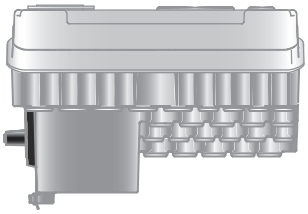
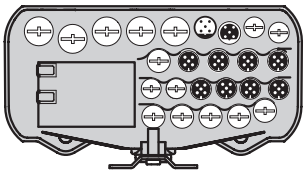
1) For UL only switch disconnector
2) Only available in connection with UL

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 

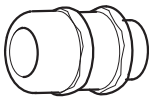
31550126/EN – 11/2023

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

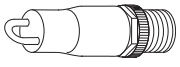
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnector 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]

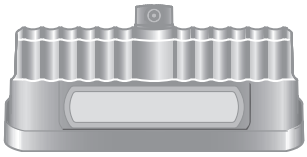
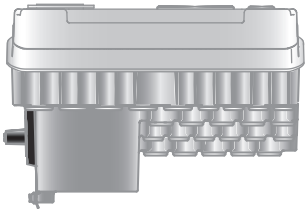
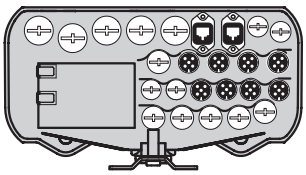
1) For UL only switch disconnector
2) Only available in connection with UL

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 

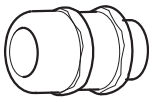
31550126/EN – 11/2023

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

	EBOX	ABOX	
	MTM...-...-00		MTA...-S61.-...-00
MC	 MOVIFIT® MC for controlling up to 3 MOVIMOT® drives		 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

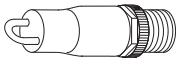
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnector 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)]

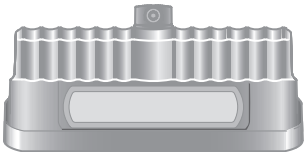
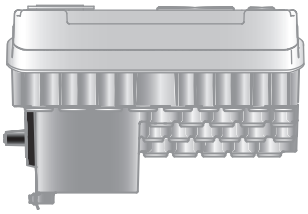
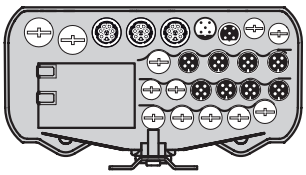
1) For UL only switch disconnector
2) Only available in connection with UL

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 

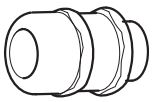
31550126/EN – 11/2023

MOVIFIT® MC in connection with hybrid ABOX MTA...-I51.-...-00

	EBOX	ABOX
MC	**MTM...-...-00**  MOVIFIT® MC for controlling up to 3 MOVIMOT® drives	 **MTA...-I51.-...-00**  Hybrid ABOX with 3 circular connectors (TE/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

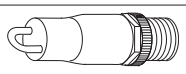
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnector 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)]

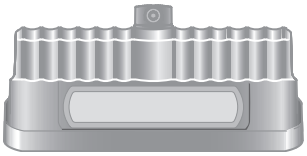
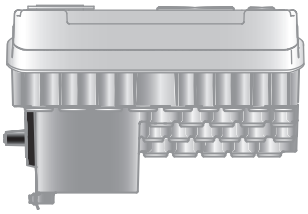
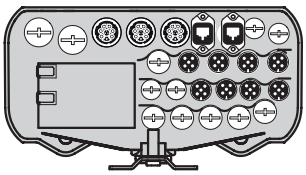
1) For UL only switch disconnector
2) Only available in connection with UL

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 

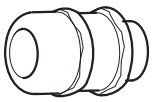
31550126/EN – 11/2023

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 (TE/Intercontec) (downward motor output) and 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-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

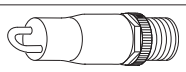
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch	Integrated in	Type
Switch disconnector 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 disconnector
2) Only available in connection with UL

Option

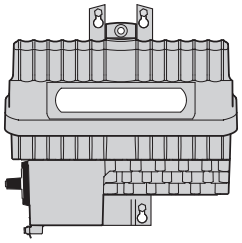
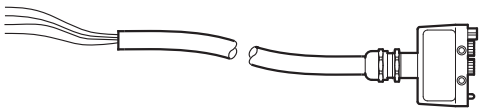
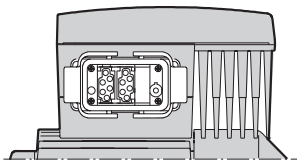
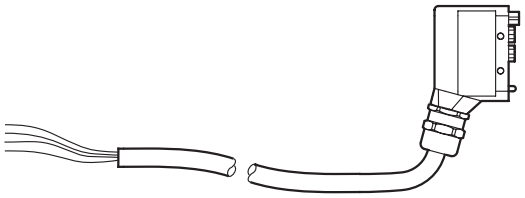
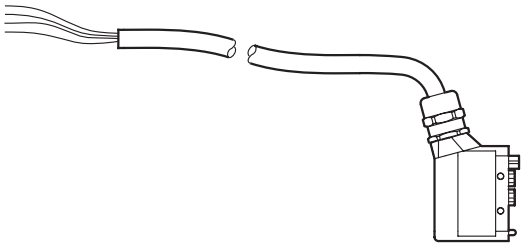
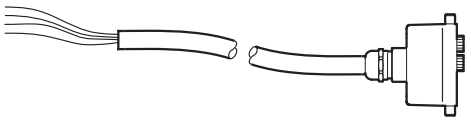
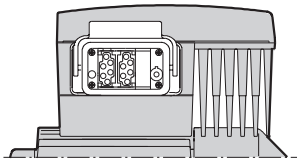
Option	Integrated in	Type
S12A safety option	EBOX	**/S12A**
S12B safety option		**/S12B**
STO pluggable (M12)	ABOX	**/00S**, **/M1S** or **/M2S**
STO jumper plug	Included in the delivery, order optional	Part number: 11747099 

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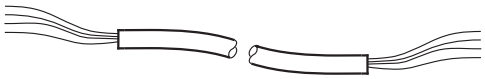
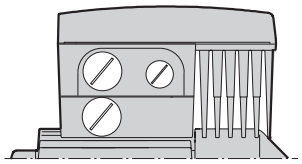
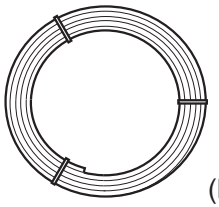
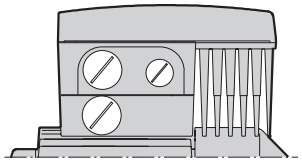
5.11.2 Hybrid cable for connecting MOVIFIT® MC and MOVIMOT®

Overview

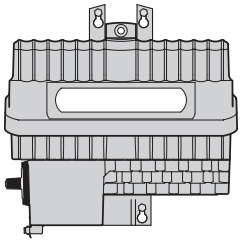
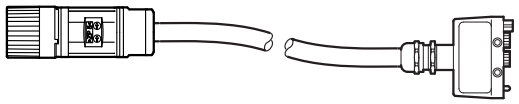
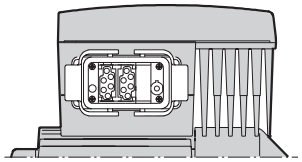
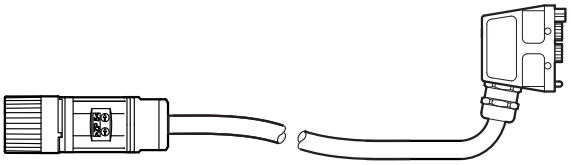
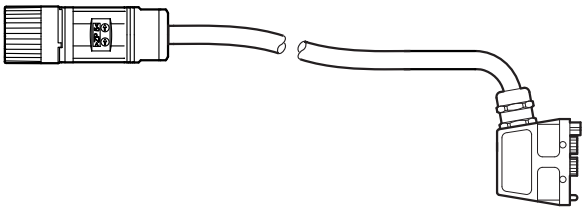
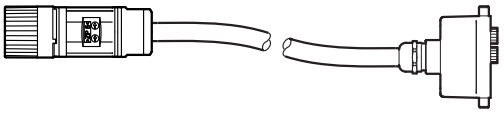
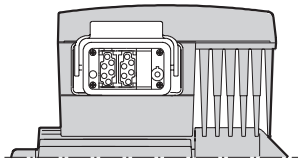
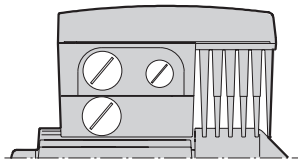
Hybrid cables are available for connecting MOVIFIT® MC and MOVIMOT®. The following table lists the available hybrid cables for total currents of up to 12 A (with UL approval only up to 9 A):

<table>
<tr><th>MOVIFIT® MC</th><th>Connection cable</th><th>Length
Type</th><th>Drive</th></tr>
<tr><td rowspan="3">Standard ABOX:
MTA...-S01.-...-00
Hybrid ABOX:
MTA...-S41.-...-00
MTA...-S51.-...-00
MTA...-S61.-...-00
</td><td>Part number: 08199655
</td><td rowspan="3">Variable
type B</td><td rowspan="3">MOVIMOT® with AMA6 plug connector
</td></tr>
<tr><td>Part number: 18100554

9007200340340363</td></tr>
<tr><td>Part number: 18100562

9007200339769739</td></tr>
<tr><td></td><td>Part number: 08198713
</td><td>Variable
type B</td><td>MOVIMOT® with AMD6 plug connector
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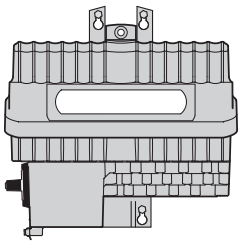
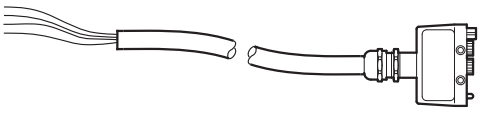
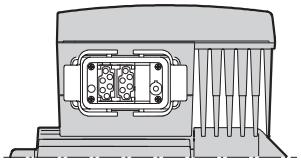
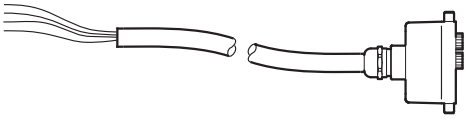
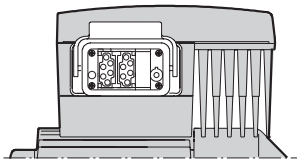
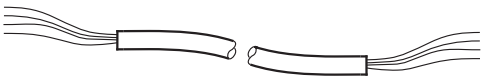
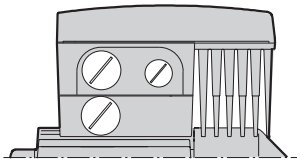
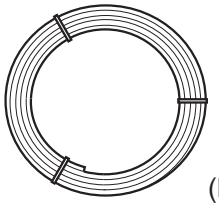
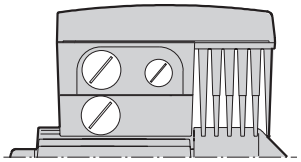
MOVIFIT® MC	Connection cable	Length Type	Drive
	Part number: 08199744 	Variable type B	MOVIMOT® with cable glands 
	Part number: 08145172/30 m Part number: 08145172/100 m  (Hybrid cable roll)	30 m 100 m Type B	MOVIMOT® with cable glands 

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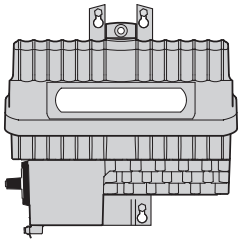
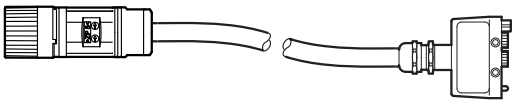
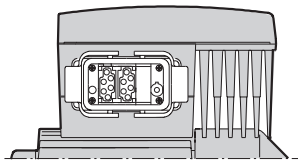
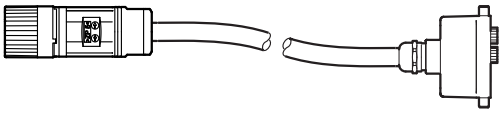
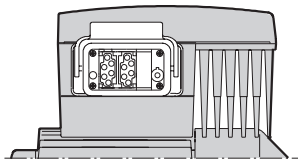
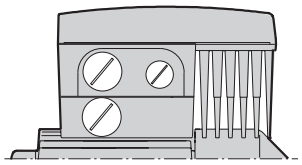
MOVIFIT® MC	Connection cable	Length Type	Drive
Hybrid ABOX: MTA...-I51.-...-00 MTA...-I61.-...-00 	Part number: 18146155 	Variable type B	MOVIMOT® with AMA6 plug connector 
	Part number: 18147348  *9007205621179531*		
	Part number: 18147321  *9007205621164427*		
	Part number: 18146171 	Variable type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

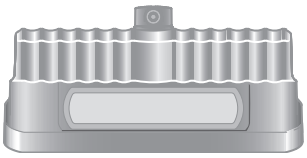
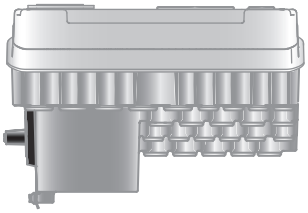
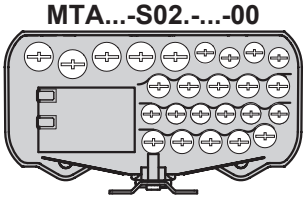
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MOVIFIT® MC	Connection cable	Length Type	Drive
Hybrid ABOX: MTA...-I51.-...-00 MTA...-I61.-...-00 	Part number: 18146147 	Variable type B/2.5	MOVIMOT® with AMA6 plug connector 
	Part number: 18146163 	Variable type B/2.5	MOVIMOT® with AMD6 plug connector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

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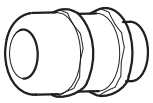
5.11.3 Available combinations for MOVIFIT® SC

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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

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

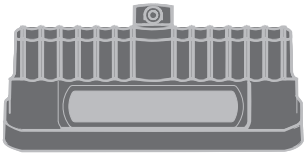
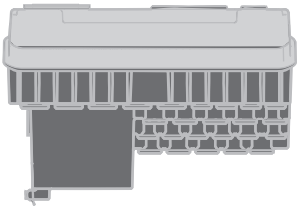
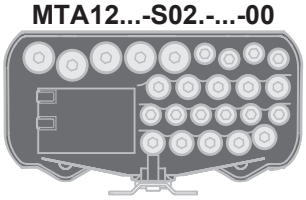
1) For units with UL, the maintenance switch M12 is mandatory.

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

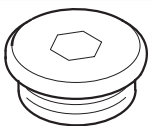
INFORMATION

- 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.

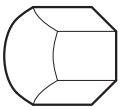
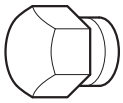
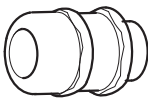
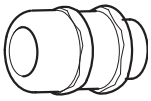
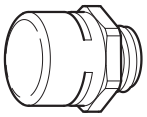
	EBOX		ABOX
SC	**MTS12...-...-00**  MOVIFIT® SC with integrated motor starter (Hygienic^{plus} design)		**MTA12...-S02.-...-00**  Standard ABOX with terminals and cable bushings (Hygienic^{plus} design)

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™ Modbus/TCP	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

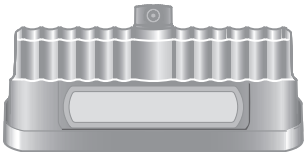
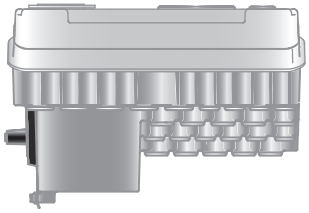
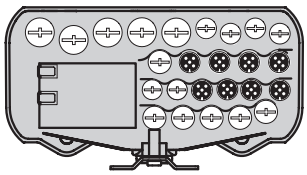
Type of screw fitting	Image	Contents	Size	Part number
Stainless steel screw plugs		10 pieces	M16 × 1.5	18202233
		10 pieces	M20 ×1.5	18202241
		10 pieces	M25 × 1.5	18202268

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

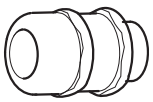
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MOVIFIT® SC in connection with hybrid ABOX MTA...-S42.-...-00

	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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

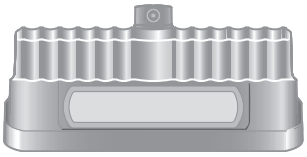
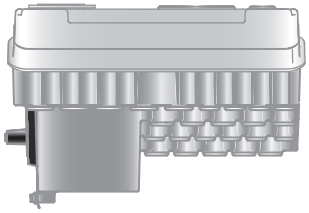
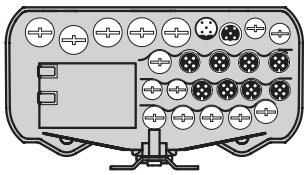
Maintenance switch

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

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

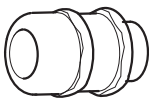
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MOVIFIT® SC in connection with hybrid ABOX MTA...-S52.-...-00

	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™ Modbus/TCP	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-S523-00
		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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

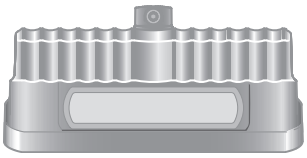
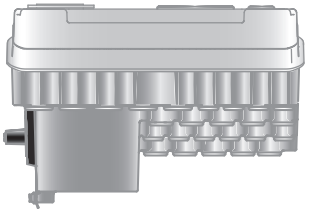
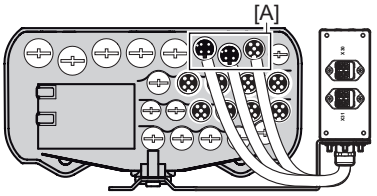
Maintenance switch

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

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

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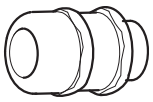
MOVIFIT® SC in connection with hybrid ABOX MTA...-S533.-...-00/L10 (POF)

	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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

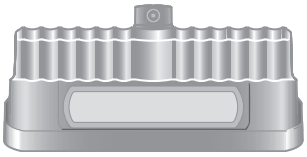
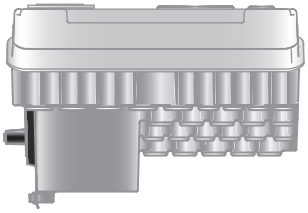
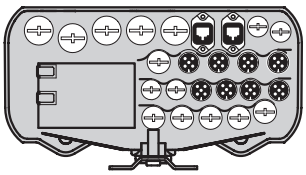
Maintenance switch

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

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

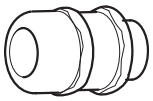
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MOVIFIT® SC in connection with hybrid ABOX MTA...-S62.-...-00

	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™ Modbus/TCP	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-S623-00
		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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

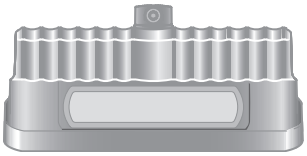
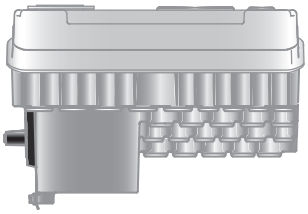
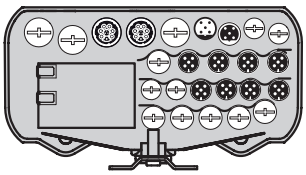
Maintenance switch

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

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

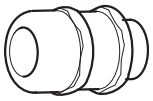
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MOVIFIT® SC in connection with hybrid ABOX MTA...-I52.-...-00

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

Function level	Fieldbus	Device output	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™ Modbus TCP	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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

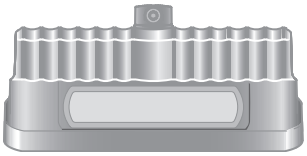
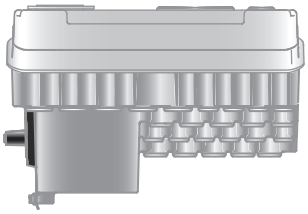
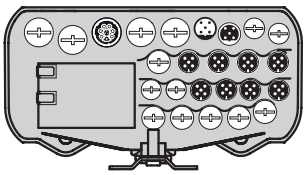
Maintenance switch

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

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

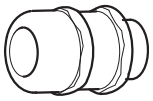
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MOVIFIT® SC in connection with hybrid ABOX MTA...-I55.-...-00

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

Function level	Fieldbus	Device output	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™ Modbus TCP	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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

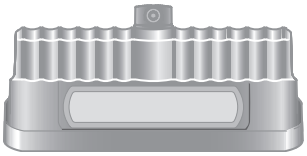
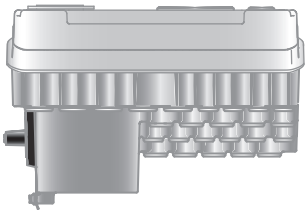
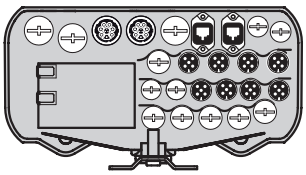
Maintenance switch

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

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

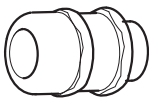
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MOVIFIT® SC in connection with hybrid ABOX MTA...-I62.-...-00

	EBOX	ABOX
SC	MTS...-...-00  MOVIFIT® SC with integrated motor starter		MTA...-I62.-...-00  Hybrid ABOX with 2 circular connectors (TE/Intercontec) (downward motor output) and M12 for I/Os and push-pull RJ45 for bus

Function level	Fieldbus	Device output	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™ Modbus TCP	1.5 kW	MTS11A015-503-E31A-00	MTA11A-503-I623-00
		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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

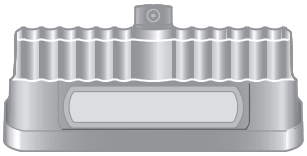
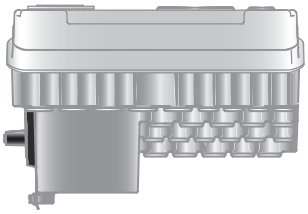
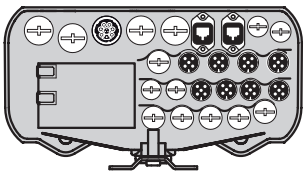
Maintenance switch

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

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

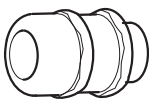
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MOVIFIT® SC in connection with hybrid ABOX MTA...-I65.-...-00

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

Function level	Fieldbus	Device output	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™ Modbus TCP	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 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

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

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

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Motor requirements in connection with MOVIFIT® SC

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications without fail when ordering the drives assigned to MOVIFIT® SC:

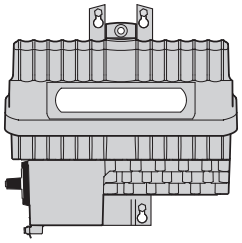
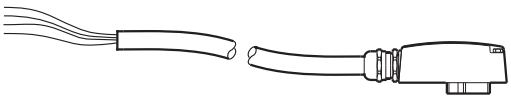
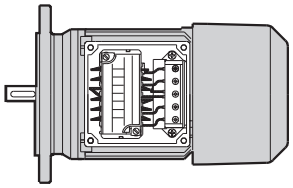
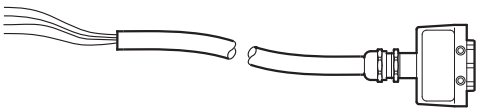
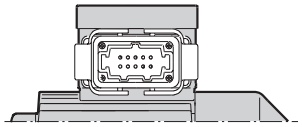
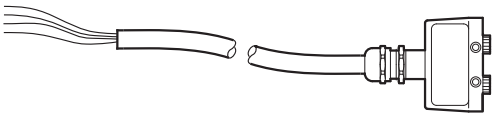
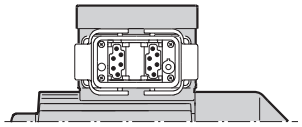
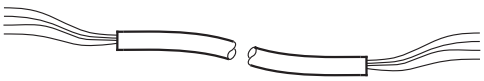
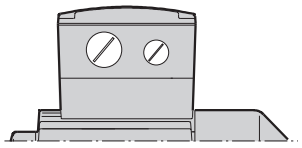
Integral characteristics	Requirements for the assigned AC motor
Permitted motors	Motors within the range 0.25 kW to 3 kW are permitted.
Permitted nominal motor voltage	AC 380 V to AC 500 V
Permitted brakes	No restrictions
Permitted brake voltage	In the case of brakemotors, the brake voltage must comply 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 For additional information, refer to chapter "Hybrid cables for connecting MOVIFIT® SC and motors" (→ 🗎 236).
Permitted motor protection	• TH thermostat (bimetallic switch) • TF temperature sensor (PTC thermistor or PTC resistor)

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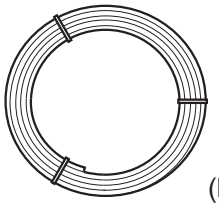
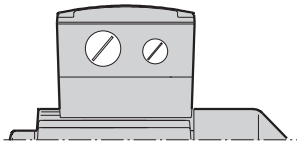
5.11.4 Hybrid cables for connecting MOVIFIT® SC and motors

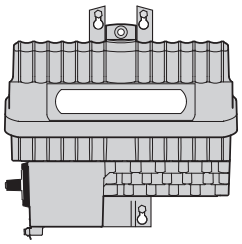
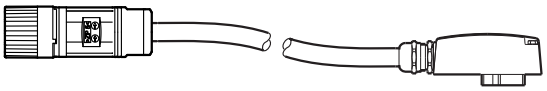
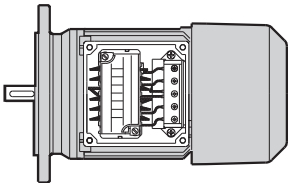
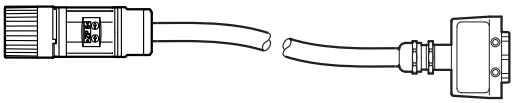
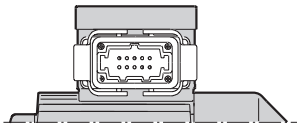
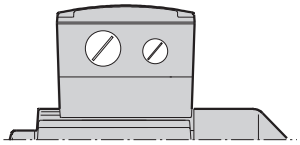
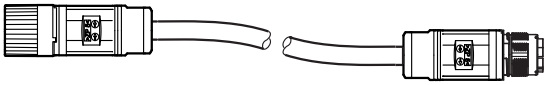
Overview

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

MOVIFIT® SC	Connection cables	Length Type	Drive
Standard ABOX: MTA...-S02.-...-00 **Hybrid ABOX:** MTA...-S42.-...-00 MTA...-S52.-...-00 MTA...-S62.-...-00 	Part no. DR63/DT71 – 90 (⅄): 08199671 Part no. DR63/DT71 – 90 (△): 08199698 Part no. DR.71 – 132, DV100, DV112 (⅄): 08199701 Part no. DR.71 – 132, DV100, DV112 (△): 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 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 

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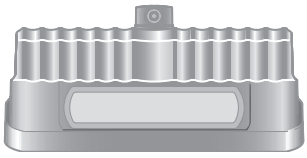
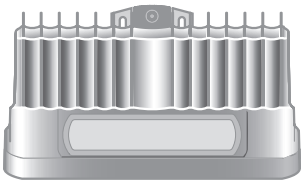
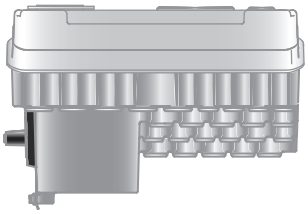
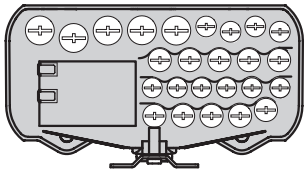
MOVIFIT® SC	Connection cables	Length Type	Drive
	Part number: 08179530/30 m Part number: 08179530/100 m  (hybrid cable roll)	30 m 100 m Type A	Motor with cable glands 

MOVIFIT® SC	Connection cables	Length Type	Drive
Hybrid ABOX: MTA...-I52.-...-00 MTA...-I55.-...-00 MTA...-I62.-...-00 MTA...-I65.-...-00 	Part no. DR63 (⅄): 18138411 Part no. DR63 (△): 18138438 Part no. DR.71 – 132 (⅄): 18138330 Part no. DR.71 – 132 (△): 18138365 	Vari-able Type A	Motor with ISU4 plug connector 
	Part number: 18142257 	Vari-able 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 	Vari-able Type A	Motor with cable glands 
	Part number: 18141056 (= extension cable) 	Vari-able Type A	Hybrid cable

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5.11.5 Available combinations for MOVIFIT® FC

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

	EBOX	ABOX
FC	**MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	 **MTA...-S02.-...-..**  Standard ABOX with terminals and cable bushings

Function level	Fieldbus	Device output	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-S021-33
		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-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-□	

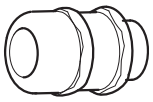
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Function level	Fieldbus	Device output	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-□	MTA11A-503-S023-00 MTA11A-503-S023-30 MTA11A-503-S023-33
		0.55 kW		MTF11A005-503-E20A-□	
		0.75 kW		MTF11A007-503-E20A-□	
		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-□	

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Function level	Fieldbus	Device output	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

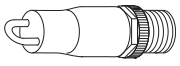
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

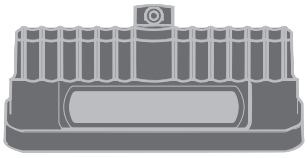
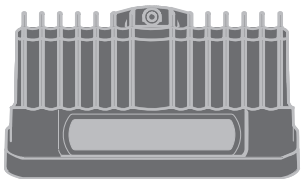
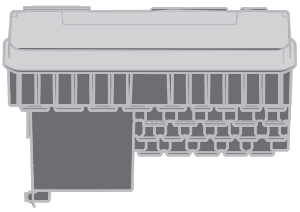
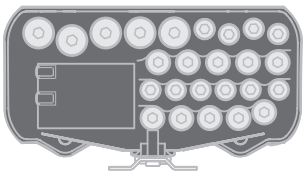
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MOVIFIT® FC in connection with standard ABOX and Hygienic^{plus} design

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.

	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-□	

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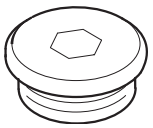
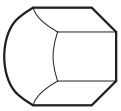
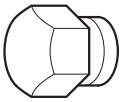
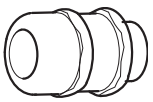
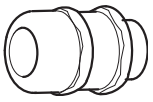
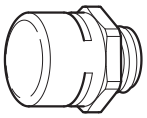
Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	DeviceNet™	0.37 kW	1	MTF12A003-503-D10A-□	MTA12A-503-S022-00 MTA12A-503-S022-30 MTA12A-503-S022-33
		0.55 kW		MTF12A005-503-D10A-□	
		0.75 kW		MTF12A007-503-D10A-□	
		1.1 kW		MTF12A011-503-D10A-□	
		1.5 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-□	

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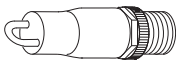
Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Technology	EtherNet/IP™ Modbus/TCP	0.37 kW	1	MTF12A003-503-E31A-□	MTA12A-503-S023-00 MTA12A-503-S023-30 MTA12A-503-S023-33
		0.55 kW		MTF12A005-503-E31A-□	
		0.75 kW		MTF12A007-503-E31A-□	
		1.1 kW		MTF12A011-503-E31A-□	
		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-□	

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Screw fittings/screw plug/pressure compensation

Type of screw fitting	Image	Contents	Size	Part number
Stainless steel screw plugs		10 pieces	M16 × 1.5	18202233
		10 pieces	M20 ×1.5	18202241
		10 pieces	M25 × 1.5	18202268
M12 screw plug (made of stainless steel)		10 pieces	M12 × 1.0	18202799
M12 screw plug (made of stainless steel)		10 pieces	M12 × 1.0	18202276
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805
EMC cable gland (made of stainless steel)		10 pieces	M16 × 1.5	18216366
		10 pieces	M20 × 1.5	18216374
		10 pieces	M25 × 1.5	18216382
Pressure compensation screw fittings (made of stainless steel)		1 piece	M16 × 1.5	18204090
		1 piece	M20 × 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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:

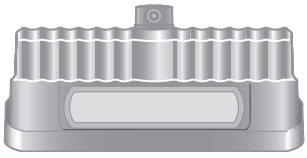
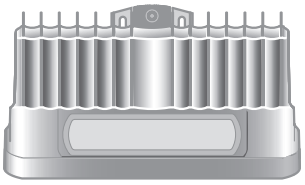
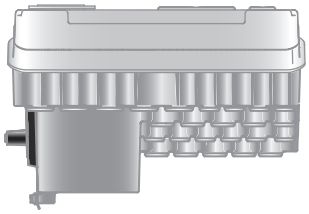
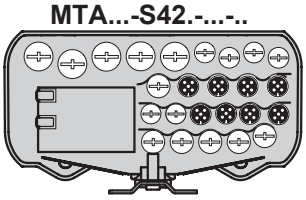
MOVIFIT® EBOX MTF11A003-503-E20A-[..]

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

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

	EBOX	ABOX
FC	**MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	
		MTA...-S42.-...-..  Hybrid ABOX with M12 for I/Os

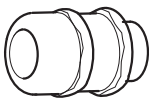
Function level	Fieldbus	Unit performance	Size	Type of EBOX □.. = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF11A003-503-P10A-□..	MTA11A-503-S421-00 MTA11A-503-S421-30 MTA11A-503-S421-33
		0.55 kW		MTF11A005-503-P10A-□..	
		0.75 kW		MTF11A007-503-P10A-□..	
		1.1 kW		MTF11A011-503-P10A-□..	
		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-□..	

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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-□..	

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Screw fitting

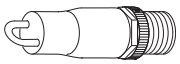
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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:

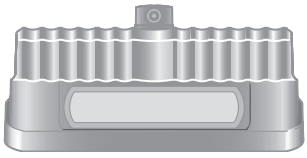
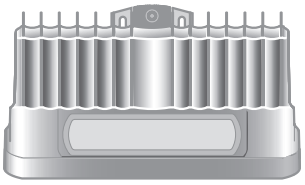
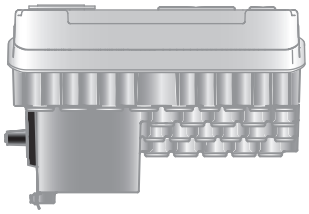
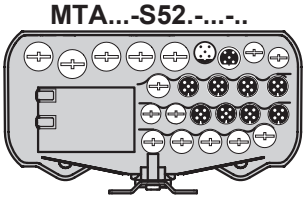
MOVIFIT® EBOX MTF11A003-503-E20A-[..]

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

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

	EBOX	ABOX
FC	**MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	
		MTA...-S52.-...-..  Hybrid ABOX with M12 for I/Os and bus

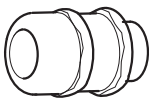
Function level	Fieldbus	Unit performance	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF11A003-503-P10A-□	MTA11A-503-S521-00 MTA11A-503-S521-30 MTA11A-503-S521-33
		0.55 kW		MTF11A005-503-P10A-□	
		0.75 kW		MTF11A007-503-P10A-□	
		1.1 kW		MTF11A011-503-P10A-□	
		1.5 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-□	

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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-□..	

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Screw fitting

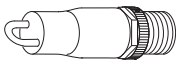
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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:

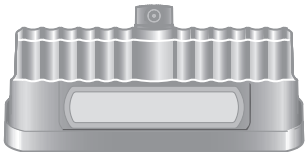
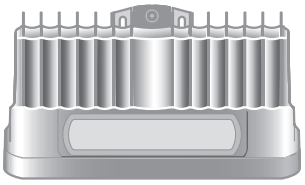
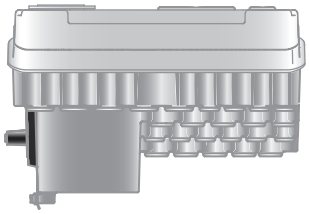
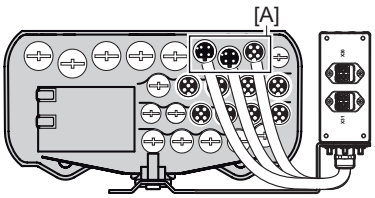
MOVIFIT® EBOX MTF11A003-503-E20A-[..]

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

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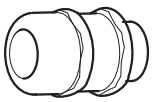
MOVIFIT® FC in connection with hybrid ABOX MTA...-S533.-...-00/L10 (POF)

	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-□	

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Screw fitting

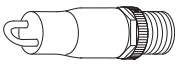
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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:

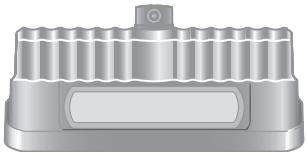
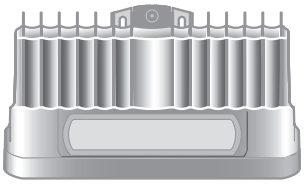
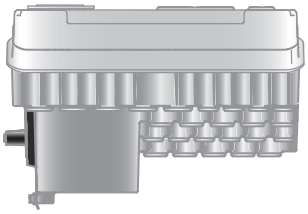
MOVIFIT® EBOX MTF11A003-503-E20A-[..]

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

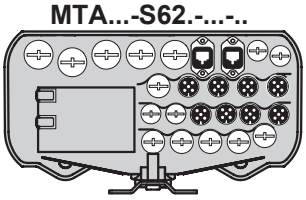
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MOVIFIT® FC in connection with hybrid ABOX MTA...-S62.-...-..

	EBOX	ABOX
FC	**MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	

MTA...-S62.-...-..



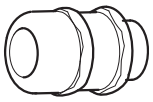
Hybrid ABOX with M12 for I/Os and push-pull RJ45

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-□..	

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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

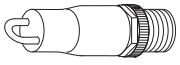
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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:

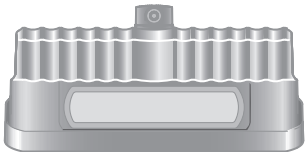
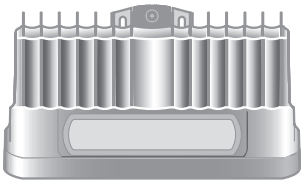
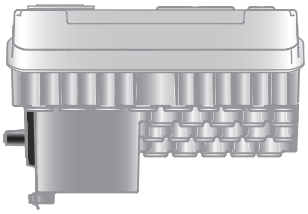
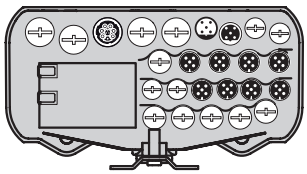
MOVIFIT® EBOX MTF11A003-503-E20A-[..]

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

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

	EBOX	ABOX
FC	**MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	 **MTA...-I55.-...-00**  Hybrid ABOX with 1 circular connector (TE/Intercontec) (downward motor output) and M12 for I/Os and bus

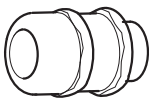
Function level	Fieldbus	Device output	Size	Type of EBOX □ = Motor assignment	Type of ABOX
Classic	PROFIBUS	0.37 kW	1	MTF11A003-503-P10A-□	MTA11A-503-I551-00
		0.55 kW		MTF11A005-503-P10A-□	
		0.75 kW		MTF11A007-503-P10A-□	
		1.1 kW		MTF11A011-503-P10A-□	
		1.5 kW		MTF11A015-503-P10A-□	
		2.2 kW	2	MTF11A022-503-P10A-□	
		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-□	

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Function level	Fieldbus	Device output	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-□	

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Screw fitting

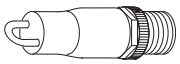
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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:

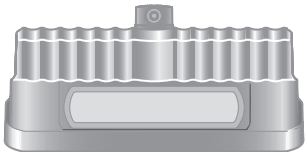
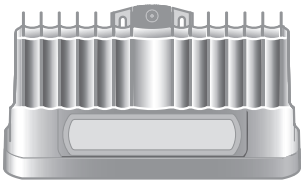
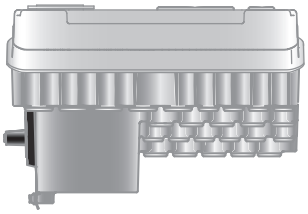
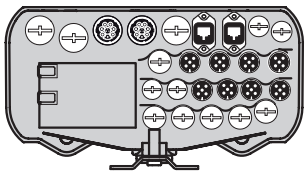
MOVIFIT® EBOX MTF11A003-503-E20A-[..]

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

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

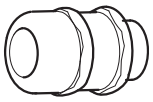
	EBOX	ABOX
FC	**MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	 **MTA...-I62.-...-..**  Hybrid ABOX with 2 circular connectors (TE/Intercontec) (downward motor output), M12 for I/Os, push-pull RJ45 for bus

Function level	Fieldbus	Device output	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-□	

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Function level	Fieldbus	Device output	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

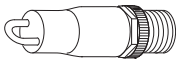
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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:

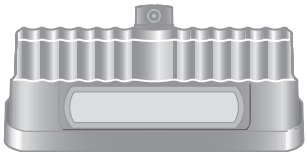
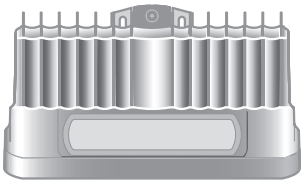
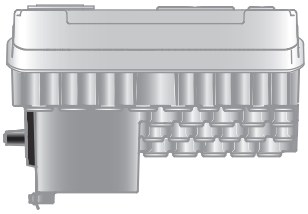
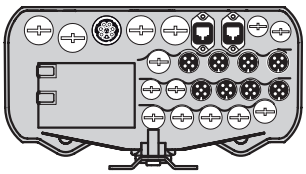
MOVIFIT® EBOX MTF11A003-503-E20A-[..]

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = DRN 50 – 60 Hz

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MOVIFIT® FC in connection with hybrid ABOX MTA...-I65.-...-00

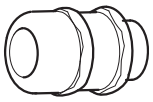
	EBOX	ABOX
FC	**MTF...-...-00** Size 1  Size 2  MOVIFIT® FC with integrated frequency inverter	
		MTA...-I65.-...-00  Hybrid ABOX with 1 circular connector (TE/Intercontec) (downward motor output), and M12 for I/Os and push-pull RJ45 for bus

Function level	Fieldbus	Device output	Size	Type of EBOX □.. = Motor assignment	Type of ABOX
Classic	PROFINET	0.37 kW	1	MTF11A003-503-E20A-□..	MTA11A-503-I653-00
		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-I653-00
		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-□..	

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Function level	Fieldbus	Device output	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

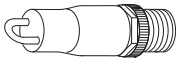
Screw fitting	Figure	Contents	Size	Part number
EMC cable gland (brass, nickel-plated)		10 pieces	M16 × 1.5	18204783
		10 pieces	M20 × 1.5	18204791
		10 pieces	M25 × 1.5	18204805

Maintenance switch

Maintenance switch (optional)	Integrated in	Type
Switch disconnector	ABOX	MTA...-...-....-**D01**-00
Switch disconnector 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" (→ 🗎 457).	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	Added to the delivery, order as an option	Part number: 11747099 

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External braking resistors

The following table shows the assignment 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" (→ 🗎 459).

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
18 = DRN 400 V, 50 Hz
19 = DRN 460 V, 60 Hz
20 = DRS-DRN 50 – 60 Hz
22 = 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 without fail when ordering the drives assigned to MOVIFIT® FC:

Integral characteristics	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" (→ 🗎 272) are permissible.
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 For additional information, refer to the chapter "Hybrid cables for connecting MOVIFIT® FC and motors" (→ 🗎 277).
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" (→ 🗎 211).

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Assignment of MOVIFIT® FC to SEW-EURODRIVE AC motors

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" (→ 🗎 458).
- The expanded parameterization in Expert mode via fieldbus or diagnostic interface allows for additional motor/brake combinations. For additional information, refer to the "MOVIFIT® Function Level Classic..." or "MOVIFIT® Function Level Technology..." manuals.

MTF..-10 and MTF..-12

DRS..	MTF..-10: U = AC 3 × 400 V, 50 Hz						MTF..-12: U = AC 3 × 460 V, 60 Hz					
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄connection			△connection			⅄connection			△connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Default	Option		Default	Option		Default	Option		Default	Option
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

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MTF..-11 and MTF..-13

DRE..	MTF..-11: U = AC 3 × 400 V, 50 Hz						MTF..-13: U = AC 3 × 460 V, 60 Hz					
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄connection			△connection			⅄connection			△connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Default	Option		Default	Option		Default	Option		Default	Option
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..	U = AC 3 × 380 V, 60 Hz											
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄connection			△connection			⅄connection			△connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Default	Option		Default	Option		Default	Option		Default	Option
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

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MTF..-15

DRS.. – DRE..	U = AC 3 × 400 V, 50 Hz or AC 3 × 460 V, 60 Hz											
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄ connection			△ connection			⅄ connection			△ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Default	Option		Default	Option		Default	Option		Default	Option
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 U = 3 × 400 V, 50 Hz (no motor with 50/60 Hz voltage range)

MTF..-18

DRN..	U = AC 3 × 400 V, 50 Hz											
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄ connection			△ connection			⅄ connection			△ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Default	Option		Default	Option		Default	Option		Default	Option
MTF..003..-18	DRN71M4	BE05	BE1	DRN71MS4	BE03	BE05	DRN71MS4	BE03	BE05	-	-	-
MTF..005..-18	DRN80MK4	BE1	BE05	DRN71M4	BE05	BE1	DRN71M4	BE05	BE1	DRN71MS4	BE03	BE05
MTF..007..-18	DRN80M4	BE1	BE05	DRN80MK4	BE1	BE05	DRN80MK4	BE1	BE05	DRN71M4	BE05	BE1
MTF..011..-18	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05	DRN80M4	BE1	BE05	DRN80MK4	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

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MTF..-19

DRN..	U = AC 3 × 460 V, 60 Hz											
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄ connection			△ connection			⅄ connection			△ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Default	Option		Default	Option		Default	Option		Default	Option
MTF..003..-19	DRN71M4	BE05	BE1	DRN71MS4	BE03	BE05	DRN71MS4	BE03	BE05	-	-	-
MTF..005..-19	DRN80MK4	BE1	BE05	DRN71M4	BE05	BE1	DRN71M4	BE05	BE1	DRN71MS4	BE03	BE05
MTF..007..-19	DRN80M4	BE1	BE05	DRN80MK4	BE1	BE05	DRN80MK4	BE1	BE05	DRN71M4	BE05	BE1
MTF..011..-19	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05	DRN80M4	BE1	BE05	DRN80MK4	BE1	BE05
MTF..015..-19	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05
MTF..022..-19	DRN100L4[2] DRN100LM4[3] 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] DRN100LM4[3] 2.2 kW	BE5	BE2	DRN100L4[2] DRN100LM4[3] 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] DRN100LM4[3] 2.2 kW	BE5	BE2

1) Possible brake voltages: 120 V, 230 V, 400 V
2) Only for motor data set up to version 10
3) Only for motor data set of version 11 or higher

MTF..-20

DRS.. – DRN..	U = AC 3 × 400 V, 50 Hz or AC 3 × 460 V, 60 Hz											
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄ connection			△ connection			⅄ connection			△ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Default	Option		Default	Option		Default	Option		Default	Option
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[3] DRN100LM4[4] 2.2 kW	BE5	BE2	DRN90L4	BE2	BE1	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1
MTF..030..-20	DRN100L4 3.0 kW	BE5	BE2	DRN100L4[3] DRN100LM4[4] 2.2 kW	BE5	BE2	DRN100L4[3] DRN100LM4[4] 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[3] DRN100LM4[4] 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 U = 3 × 400 V, 50 Hz (no motor with 50/60 Hz voltage range)
3) Only for motor data set up to version 10
4) Only for motor data set of version 11 or higher

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MTF..-22

DRN..	U = AC 3 × 400 V, 50 Hz or AC 3 × 460 V, 60 Hz											
MOVIFIT®	Assigned motor and brake[1]											
	S10/5 = OFF						S10/5 = ON					
	⅄ connection			△ connection			⅄ connection			△ connection		
	Motor	Brake		Motor	Brake		Motor	Brake		Motor	Brake	
		Standard	Option		Standard	Option		Standard	Option		Standard	Option
MTF..003..-22	DRN71M4	BE05	BE1	DRN71MS4	BE03	BE05	DRN71MS4	BE03	BE05	-	-	-
MTF..005..-22	DRN80MK4	BE1	BE05	DRN71M4	BE05	BE1	DRN71M4	BE05	BE1	DRN71MS4	BE03	BE05
MTF..007..-22	DRN80M4	BE1	BE05	DRN80MK4	BE1	BE05	DRN80MK4	BE1	BE05	DRN71M4	BE05	BE1
MTF..011..-22	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05	DRN80M4	BE1	BE05	DRN80MK4	BE1	BE05
MTF..015..-22	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1	DRN90S4	BE2	BE1	DRN80M4	BE1	BE05
MTF..022..-22	DRN100LM4	BE5	BE2	DRN90L4	BE2	BE1	DRN90L4	BE2	BE1	DRN90S4	BE2	BE1
MTF..030..-22	DRN100L4 3.0 kW	BE5	BE2	DRN100LM4	BE5	BE2	DRN100LM4	BE5	BE2	DRN90 L4	BE2	BE1
MTF..040..-22	DRN112M4	BE5	BE11	DRN100L4 3.0 kW	BE5	BE2	DRN100L4 3.0 kW	BE5	BE2	DRN100LM4	BE5	BE2

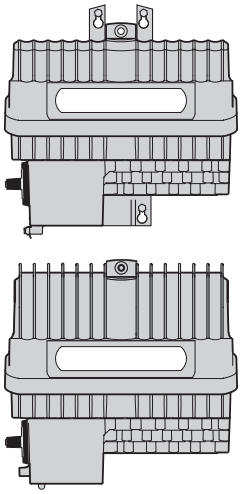
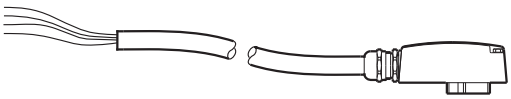
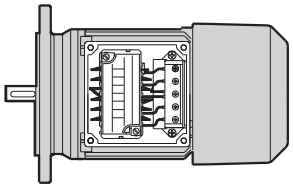
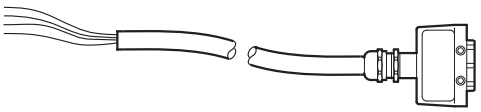
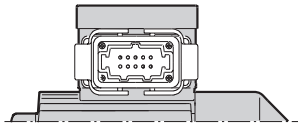
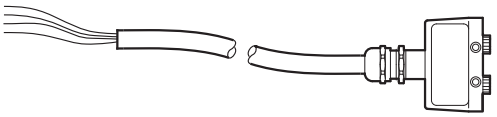
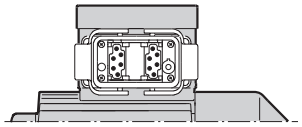
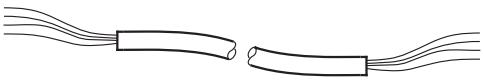
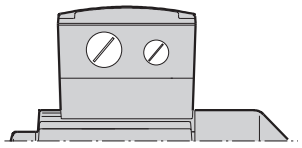
1) Possible brake voltages: 120 V, 230 V, 400 V

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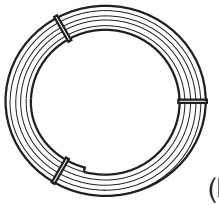
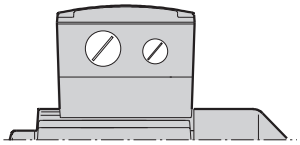
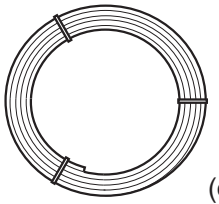
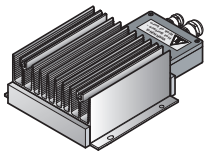
5.11.6 Hybrid cables for connecting MOVIFIT® FC and motors

Overview

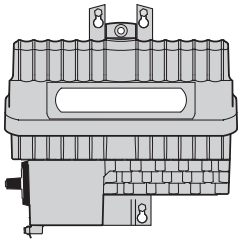
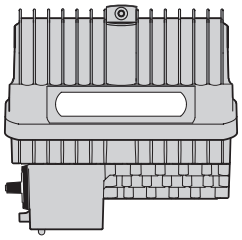
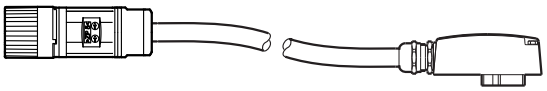
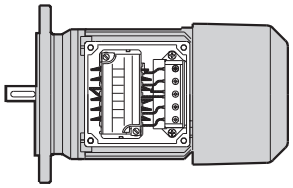
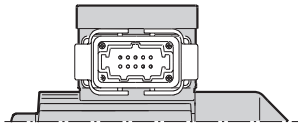
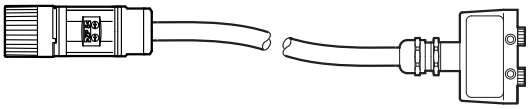
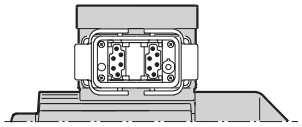
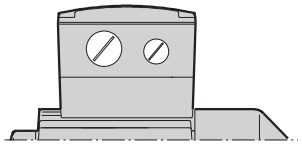
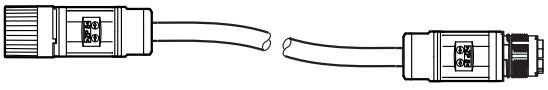
The following hybrid cables are available for connecting MOVIFIT® FC to the motor:

MOVIFIT® FC	Connection cables	Length Type	Drive
Standard ABOX: MTA...-S02.-...-00 **Hybrid ABOX:** MTA...-S42.-...-00 MTA...-S52.-...-00 MTA...-S53.-...-00 MTA...-S62.-...-00 	Part no. DR63/DT71 – 90 (⅄): 08199671 Part no. DR63/DT71 – 90 (△): 08199698 Part no. DR.71 – 132, DV100, DV112 (⅄): 08199701 Part no. DR.71 – 132, DV100, DV112 (△): 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 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 

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MOVIFIT® FC	Connection cables	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 

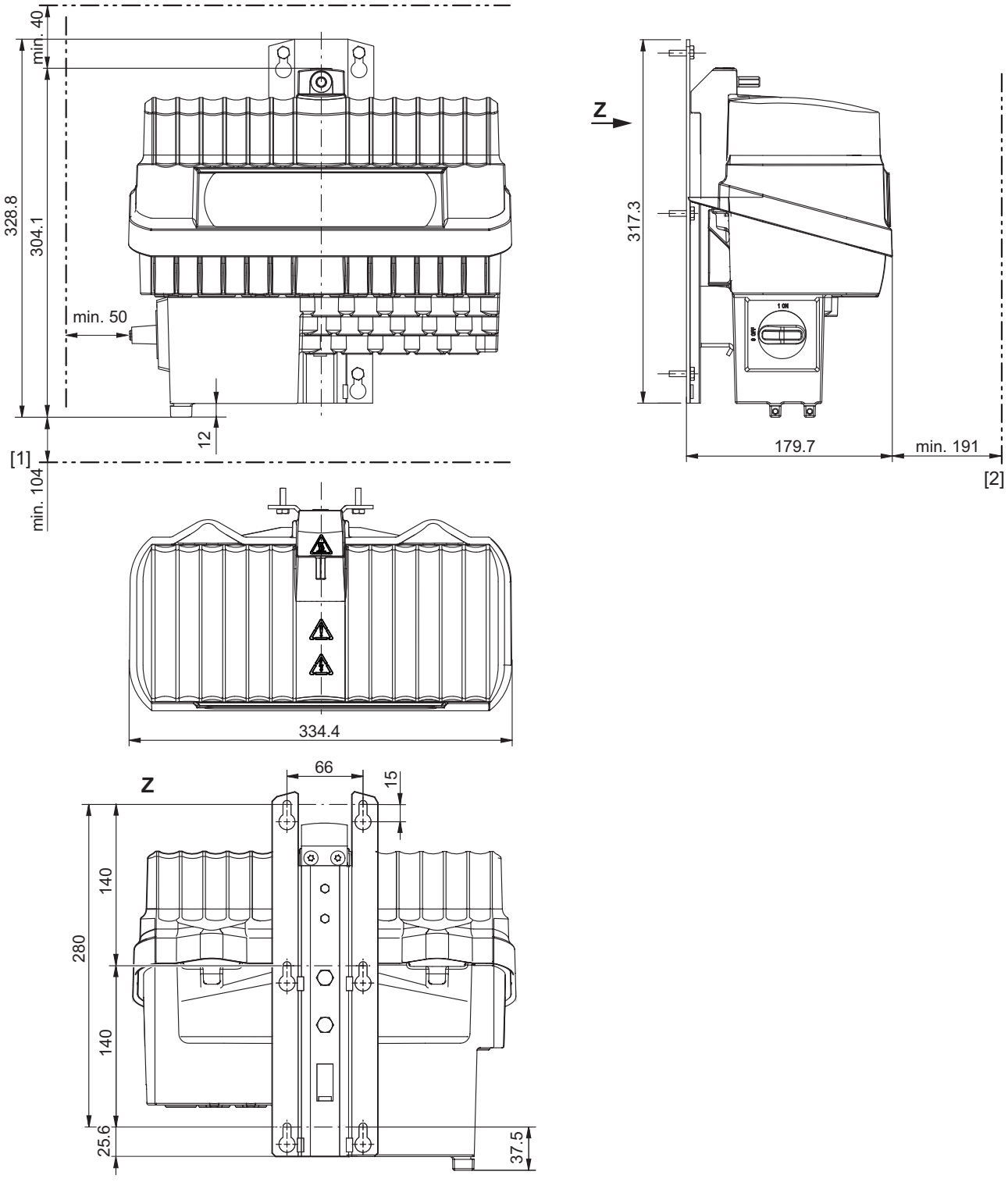
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MOVIFIT® FC	Connection cables	Length Type	Drive
Hybrid ABOX: MTA...-I55.-...-00 MTA...-I65.-...-00  	Part no. DR63 (⅄): 18138411 Part no. DR63 (△): 18138438 Part no. DR.71 – 132 (⅄): 18138330 Part no. DR.71 – 132 (△): 18138365 	Variable Type A	Motor 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

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5.12 Dimension drawings

5.12.1 MOVIFIT® size 1 with standard mounting rail



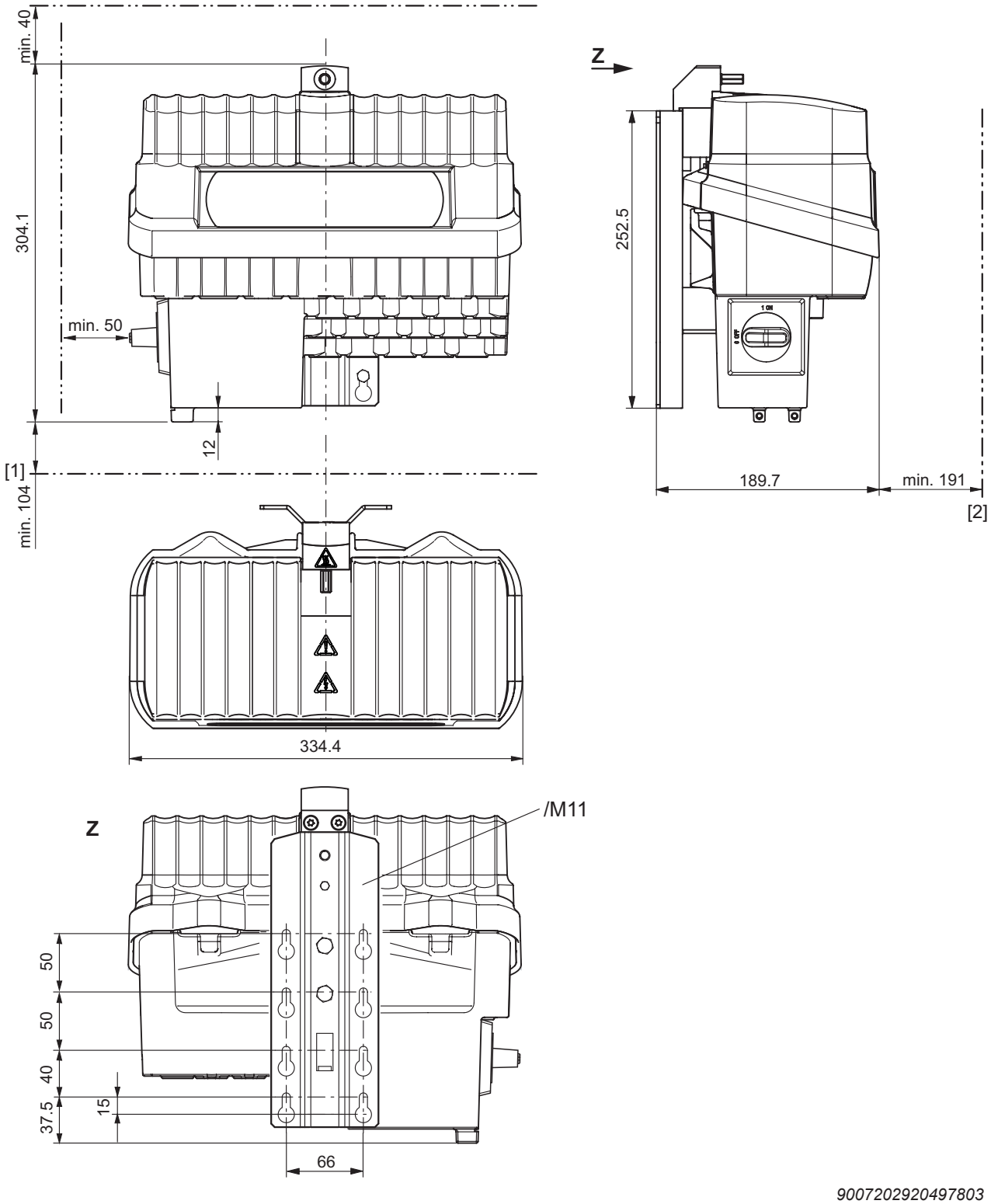
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[1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (TE/Intercontec) motor output pointing downward.

[2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (TE/Intercontec) motor output at the front.

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

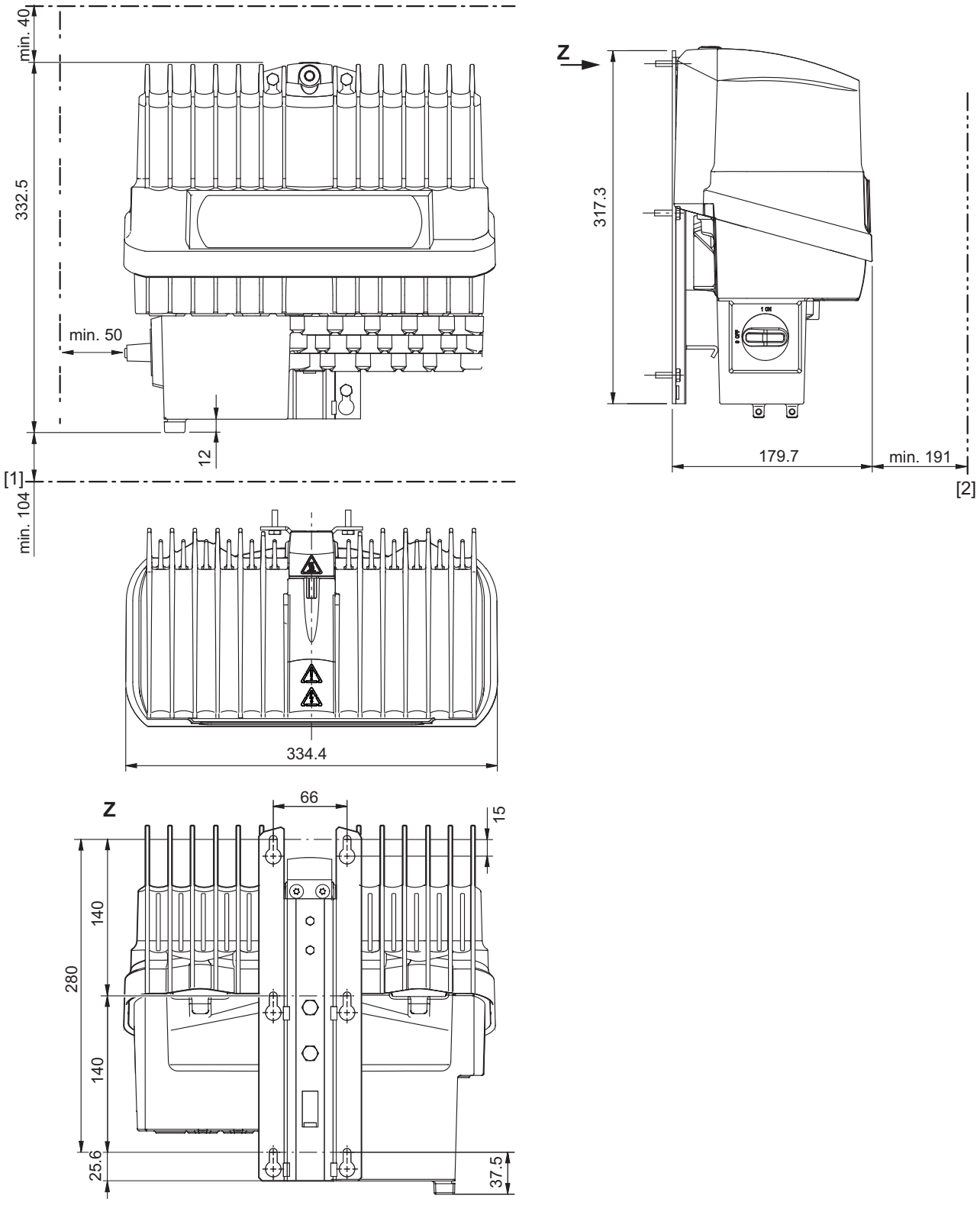


9007202920497803

[1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (TE/Intercontec) motor output pointing downward.

[2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (TE/Intercontec) motor output at the front.

5.12.3 MOVIFIT® size 2 with standard mounting rail



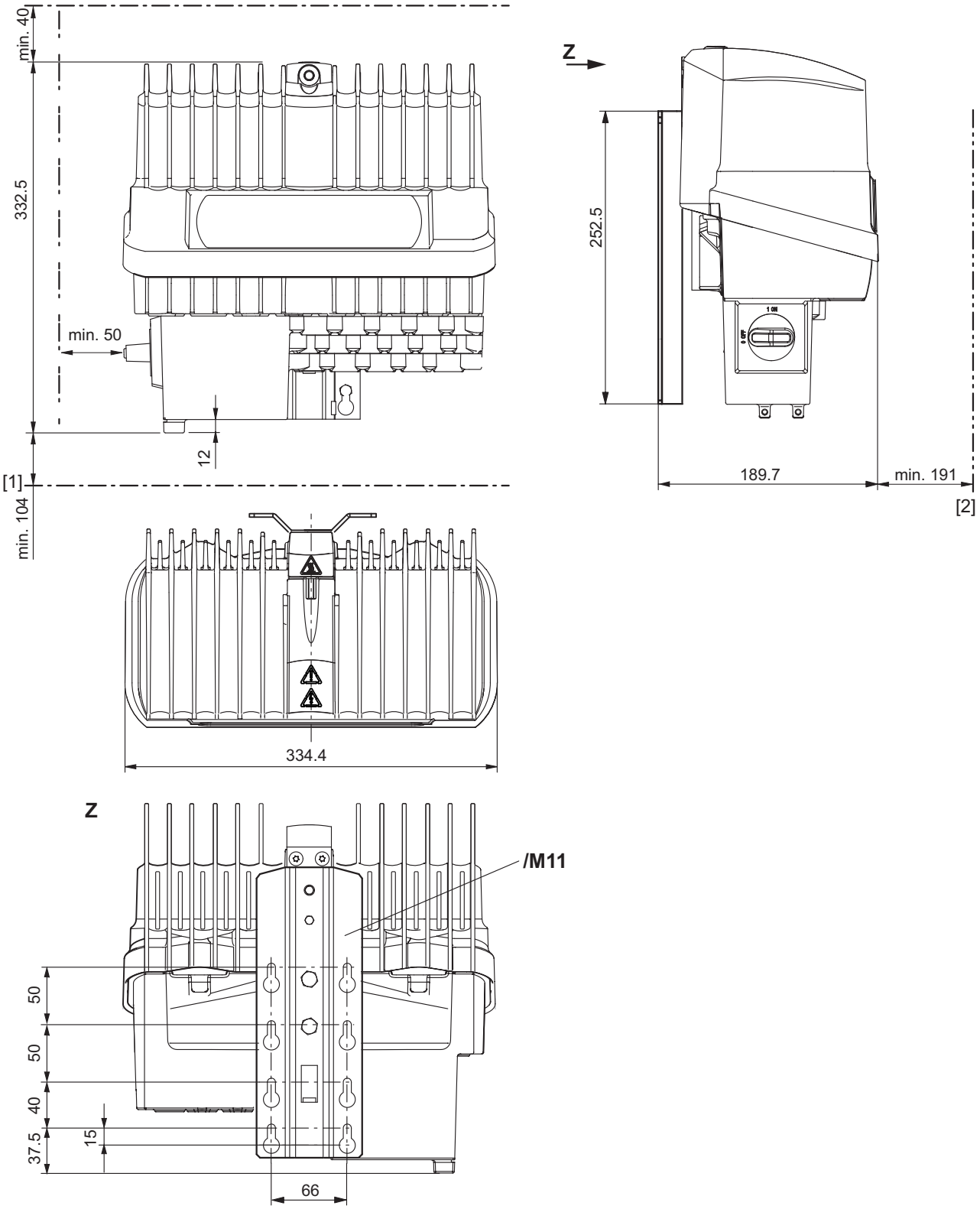
27021598603390347

[1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (TE/Intercontec) motor output pointing downward.

[2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (TE/Intercontec) motor output at the front.

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

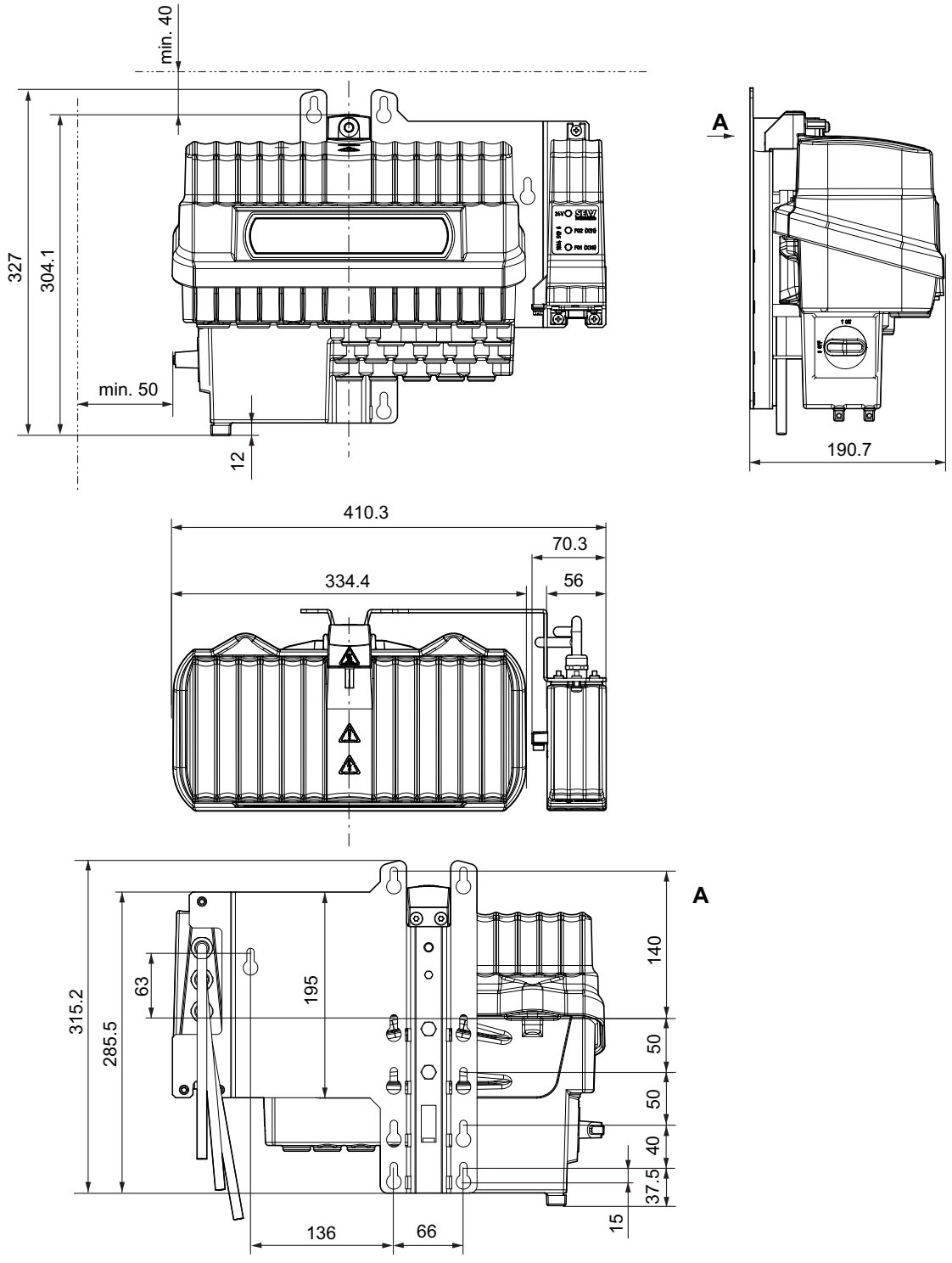


9007202968012171

[1] The clearance of 104 mm below is only necessary for ABOXes with circular connector (TE/Intercontec) motor output pointing downward.

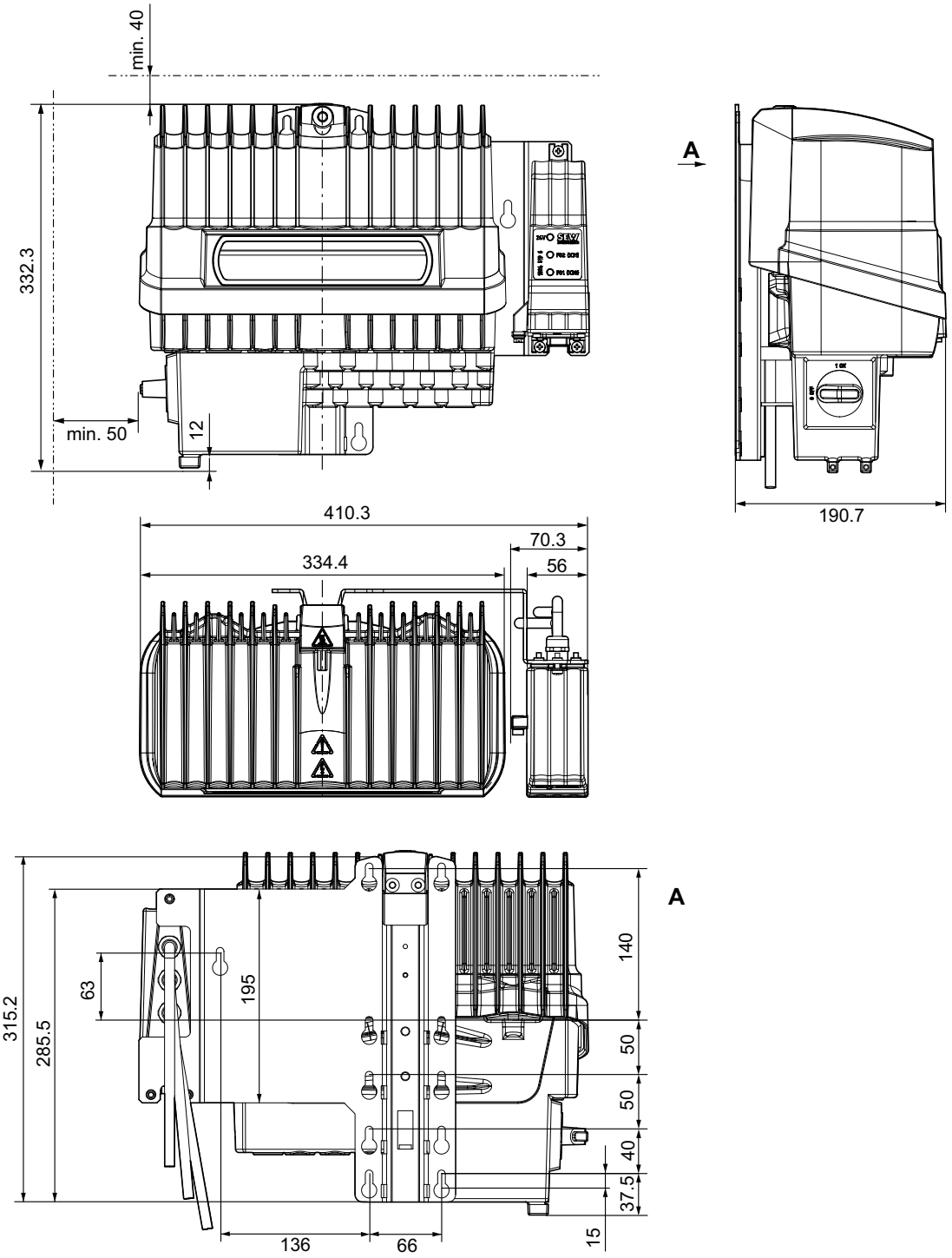
[2] The clearance of 191 mm at the front is only necessary for ABOXes with circular connector (TE/Intercontec) motor output at the front.

5.12.5 MOVIFIT® size 1 with POF option L10



18014402366515211

5.12.6 MOVIFIT® size 2 with POF option L10

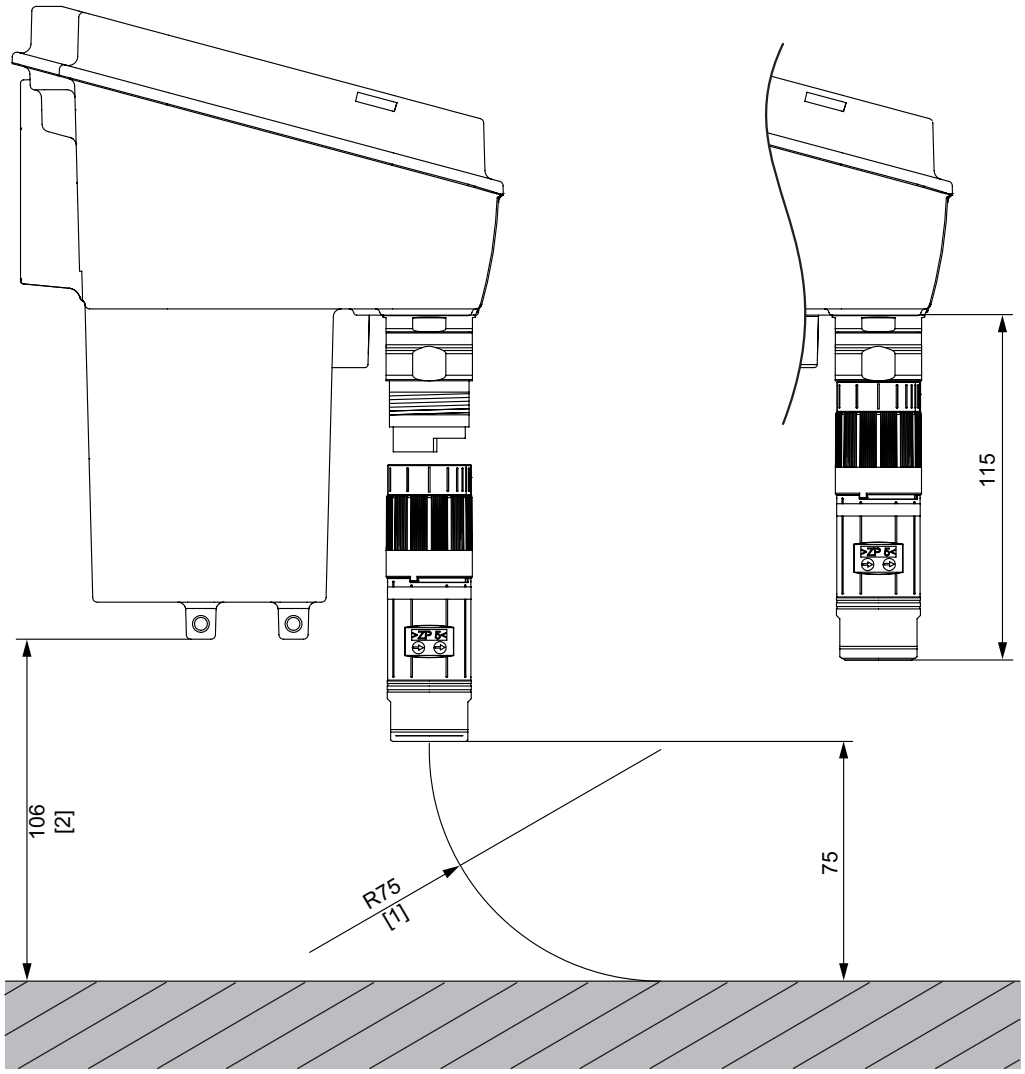


9007203640500875

5.12.7 Minimum installation clearance for ABOX with round connector (TE/Intercontec)

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

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



45036001042534155

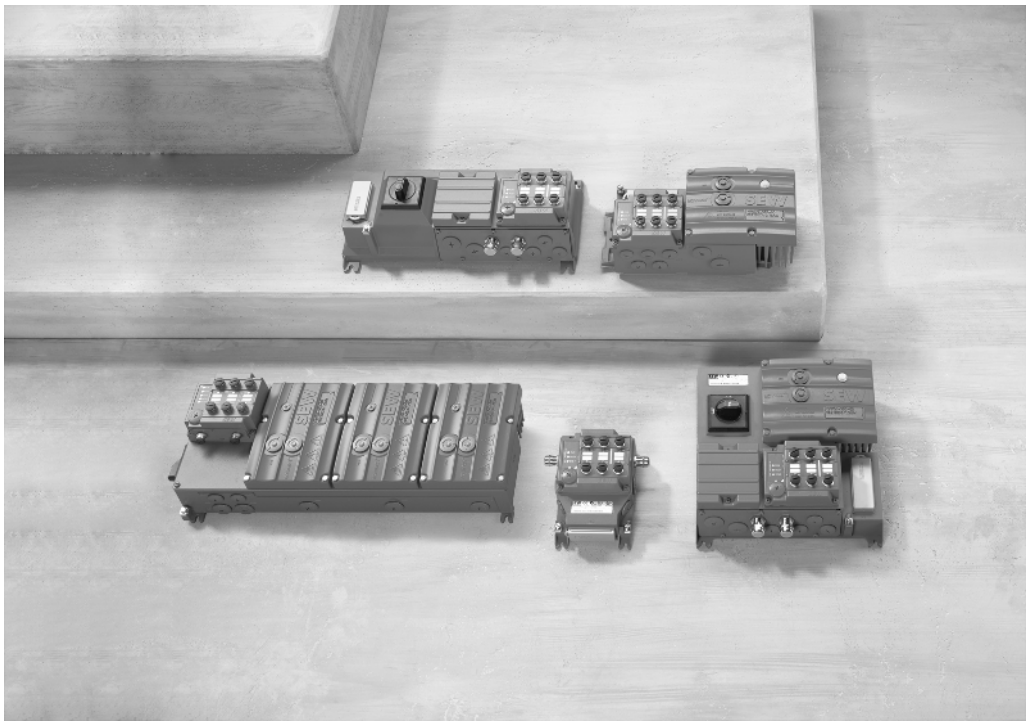
[1] Minimum permitted bending radius of bulk cable: 75 mm
[2] Minimum distance to the bottom of the ABOX: 106 mm

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6 Fieldbus interfaces and field distributors

6.1 Description

The following figure shows field distributors from SEW-EURODRIVE:



19445653259

6.1.1 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

6.1.2 Field distributor

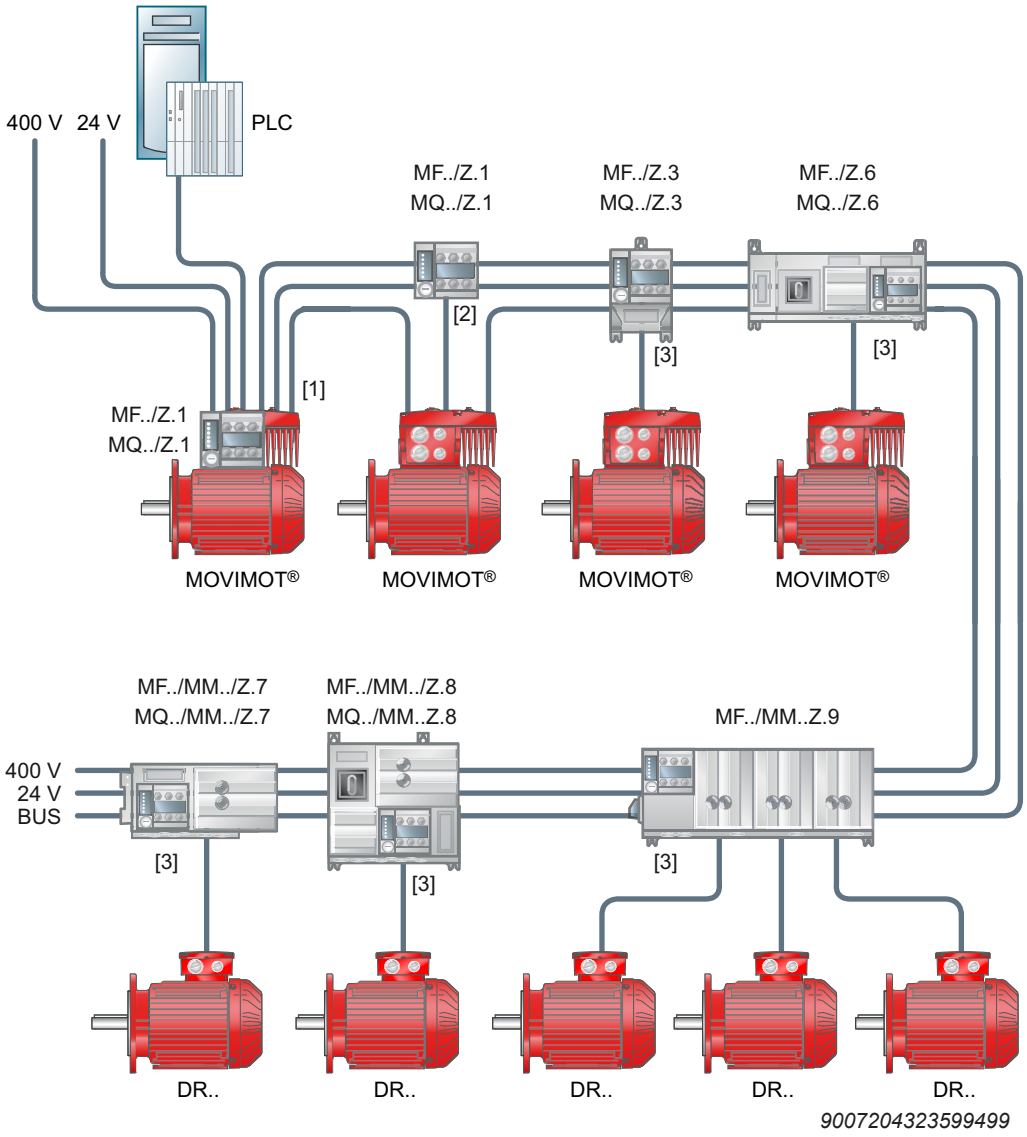
Field distributors rationalize the connection of drives with the power supply system, the control voltage and the fieldbus. The units are based on the bus interfaces technology with additional connection technology for power distribution.

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

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6.1.3 Installation topology

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



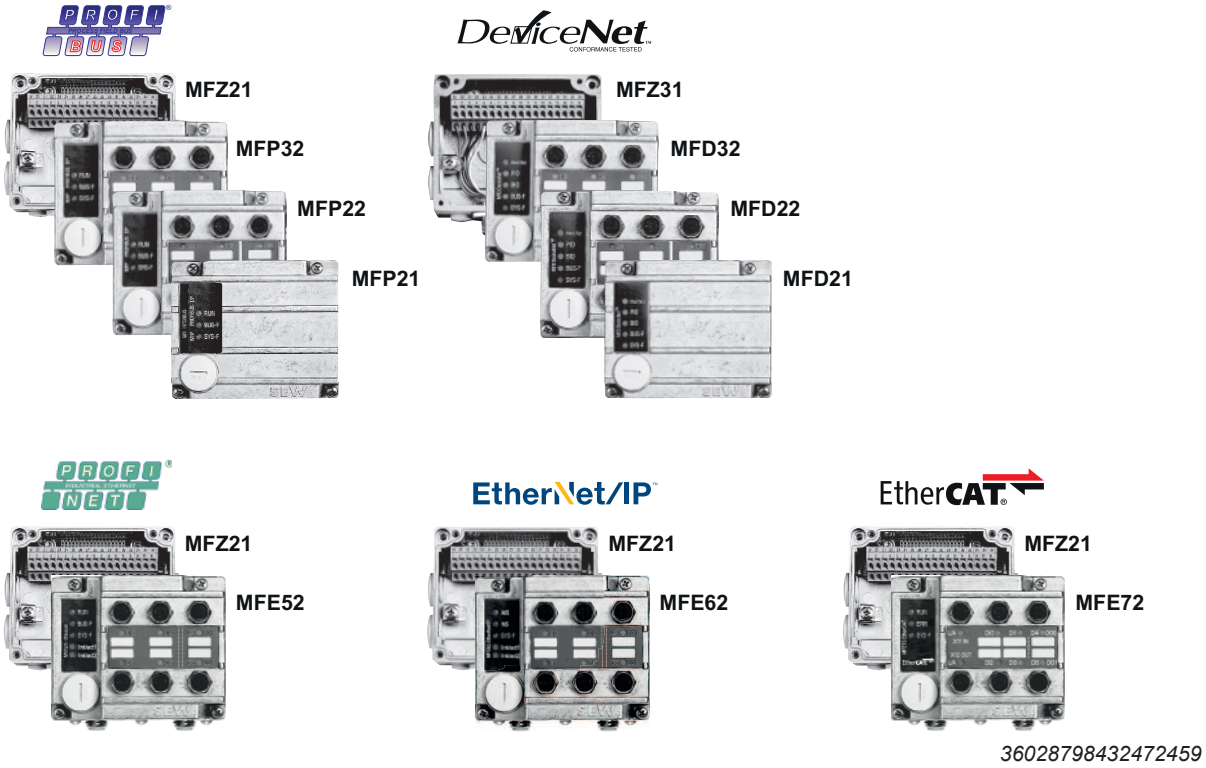
[1] Fieldbus interface of the drive
[2] Fieldbus interface in the field
[3] Fieldbus interface of the field distributor

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6.2 Fieldbus interfaces

6.2.1 MF../Z.1 fieldbus interfaces

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



36028798432472459

Example for type designation MF../Z.1

The following table shows the type designation of the fieldbus interface MFE52B/Z21D as an example:

MFE	**Fieldbus interface**		
	MFP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™ or EtherCAT®
	MFD..	=	DeviceNet™
52	**Connections**		
	21 = 4 × I, 2 × O		(connection via terminals)
	22 = 4 × I, 2 × O		(connection via plug connector + terminals)
	32 = 6 × I		(connection via plug connector + terminals)
	52 = 4 × I, 2 × I/O		(connection via plug connector + terminals) for PROFINET IO
	62 = 4 × I, 2 × I/O		(connection via plug connector + terminals) for EtherNet/IP™
	72 = 4 × I, 2 × I/O		(connection via plug connector + terminals) for EtherCAT®
B	**Variant**		
/			
Z21	**Connection module**		
	Z21	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, and EtherCAT®
	Z31	=	For DeviceNet™
D	**Variant**		

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PROFIBUS variants

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

Module type **Part number**	**MFP21D** **8236240**	**MFP22D** **8236259**	**MFP32D** **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 Part number Fieldbus connection technology	MFZ21D or MFZ21D/AVT2/AWT2 8236275 or 8242992 Terminals or M12 plug connectors		
Module + module terminal box	**MFP21D/Z21D..**	**MFP22D/Z21D..**	**MFP32D/Z21D..**

PROFINET IO variant

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

Module type **Part number**	**MFE52B** **28238761**
Connection technology Fieldbus Sensors/actuators	 M12, D-coded M12 and terminals
Digital inputs	4 or 6[1)]
Digital outputs	2 or 0[1)]
Associated module terminal box Part number	MFZ21D 8236275
Module + module terminal box	**MFE52B/Z21D**

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

EtherNet/IP™ version

The following table shows the EtherNet/IP™ version of the fieldbus interface MF../Z.1:

Module type **Part number**	**MFE62A** **28230280**
Connection technology Fieldbus Sensors/actuators	 M12, D-coded M12 and terminals
Digital inputs	4
Digital outputs	2
Associated module terminal box Part number	MFZ21D 8236275
Module + module terminal box	**MFE62A/Z21D**

EtherCAT® variants

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

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

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

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DeviceNet™ variants

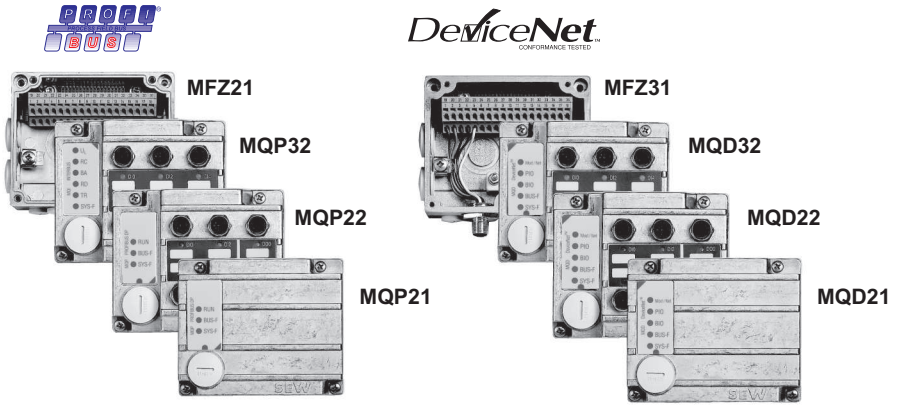
The following table shows the DeviceNet™ variants of the fieldbus interface MF../Z.1:

Module type **Part number**	**MFD21A** **8235511**	**MFD22A** **823552X**	**MFD32A** **8235538**
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 Part number Fieldbus connection technology	MFZ31A 8235481 Micro-style connector		
Module + module terminal box	**MFD21A/Z31A**	**MFD22A/Z31A**	**MFD32A/Z31A**

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6.2.2 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 interfaces MQP21D/ Z21D as an example:

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

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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 Part number Fieldbus connection technology	MFZ21D or MFZ21D/AVT2/AWT2 8236275 or 8242992 Terminals or M12 plug connectors		
Module + module terminal box	**MQP21D/Z21D..**	**MQP22D/Z21D..**	**MQP32D/Z21D..**

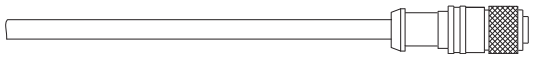
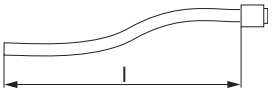
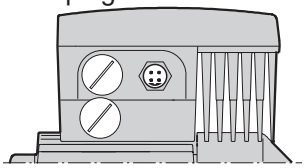
DeviceNet™ variants

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 Part number Fieldbus connection technology	MFZ31A 8235481 Micro-style connector		
Module + module terminal box	**MQD21A/Z31A**	**MQD22A/Z31A**	**MQD32A/Z31A**

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6.2.3 Cables for connecting fieldbus interfaces and MOVIMOT®

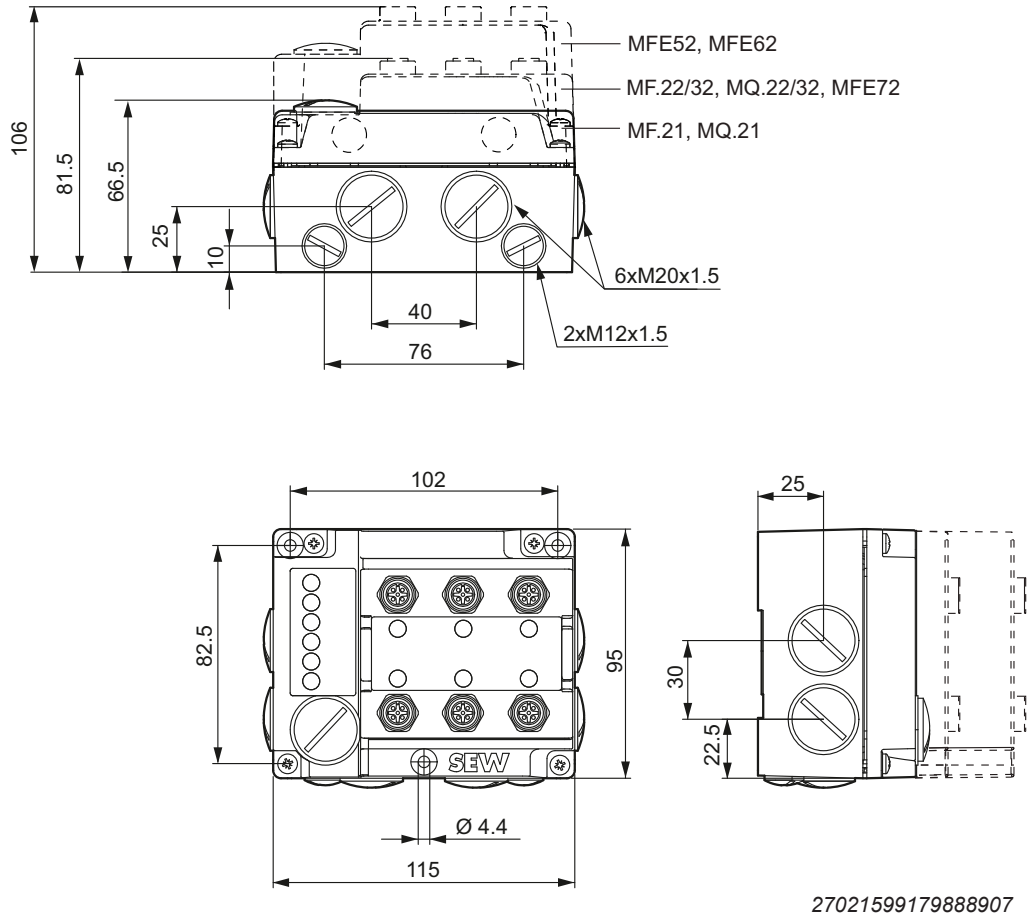
Field distributor Fieldbus interface	Cable	Cable type	Drive
Z.1 **or RS485 master**	 **Available cable lengths:**  l = 5 m: Part number 08155925 l = 10 m: Part number 08155933	–	MOVIMOT® with AVT1 plug connector 

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

Dimension drawing of MF ..Z.1./MQ ../Z.1. fieldbus interface

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

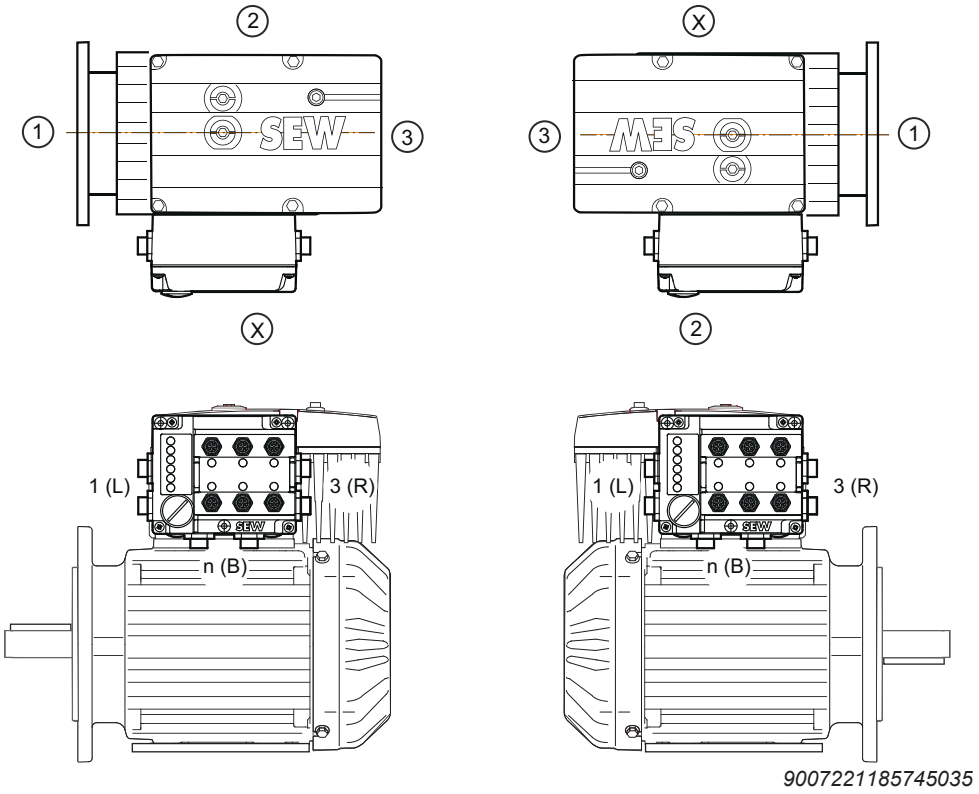


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Possible plug connector locations on the fieldbus interface

It is possible to install the fieldbus interface in location "X" or location "2" on the MOVIMOT® connection box.

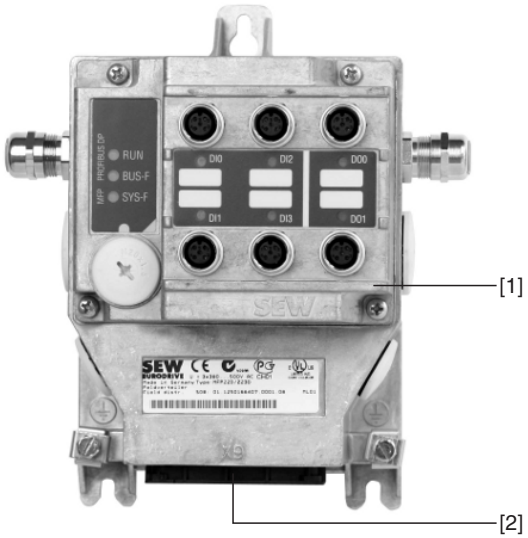
The plug connectors on the fieldbus interface are available in positions (L), (B), or (R) in accordance with the following figure:



9007221185745035

6.3 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

6.3.1 Device 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)

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

The following table shows the type designation for the field distributor MFP21D/Z23D as an example:

MFP 21D	**Fieldbus interface**		
	MFP../MQP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™, or EtherCAT®
	MFD../MQD..	=	DeviceNet™
/			
Z23D	**Connection module for controlling MOVIMOT®**		
	Z23D	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z23D/AVT2/AWT2	=	For PROFIBUS with M12 plug connector
	Z33A	=	For DeviceNet™
	Connection module for controlling MOVI-SWITCH®		
	Z23**W**	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z23**W**/AVT2/AWT2	=	For PROFIBUS with M12 plug connector
	Z33**W**	=	For DeviceNet™

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6.3.3 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 × I, 2 × O (M12)** 	**6 × I (M12)** 
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	–	MFE52BZ23D	
EtherNet/IP™	–	MFE62A/Z23D	
EtherCAT®	–	MFE72A/Z23D	
DeviceNet™	MFD21A/Z33A	MFD22A/Z33A	MFD32A/Z33A

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

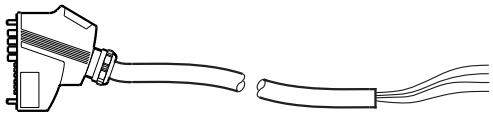
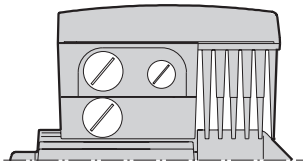
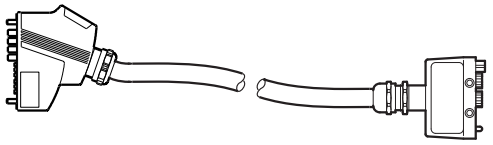
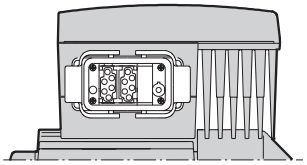
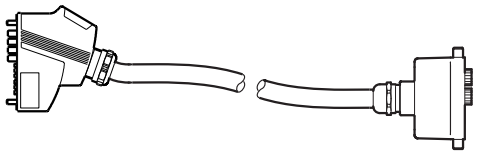
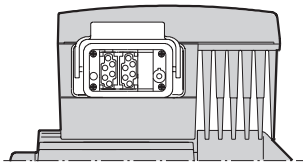
The following table shows the possible combinations of the MQ../Z.3 field distributor with fieldbus interfaces:

	**No I/O** 	**4 × I, 2 × O (M12)** 	**6 × 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

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6.3.5 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	**B**	MOVIMOT® with AMA6 plug connector 
	Part number: 08171122 	**B**	MOVIMOT® with AMD6 plug connector 

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

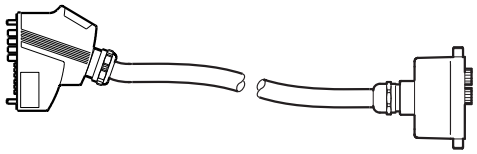
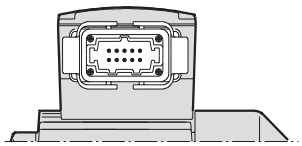
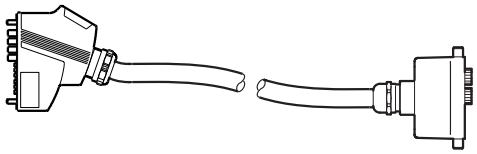
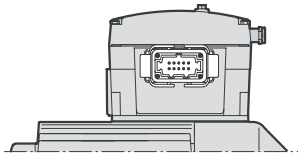
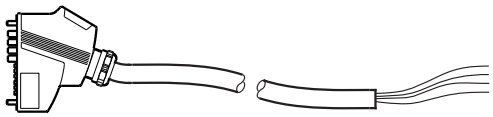
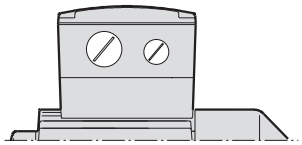
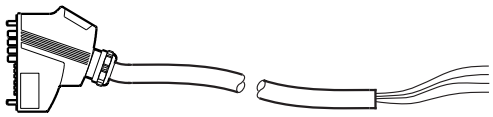
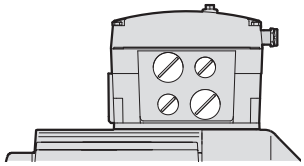
The following table shows the possible combinations of the MF../Z.3W field distributor with fieldbus interfaces:

	**No I/O** 	**4 × I, 2 × O (M12)** 	**6 × I (M12)** 
PROFIBUS	MFP21D/Z23W	MFP22D/Z23W	–
PROFIBUS with M12 plug connector for bus	MFP21D/Z23W/ AVT2/AWT2	MFP22D/Z23W/ AVT2/AWT2	–
PROFINET IO	–	MFE52B/Z23W	–
EtherNet/IP™	–	MFE62A/Z23W	–
EtherCAT®	–	MFE72A/Z23W	–
DeviceNet™	MFD21A/Z33W	MFD22A/Z33W	–

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

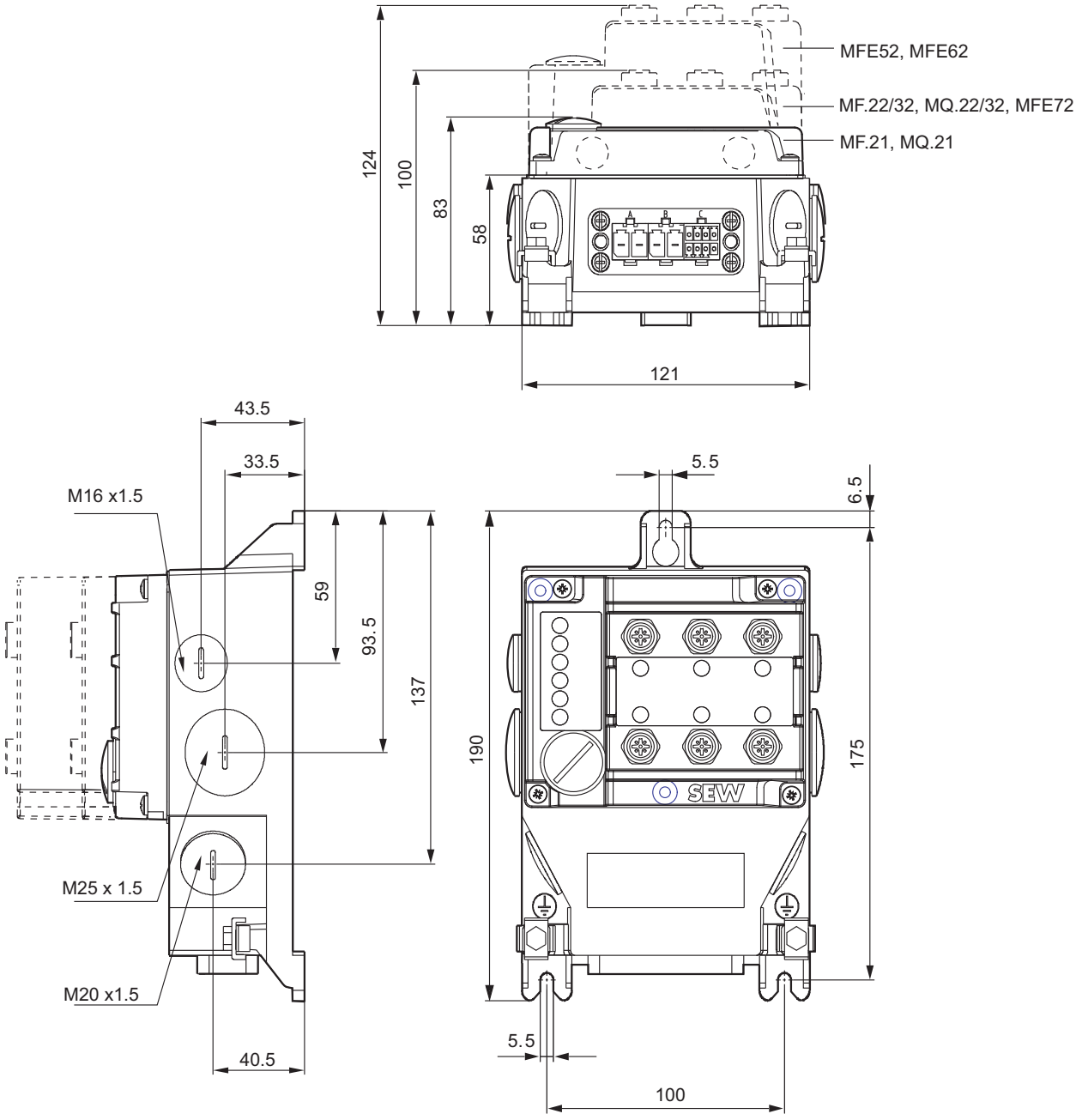
The following table shows the hybrid cables for connecting the MOVI-SWITCH® drive to the field distributor MF../Z.3W:

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 

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6.3.8 Dimension drawing of MF../Z.3., MQ../Z.3. field distributors

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

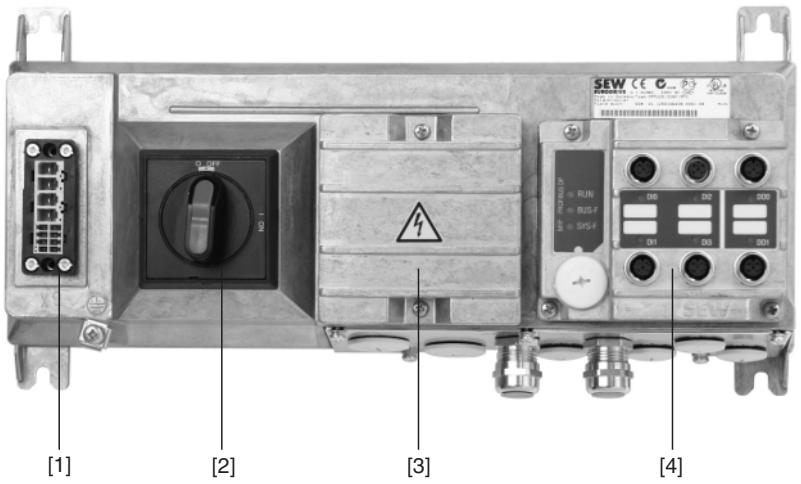


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6.4 MF../Z.6., MQ../Z.6. field distributors

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

6.4.1 Device 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

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

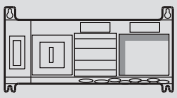
The following table shows the type designation for the field distributor MFP21D/Z26F/AF0 as an example:

MFP 21D	**Fieldbus interface**		
	MFP../MQP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™ or EtherCAT®
	MFD../MQD..	=	DeviceNet™
/			
Z26F	**Connection module for controlling MOVIMOT®**		
	Z26F	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z36F	=	For DeviceNet™
	Connection module for controlling MOVI-SWITCH®		
	Z26W		For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z36W	=	For DeviceNet™
/			
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

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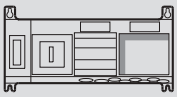
6.4.3 Possible combinations MF../Z.6. (MOVIMOT® control)

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

	**4 × I, 2 × O (terminals)** 	**4 × I, 2 × O (M12)** 	**6 × I (M12)** 
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	–	MFE52B/Z26F/AF0	
EtherNet/IP™	–	MFE62A/Z26F/AF0	
EtherCAT®	–	MFE72A/Z26F/AF0	
DeviceNet™	MFD21A/Z36F/AF1	MFD22A/Z36F/AF1	MFD32A/Z36F/AF1

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

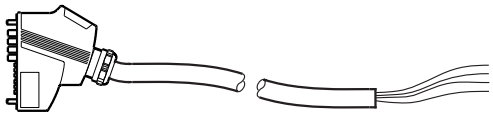
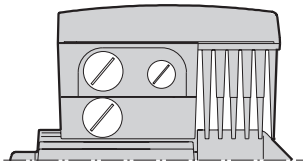
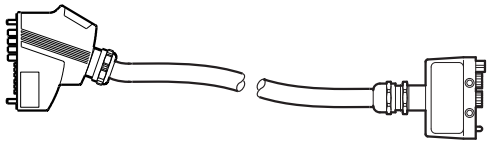
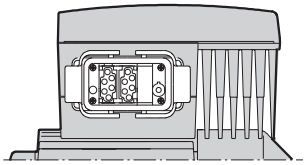
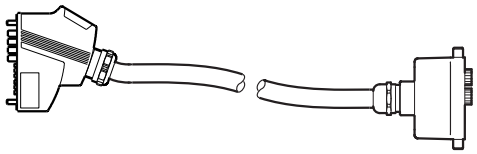
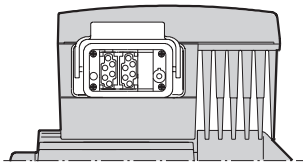
The following table shows the possible combinations of the MQ../Z.6 field distributor with fieldbus interfaces:

	**4 × I, 2 × O (terminals)** 	**4 × I, 2 × O (M12)** 	**6 × 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

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

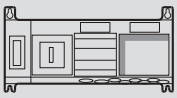
The following table shows the hybrid cables for connecting the MOVIMOT® drive to the field distributors MF../Z.6. or MQ../Z.6.:

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	**B**	MOVIMOT® with AMA6 plug connector 
	Part number: 08171122 	**B**	MOVIMOT® with AMD6 plug connector 

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

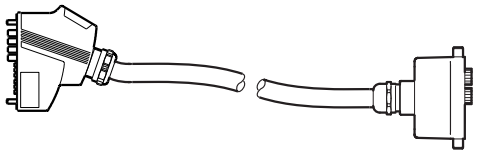
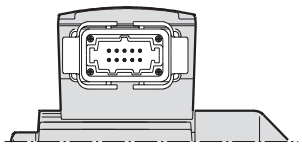
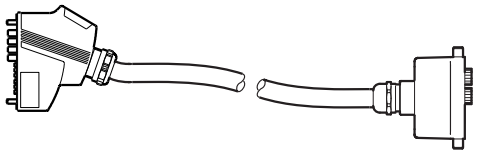
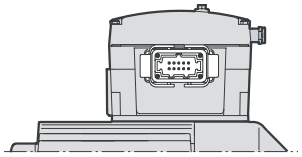
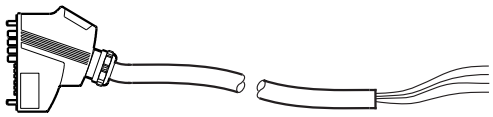
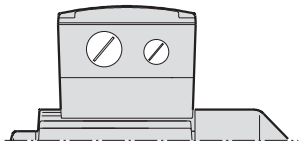
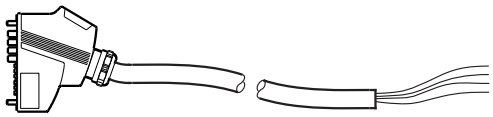
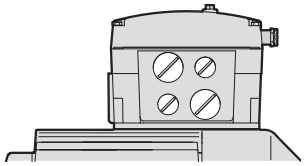
The following table shows the possible combinations of the MF../Z.6W field distributor with fieldbus interfaces:

	**4 × I, 2 × O (terminals)** 	**4 × I, 2 × O (M12)** 	**6 × I (M12)** 
PROFIBUS	MFP21D/Z26W/AF0	MFP22D/Z26W/AF0	–
	MFP21D/Z26W/AF2	MFP22D/Z26W/AF2	–
	MFP21D/Z26W/AF3	MFP22D/Z26W/AF3	–
PROFINET IO	–	MFE52B/Z26W/AF0	–
EtherNet/IP™	–	MFE62A/Z26W/AF0	–
EtherCAT®	–	MFE72A/Z26W/AF0	–

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

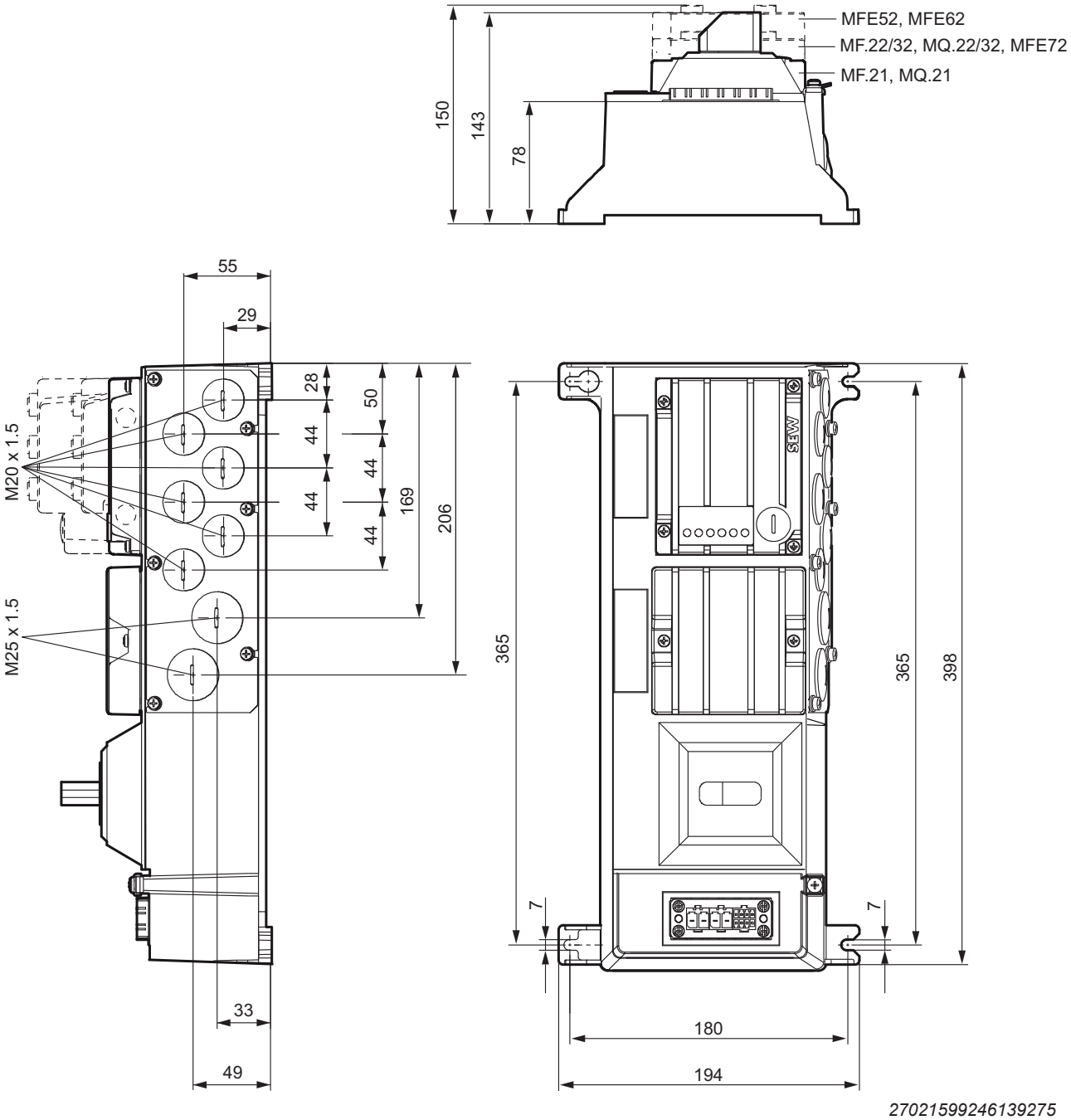
The following table shows the hybrid cables for connecting the MOVIMOT® drive to the field distributor MF../Z.6W:

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 

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6.4.8 Dimension drawing of MF../Z.6., MQ../Z.6. field distributors

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

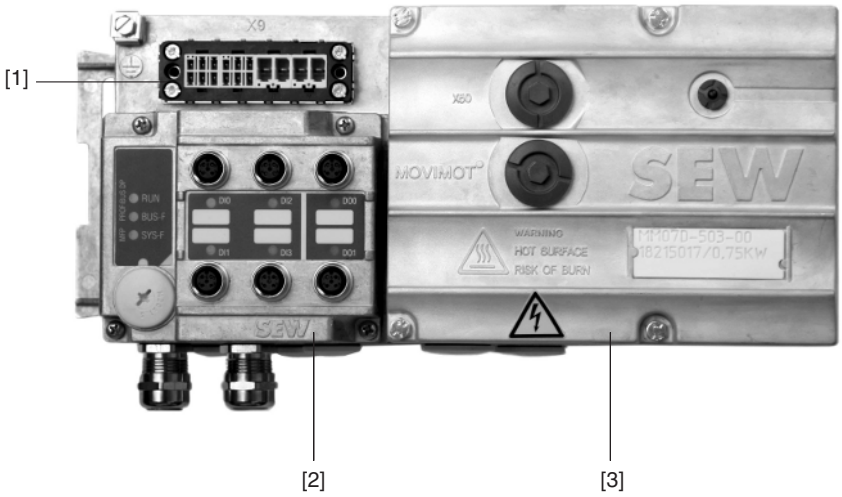


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6.5 MF../MM../Z.7., MQ../MM../Z.7. field distributors

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

6.5.1 Device 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

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

The following table shows the type designation of the field distributor MFP22D/ MM15D-503-00/Z27F 0/BW1 as an example:

MFP 22D	**Fieldbus interface**		
	MFP../MQP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™, or EtherCAT®
	MFD../MQD..	=	DeviceNet™
/			
MM15D -503-00	**MOVIMOT® inverter**		
	MM03D – MM15D...	=	MOVIMOT® inverter
/			
Z27F	**Connection module for controlling MOVIMOT®**		
	Z27F	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z37F	=	For DeviceNet™
0	**Connection type**		
	0	=	⅄
	1	=	△
/			
BW1	**Braking resistor** (option)		
	BW1	=	Braking resistor for MOVIMOT® MM03 – MM15

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:



For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 🗎 457).

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6.5.3 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 × I, 2 × O (terminals) 	4 × I, 2 × O (M12) 	6 × I (M12) 
PROFIBUS	⅄	MFP21D/MM..D/Z27F 0	MFP22D/MM..D/Z27F 0	MFP32D/MM..D/Z27F 0
	△	MFP21D/MM..D/Z27F 1	MFP22D/MM..D/Z27F 1	MFP32D/MM..D/Z27F 1
PROFINET IO	⅄	–	MFE52B/MM..D/Z27F 0	
	△	–	MFE52B/MM..D/Z27F 1	
EtherNet/IP™	⅄	–	MFE62A/MM..D/Z27F 0	
	△	–	MFE62A/MM..D/Z27F 1	
EtherCAT®	⅄	–	MFE72A/MM..D/Z27F 0	
	△	–	MFE72A/MM..D/Z27F 1	
DeviceNet™	⅄	MFD21A/MM..D/Z37F 0	MFD22A/MM..D/Z37F 0	MFD32A/MM..D/Z37F 0
	△	MFD21A/MM..D/Z37F 1	MFD22A/MM..D/Z37F 1	MFD32A/MM..D/Z37F 1

6.5.4 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 × I, 2 × O (terminals) 	4 × I, 2 × O (M12) 	6 × I (M12) 
PROFIBUS	⅄	MQP21D/MM..D/Z27F 0	MQP22D/MM..D/Z27F 0	MQP32D/MM..D/Z27F 0
	△	MQP21D/MM..D/Z27F 1	MQP22D/MM..D/Z27F 1	MQP32D/MM..D/Z27F 1
DeviceNet™	⅄	MQD21A/MM..D/Z37F 0	MQD22A/MM..D/Z37F 0	MQD32A/MM..D/Z37F 0
	△	MQD21A/MM..D/Z37F 1	MQD22A/MM..D/Z37F 1	MQD32A/MM..D/Z37F 1

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6.5.5 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:

<table>
<tr><th>Characteristics</th><th colspan="3">Requirements for the assigned AC motor</th></tr>
<tr><td>Permitted motors</td><td colspan="3">Only motors listed in the following chapters are approved:
"Motor assignment 1400 min^{-1}" (→ 🗎 318) and
"Motor assignment 2900 min^{-1}" (→ 🗎 320).</td></tr>
<tr><td rowspan="6">Permitted nominal motor voltage</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Nominal voltage V</td><td>Line frequency Hz</td></tr>
<tr><td>DR2S..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS../DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRN..</td><td>230/400</td><td>50</td></tr>
<tr><td rowspan="11">Permitted brakes</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Standard brake type</td><td>Optional brake type</td></tr>
<tr><td>DR63L4</td><td>BR03</td><td>–</td></tr>
<tr><td>DR2S63M4</td><td>BR03</td><td>BR03</td></tr>
<tr><td>DRN71MS4</td><td>BR03</td><td>BR05</td></tr>
<tr><td>DR2S71MS4</td><td>BE05</td><td>BE05</td></tr>
<tr><td>DRS71S4
DRE80S4
DRN71M4</td><td>BE05</td><td>BE1</td></tr>
<tr><td>DR2S71M4
DR2S80MK4
DRS71M4
DRS80S4
DRE80M4
DRN80M4
DRN80MK4</td><td>BE1</td><td>BE05</td></tr>
<tr><td>DR2S80M4
DRS80M4
DRE90M4
DRN90S4</td><td>BE2</td><td>BE1</td></tr>
</table>

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Characteristics	Requirements for the assigned AC motor		
	DRS90M4 DRE90L4 DRN90L4	BE2	BE1
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 the chapter "Hybrid cables for connecting Z.7 field distributor and motors" (→ 🗎 322).		
Permitted motor protection	SEW-EURODRIVE recommends that you 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.. minicontroller).		

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Motor assignment 1400 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) ⅄	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.25	DR63L4/TH. DR**2S**63M4/TH. DR**E**80S4/TH. DR**N**71MS4/TH.	MF../**MM03D**/Z.7F **0**/**BW1**[1)]	MQ../**MM03D**/Z.7F **0** /**BW1**[1)]
	DR63L4/**BR.**/TH. DR**2S**63M4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71MS4/**BE.**/TH.	MF../**MM03D**/Z.7F **0**[1)]	MQ../**MM03D**/Z.7F **0**[1)]
0.37	DR**2S**71MS4/TH. DR**S**71S4/TH. DR**E**80S4/TH. DR**N**71M/TH.	MF../**MM03D**/Z.7F **0**/**BW1**	MQ../**MM03D** /Z.7F **0**/**BW1**
		MF../**MM05D**/Z.7F **0**/**BW1**[1)]	MQ../**MM05D** /Z.7F **0**/**BW1**[1)]
	DR**2S**71MS4/**BE.**/TH. DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MF../**MM03D**/Z.7F **0**	MQ../**MM03D** /Z.7F **0**
		MF../**MM05D**/Z.7F **0**[1)]	MQ../**MM05D** /Z.7F **0**[1)]
0.55	DR**2S**71M4/TH. DR**S**71M4/TH. DR**E**80M4/TH. DR**N**80MK4/TH.	MF../**MM05D**/Z.7F **0**/**BW1**	MQ../**MM05D** /Z.7F **0**/**BW1**
		MF../**MM07D**/Z.7F **0**/**BW1**[1)]	MQ../**MM07D** /Z.7F **0**/**BW1**[1)]
	DR**2S**71M4/**BE.**/TH. DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MF../**MM05D**/Z.7F **0**	MQ../**MM05D** /Z.7F **0**
		MF../**MM07D**/Z.7F **0**[1)]	MQ../**MM07D** /Z.7F **0**[1)]
0.75	DR**2S**80MK4/TH. DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MF../**MM07D**/Z.7F **0**/**BW1**	MQ../**MM07D** /Z.7F **0**/**BW1**
		MF../**MM11D**/Z.7F **0**/**BW1**[1)]	MQ../**MM11D** /Z.7F **0**/**BW1**[1)]
	DR**2S**80MK4/**BE.**/TH. DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MF../**MM07D**/Z.7F **0**	MQ../**MM07D** /Z.7F **0**
		MF../**MM11D**/Z.7F **0**[1)]	MQ../**MM11D** /Z.7F **0**[1)]

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Power kW	Motor (230/400 V, 50 Hz) ⅄	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
1.1	DR**2S**80M4/TH.	MF../**MM11D**/Z.7F **0**/**BW1**	MQ../**MM11D** /Z.7F **0**/**BW1**
	DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MF../**MM15D**/Z.7F **0**/**BW1**[1)]	MQ../**MM15D** /Z.7F **0**/**BW1**[1)]
	DR**2S**80M4/**BE.**/TH.	MF../**MM11D**/Z.7F **0**	MQ../**MM11D** /Z.7F **0**
	DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MF../**MM15D**/Z.7F **0**[1)]	MQ../**MM15D** /Z.7F **0**[1)]
1.5	DR**S**90M4/TH. DR**E**90L4/TH. DR**N**90L4/TH.	MF../**MM15D**/Z.7F **0**/**BW1**	MQ../**MM15D** /Z.7F **0**/**BW1**
	DR**S**90M4/**BE.**/TH. DR**E**90L4/**BE.**/TH. DR**N**90L4/**BE.**/TH.	MF../**MM15D**/Z.7F **0**	MQ../**MM15D**/Z.7F **0**

1) Combination with increased short-term torque

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Motor assignment 2900 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) △	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.37	DR63L4/TH	MF../**MM03D**/Z.7F **1**/**BW1**	MQ../**MM03D**/Z.7F **1**/**BW1**
	DR**2S**71MS4/TH. DR**E**80S4/TH. DR**N**71M4/TH.	MF../**MM05D**/Z.7F **1**/**BW1**[1)]	MQ../**MM05D**/Z.7F **1**/**BW1**[1)]
	DR63L4/**BR..**/TH.	MF../**MM03D**/Z.7F **1**	MQ../**MM03D**/Z.7F **1**
	DR**2S**71MS4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MF../**MM05D**/Z.7F **1**[1)]	MQ../**MM05D**/Z.7F **1**[1)]
0.55	DR**2S**71M4/TH.	MF../**MM05D**/Z.7F **1**/**BW1**	MQ../**MM05D**/Z.7F **1**/**BW1**
	DR**S**71S4/TH. DR**E**80S4/TH. DR**N**80MK4/TH.	MF../**MM07D**/Z.7F **1**/**BW1**[1)]	MQ../**MM07D**/Z.7F **1**/**BW1**[1)]
	DR**2S**71M4/**BE.**/TH.	MF../**MM05D**/Z.7F **1**	MQ../**MM05D**/Z.7F **1**
	DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MF../**MM07D**/Z.7F **1**[1)]	MQ../**MM07D**/Z.7F **1**[1)]
0.75	DR**2S**80MK4/TH.	MF../**MM07D**/Z.7F **1**/**BW1**	MQ../**MM07D**/Z.7F **1**/**BW1**
	DR**S**71M4/TH. DR**E**80M4/TH.	MF../**MM11D**/Z.7F **1**/**BW1**[1)])	MQ../**MM11D**/Z.7F **1**/**BW1**[1)]
	DR**2S**80MK4/**BE.**/TH.	MF../**MM07D**/Z.7F **1**	MQ../**MM07D**/Z.7F **1**
	DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH.	MF../**MM11D**/Z.7F **1**[1)]	MQ../**MM11D**/Z.7F **1**[1)]
1.1	DR**2S**80M4/TH.	MF../**MM11D**/Z.7F **1**/**BW1**	MQ../**MM11D**/Z.7F **1**/**BW1**
	DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MF../**MM15D**/Z.7F **1**/**BW1**[1)]	MQ../**MM15D**/Z.7F **1**/**BW1**[1)]
	DR**2S**80M4/**BE.**/TH.	MF../**MM11D**/Z.7F **1**	MQ../**MM11D**/Z.7F **1**
	DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MF../**MM15D**/Z.7F **1**[1)]	MQ../**MM15D**/Z.7F **1**[1)]

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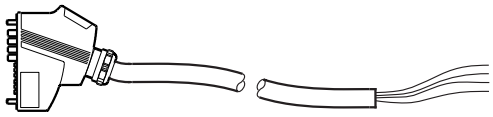
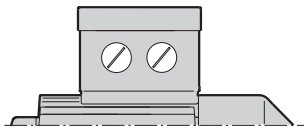
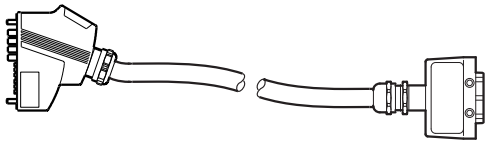
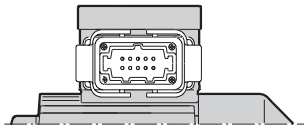
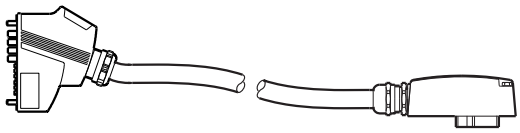
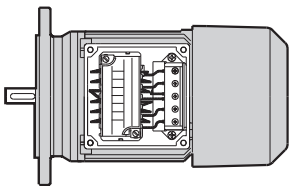
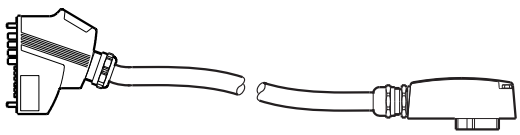
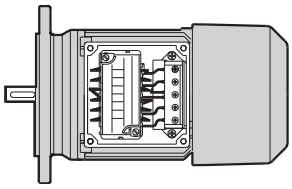
Power kW	Motor (230/400 V, 50 Hz) △	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
1.5	DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MF../**MM15D**/Z.7F **1**/**BW1**	MQ../**MM15D**/Z.7F **1**/**BW1**
	DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MF../**MM15D**/Z.7F **1**	MQ../**MM15D**/Z.7F **1**

1) Combination with increased short-term torque

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

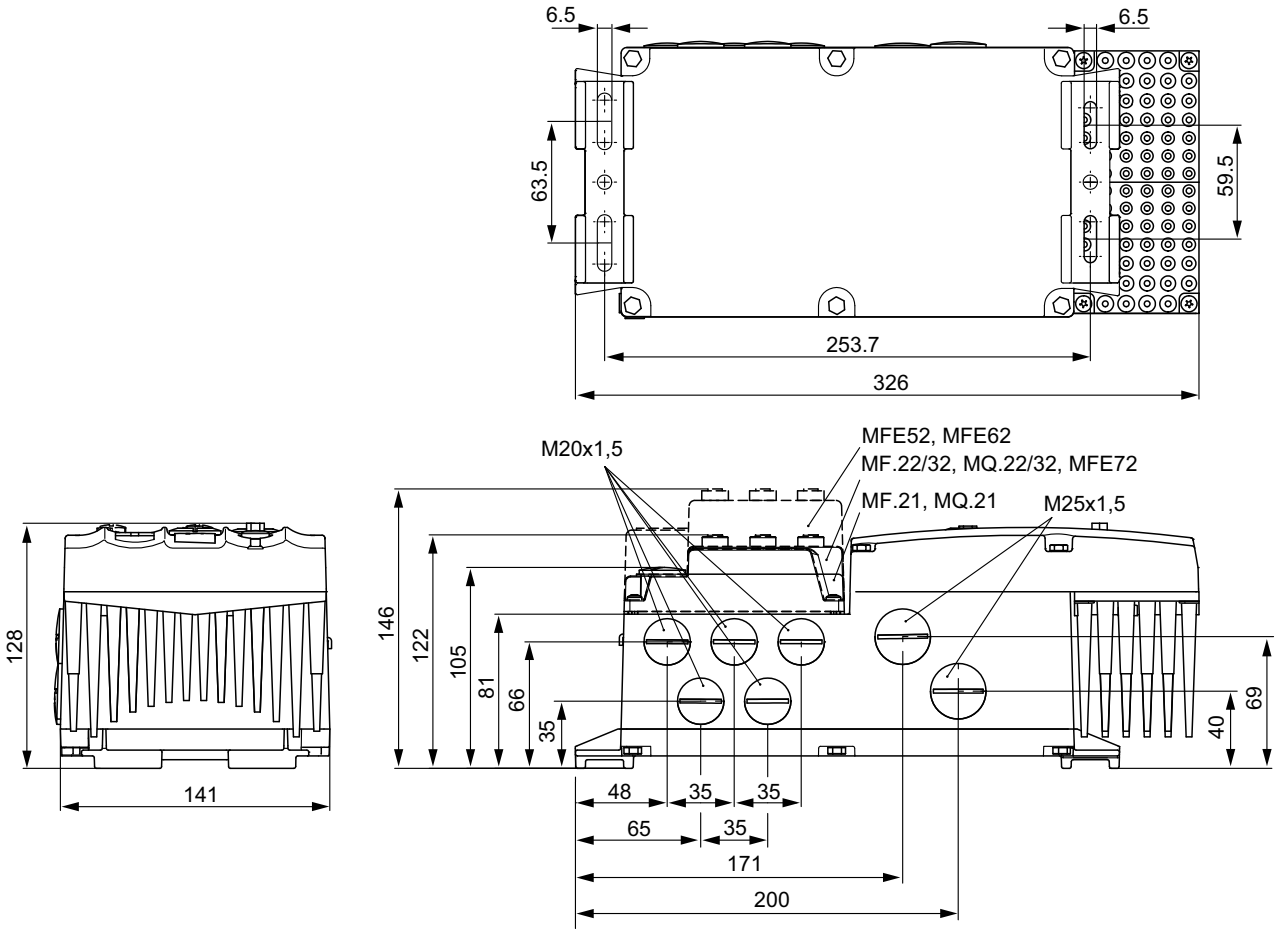
The following table shows the hybrid cables for connecting the motor to the field distributors MF../MM../Z.7. or MQ../MM../Z.7.:

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 (⅄) 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 

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

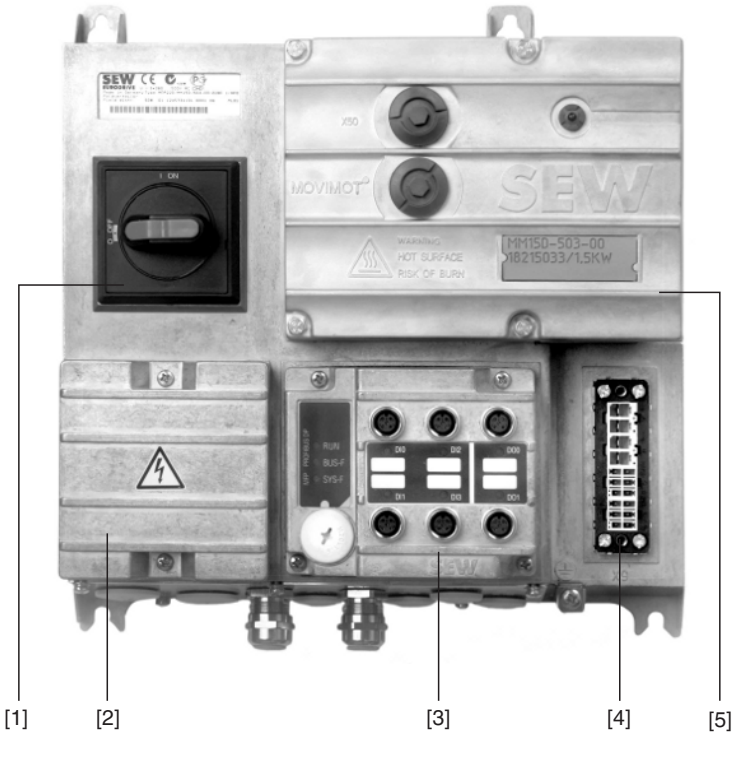
The following figure shows the dimensions of MF../MM03-MM15/Z.7., MQ../MM03-MM15/Z.7. field distributors:



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6.6 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:



[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)

6.6.1 Device 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

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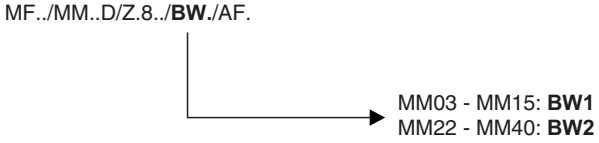
6.6.2 Example for type designation MF../MM../Z.8., MQ../MM../Z.8.

The following table shows the type designation of the field distributor MF22D/MM15D-503-00/Z28F 0/BW1/AF0 as an example:

MFP 22D	**Fieldbus interface**		
	MFP../MQP..	=	PROFIBUS
	MFE..	=	PROFINET IO, EtherNet/IP™, or EtherCAT®
	MFD../MQD..	=	DeviceNet™
/			
MM15D -503-00	**MOVIMOT® inverter**		
	MM..D..	=	MOVIMOT® inverter
/			
Z28F	**Connection module for controlling MOVIMOT®**		
	Z28F	=	For PROFIBUS, PROFINET IO, EtherNet/IP™, or EtherCAT®
	Z38F	=	For DeviceNet™
0	**Connection type**		
	0	=	⅄
	1	=	△
/			
BW1	**Braking resistor** (option)		
	BW1	=	Braking resistor for MOVIMOT® MM03 – MM15
	BW2	=	Braking resistor for MOVIMOT® MM22 – MM40
/			
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

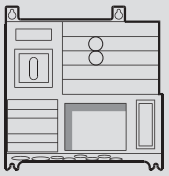


For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 🗎 457).

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

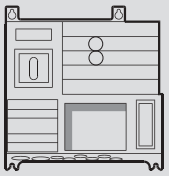
The following table shows the possible combinations of the MF../MM../Z.8. field distributor with fieldbus interfaces:

		**4 × I, 2 × O (terminals)** 	**4 × I, 2 × O (M12)** 	**6 × I (M12)** 
PROFIBUS	⅄	MFP21D/MM..D/Z28F 0/ AF0	MFP22D/MM..D/Z28F 0/ AF0	MFP32D/MM..D/Z28F 0/ AF0
	△	MFP21D/MM..D/Z28F 1/ AF0	MFP22D/MM..D/Z28F 1/ AF0	MFP32D/MM..D/Z28F 1/ AF0
	⅄	MFP21D/MM..D/Z28F 0/ AF2	MFP22D/MM..D/Z28F 0/ AF2	MFP32D/MM..D/Z28F 0/ AF2
	△	MFP21D/MM..D/Z28F 1/ AF2	MFP22D/MM..D/Z28F 1/ AF2	MFP32D/MM..D/Z28F 1/ AF2
	⅄	MFP21D/MM..D/Z28F 0/ AF3	MFP22D/MM..D/Z28F 0/ AF3	MFP32D/MM..D/Z28F 0/ AF3
	△	MFP21D/MM..D/Z28F 1/ AF3	MFP22D/MM..D/Z28F 1/ AF3	MFP32D/MM..D/Z28F 1/ AF3
PROFINET IO	⅄	–	MFE52B/MM..D/Z28F 0/AF0	
	△	–	MFE52B/MM..D/Z28F 1/AF0	
EtherNet/IP™	⅄	–	MFE62A/MM..D/Z28F 0/AF0	
	△	–	MFE62A/MM..D/Z28F 1/AF0	
EtherCAT®	⅄	–	MFE72A/MM..D/Z28F 0/AF0	
	△	–	MFE72A/MM..D/Z28F 1/AF0	
DeviceNet™	⅄	MFD21A/MM..D/Z38F 0/ AF1	MFD22A/MM..D/Z38F 0/ AF1	MFD32A/MM..D/Z38F 0/ AF1
	△	MFD21A/MM..D/Z38F 1/ AF1	MFD22A/MM..D/Z38F 1/ AF1	MFD32A/MM..D/Z38F 1/ AF1

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6.6.4 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 × I, 2 × O (terminals)** 	**4 × I, 2 × O (M12)** 	**6 × I (M12)** 
PROFIBUS	⅄	MQP21D/MM..D/Z28F 0/ AF0	MQP22D/MM..D/Z28F 0/ AF0	MQP32D/MM..D/Z28F 0/ AF0
	△	MQP21D/MM..D/Z28F 1/ AF0	MQP22D/MM..D/Z28F 1/ AF0	MQP32D/MM..D/Z28F 1/ AF0
	⅄	MQP21D/MM..D/Z28F 0/ AF2	MQP22D/MM..D/Z28F 0/ AF2	MQP32D/MM..D/Z28F 0/ AF2
	△	MQP21D/MM..D/Z28F 1/ AF2	MQP22D/MM..D/Z28F 1/ AF2	MQP32D/MM..D/Z28F 1/ AF2
	⅄	MQP21D/MM..D/Z28F 0/ AF3	MQP22D/MM..D/Z28F 0/ AF3	MQP32D/MM..D/Z28F 0/ AF3
	△	MQP21D/MM..D/Z28F 1/ AF3	MQP22D/MM..D/Z28F 1/ AF3	MQP32D/MM..D/Z28F 1/ AF3
DeviceNet™	⅄	MQD21A/MM..D/Z38F 0/ AF1	MQD22A/MM..D/Z38F 0/ AF1	MQD32A/MM..D/Z38F 0/ AF1
	△	MQD21A/MM..D/Z38F 1/ AF1	MQD22A/MM..D/Z38F 1/ AF1	MQD32A/MM..D/Z38F 1/ AF1

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6.6.5 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:

<table>
<tr><th>Characteristics</th><th colspan="3">Requirements for the assigned AC motor</th></tr>
<tr><td>Permitted motors</td><td colspan="3">Only motors listed in the following chapters are approved:
"Motor assignment 1400 min^{-1}" (→ 🖹 330) and
"Motor assignment 2900 min^{-1}" (→ 🖹 332).</td></tr>
<tr><td rowspan="6">Permitted nominal motor voltage</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Nominal voltage V</td><td>Line frequency Hz</td></tr>
<tr><td>DR2S..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS../DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRN..</td><td>230/400</td><td>50</td></tr>
<tr><td rowspan="11">Permitted brakes</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Standard brake type</td><td>Optional brake type</td></tr>
<tr><td>DR63L4</td><td>BR03</td><td>–</td></tr>
<tr><td>DR2S63M4</td><td>BE03</td><td>BE03</td></tr>
<tr><td>DRN71MS4</td><td>BR03</td><td>BE05</td></tr>
<tr><td>DR2S71MS4</td><td>BE05</td><td>BE05</td></tr>
<tr><td>DRS71S4
DRE80S4
DRN71M4</td><td>BE05</td><td>BE1</td></tr>
<tr><td>DR2S71M4
DR2S80MK4
DRS71M4
DRS80S4
DRE80M4
DRN80M4
DRN80MK4</td><td>BE1</td><td>BE05</td></tr>
<tr><td>DR2S80M4
DRS80M4
DRE90M4
DRN90S4</td><td>BE2</td><td>BE1</td></tr>
</table>

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Characteristics	Requirements for the assigned AC motor		
	DRS90M4 DRE90L4 DRN90L4	BE2	BE1
	DRS90L4 DRE100M4 DRE100L4 DRN100LS4	BE5	BE2
	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" (→ 🗎 334).		
Permitted motor protection	SEW-EURODRIVE recommends that you 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.. minicontroller).		

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Motor assignment 1400 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) ⅄	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.25	DR63L4/TH DR**2S**63M4/TH. DR**E**80S4/TH. DR**N**71MS4/TH.	MF../**MM03D**/Z.8F **0**/**BW1**/AF..[1)]	MQ../**MM03D**/Z.8F **0**/**BW1**/AF..[1)]
	DR63L4/**BR..**/TH. DR**2S**63M4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71MS4/**BE.**/TH.	MF../**MM03D**/Z.8F **0**/AF..[1)]	MQ../**MM03D**/Z.8F **0**/AF..[1)]
0.37	DR**2S**71MS4/TH. DR**S**71S4/TH. DR**E**80S4/TH. DR**N**71M/TH.	MF../**MM03D**/Z.8F **0**/**BW1**/AF..	MQ../**MM03D**/Z.8F **0**/**BW1**/AF..
		MF../**MM05D**/Z.8F **0**/**BW1**/AF..[1)]	MQ../**MM05D**/Z.8F **0**/**BW1**/AF..[1)]
	DR**2S**71MS4/**BE.**/TH. DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MF../**MM03D**/Z.8F **0**/AF..	MQ../**MM03D**/Z.8F **0**/AF..
		MF../**MM05D**/Z.8F **0**/AF..[1)]	MQ../**MM05D**/Z.8F **0**/AF..[1)]
0.55	DR**2S**71M4/TH. DR**S**71M4/TH. DR**E**80M4/TH. DR**N**80MK4/TH.	MF../**MM05D**/Z.8F **0**/**BW1**/AF..	MQ../**MM05D**/Z.8F **0**/**BW1**/AF..
		MF../**MM07D**/Z.8F **0**/**BW1**/AF..[1)]	MQ../**MM07D**/Z.8F **0**/**BW1**/AF..[1)]
	DR**2S**71M4/**BE.**/TH. DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MF../**MM05D**/Z.8F **0**/AF..	MQ../**MM05D**/Z.8F **0**/AF..
		MF../**MM07D**/Z.8F **0**/AF..[1)]	MQ../**MM07D**/Z.8F **0**/AF..[1)]
0.75	DR**2S**80MK4/TH. DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MF../**MM07D**/Z.8F **0**/**BW1**/AF..	MQ../**MM07D**/Z.8F **0**/**BW1**/AF..
		MF../**MM11D**/Z.8F **0**/**BW1**/AF..[1)]	MQ../**MM11D**/Z.8F **0**/**BW1**/AF..[1)]
	DR**2S**80MK4/**BE.**/TH. DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MF../**MM07D**/Z.8F **0**/AF..	MQ../**MM07D**/Z.8F **0**/AF..
		MF../**MM11D**/Z.8F **0**/AF..[1)]	MQ../**MM11D**/Z.8F **0**/AF..[1)]

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Power kW	Motor (230/400 V, 50 Hz)	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
1.1	DR**2S**80M4/TH. DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MF../**MM11D**/Z.8F **0**/**BW1**/AF..	MQ../**MM11D**/Z.8F **0**/**BW1**/AF..
		MF../**MM15D**/Z.8F **0**/**BW1**/AF..[1)]	MQ../**MM15D**/Z.8F **0**/**BW1**/AF..[1)]
	DR**2S**80M4/**BE.**/TH. DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MF../**MM11D**/Z.8F **0**/AF..	MQ../**MM11D**/Z.8F **0**/AF..
		MF../**MM15D**/Z.8F **0**/AF..[1)]	MQ../**MM15D**/Z.8F **0**/AF..[1)]
1.5	DR**S**90M4/TH. DR**E**90L4/TH. DR**N**90L4/TH.	MF../**MM15D**/Z.8F **0**/**BW1**/AF..	MQ../**MM15D**/Z.8F **0**/**BW1**/AF..
		MF../**MM22D**/Z.8F **0**/**BW2**/AF..[1)]	MQ../**MM22D**/Z.8F **0**/**BW2**/AF..[1)]
	DR**S**90M4/**BE.**/TH. DR**E**90L4/**BE.**/TH. DR**N**90L4/**BE.**/TH.	MF../**MM15D**/Z.8F **0**/AF..	MQ../**MM15D**/Z.8F **0**/AF..
		MF../**MM22D**/Z.8F **0**/AF..[1)]	MQ../**MM22D**/Z.8F **0**/AF..[1)]
2.2	DR**S**90L4/TH. DR**E**100M4/TH. DR**N**100LS4/TH.	MF../**MM22D**/Z.8F **0**/**BW2**/AF..	MQ../**MM22D**/Z.8F **0**/**BW2** /AF..
		MF../**MM30D**/Z.8F **0**/**BW2**/AF..[1)]	MQ../**MM30D**/Z.8F **0**/**BW2**/AF..[1)]
	DR**S**90L4/**BE.**/TH. DR**E**100M4/**BE.**/TH. DR**N**100LS4/**BE.**/TH.	MF../**MM22D**/Z.8F **0**/AF..	MQ../**MM22D**/Z.8F **0**/AF..
		MF../**MM30D**/Z.8F **0**/AF..[1)]	MQ../**MM30D**/Z.8F **0**/AF..[1)]
3.0	DR**S**100M4/TH. DR**E**100LC4/TH. DR**N**100L4/TH.	MF../**MM30D**/Z.8F **0**/**BW2**/AF..	MQ../**MM30D**/Z.8F **0**/**BW2**/AF..
		MF../**MM40D**/Z.8F **0**/**BW2**/AF..[1)]	MQ../**MM40D**/Z.8F **0**/**BW2**/AF..[1)]
	DR**S**100M4/**BE.**/TH. DR**E**100LC4/**BE.**/TH. DR**N**100L4/**BE.**/TH.	MF../**MM30D**/Z.8F **0**/AF..	MQ../**MM30D**/Z.8F **0**/AF..
		MF../**MM40D**/Z.8F **0**/AF..[1)]	MQ../**MM40D**/Z.8F **0**/AF..[1)]
4.0	DR**S**100LC4/TH. DR**E**132S4/TH. DR**N**112M4/TH.	MF../**MM40D**/Z.8F **0**/**BW2**/AF..	MQ../**MM40D**/Z.8F **0**/**BW2**/AF..
	DR**S**100LC4/**BE.**/TH. DR**E**132S4/**BE.**/TH. DR**N**112S4/**BE.**/TH.	MF../**MM40D**/Z.8F **0**/AF..	MQ../**MM40D**/Z.8F **0**/AF..

1) Combination with increased short-term torque

Motor assignment 2900 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) △	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
0.37	DR63L4/TH DR**2S**71MS4/TH. DR**E**80S4/TH. DR**N**71M4/TH.	MF../**MM03D**/Z.8F **1**/**BW1**/AF..	MQ../**MM03D**/Z.8F **1**/**BW1**/AF..
		MF../**MM05D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../**MM05D**/Z.8F **1**/**BW1**/AF..[1)]
	DR63L4/**BR..**/TH. DR**2S**71MS4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MF../**MM03D**/Z.8F **1**/AF..	MQ../**MM03D**/Z.8F **1**/AF..
		MF../**MM05D**/Z.8F **1**/AF..[1)]	MQ../**MM05D**/Z.8F **1**/AF..[1)]
0.55	DR**2S**71M4/TH. DR**S**71S4/TH. DR**E**80S4/TH. DR**N**80MK4/TH.	MF../**MM05D**/Z.8F **1**/**BW1**/AF..	MQ../**MM05D**/Z.8F **1**/**BW1**/AF..
		MF../**MM07D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../**MM07D**/Z.8F **1**/**BW1**/AF..[1)]
	DR**2S**71M4/**BE.**/TH. DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MF../**MM05D**/Z.8F **1**/AF..	MQ../**MM05D**/Z.8F **1**/AF..
		MF../**MM07D**/Z.8F **1**/AF..[1)]	MQ../**MM07D**/Z.8F **1**/AF..[1)]
0.75	DR**2S**80MK4/TH. DR**S**71M4/TH. DR**E**80M4/TH.	MF../**MM07D**/Z.8F **1**/**BW1**/AF..	MQ../**MM07D**/Z.8F **1**/**BW1**/AF..
		MF../**MM11D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../**MM11D**/Z.8F **1**/**BW1**/AF..[1)]
	DR**2S**80MK4/**BE.**/TH. DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH.	MF../**MM07D**/Z.8F **1**/AF..	MQ../**MM07D**/Z.8F **1**/AF..
		MF../**MM11D**/Z.8F **1**/AF..[1)]	MQ../**MM11D**/Z.8F **1**/AF..[1)]
1.1	DR**2S**80M4/TH. DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MF../**MM11D**/Z.8F **1**/**BW1**/AF..	MQ../**MM11D**/Z.8F **1**/**BW1**/AF..
		MF../**MM15D**/Z.8F **1**/**BW1**/AF..[1)]	MQ../**MM15D**/Z.8F **1**/**BW1**/AF..[1)]
	DR**2S**80M4/**BE.**/TH. DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MF../**MM11D**/Z.8F **1**/AF..	MQ../**MM11D**/Z.8F **1**/AF..
		MF../**MM15D**/Z.8F **1**/AF..[1)]	MQ../**MM15D**/Z.8F **1**/AF..[1)]

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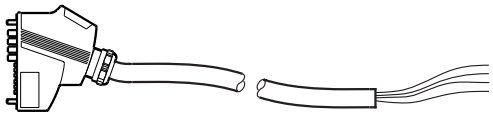
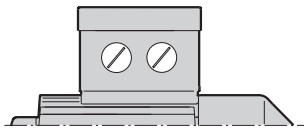
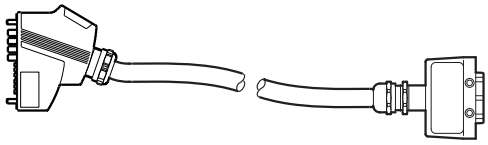
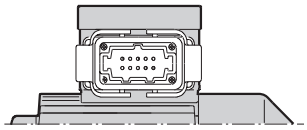
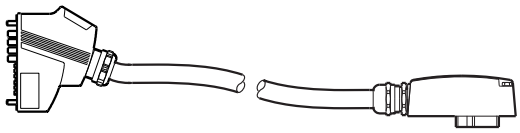
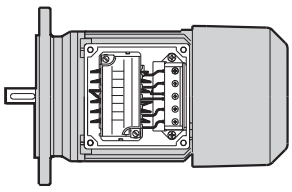
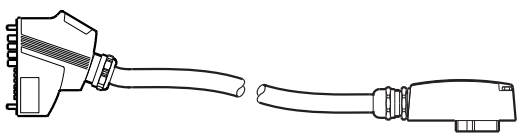
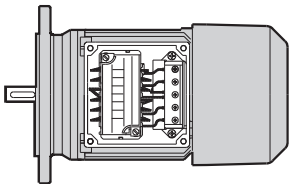
Power kW	Motor (230/400 V, 50 Hz) △	Field distributors	
		With MF.. fieldbus interface	With MQ.. fieldbus interface
1.5	DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MF../**MM15D**/Z.8F **1**/**BW1**/AF..	MQ../**MM15D**/Z.8F **1**/**BW1**/AF..
		MF../**MM22D**/Z.8F **1**/**BW2**/AF..[1)]	MQ../**MM22D**/Z.8F **1**/**BW2**/AF..[1)]
	DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MF../**MM15D**/Z.8F **1**/AF..	MQ../**MM15D**/Z.8F **1**/AF..
		MF../**MM22D**/Z.8F **1**/AF..[1)]	MQ../**MM22D**/Z.8F **1**/AF..[1)]
2.2	DR**S**90M4/TH. DR**E**90L4/TH. DR**N**90L4/TH.	MF../**MM22D**/Z.8F **1**/**BW2**/AF..	MQ../**MM22D**/Z.8F **1**/**BW2**/AF..
		MF../**MM30D**/Z.8F **1**/**BW2**/AF..[1)]	MQ../**MM30D**/Z.8F **1**/**BW2**/AF..[1)]
	DR**S**90M4/**BE.**/TH. DR**E**90L4/**BE.**/TH. DR**N**90L4/**BE.**/TH.	MF../**MM22D**/Z.8F **1**/AF..	MQ../**MM22D**/Z.8F **1**/AF..
		MF../**MM30D**/Z.8F **1**/AF..[1)]	MQ../**MM30D**/Z.8F **1**/AF..[1)]
3.0	DR**S**90L4/TH. DR**E**100M4/TH. DR**N**100LS4/TH.	MF../**MM30D**/Z.8F **1**/**BW2**/AF..	MQ../**MM30D**/Z.8F **1**/**BW2**/AF..
		MF../**MM40D**/Z.8F **1**/**BW2**/AF..[1)]	MQ../**MM40D**/Z.8F **1**/**BW2**/AF..[1)]
	DR**S**90L4/**BE.**/TH. DR**E**100M4/**BE.**/TH. DR**N**100LS4/**BE.**/TH.	MF../**MM30D**/Z.8F **1**/AF..	MQ../**MM30D**/Z.8F **1**/AF..
		MF../**MM40D**/Z.8F **1**/AF..[1)]	MQ../**MM40D**/Z.8F **1**/AF..[1)]
4.0	DR**S**100M4/TH. DR**E**100LC4/TH. DR**N**100L4/TH.	MF../**MM40D**/Z.8F **1**/**BW2**/AF..	MQ../**MM40D**/Z.8F **1**/**BW2**/AF..
	DR**S**100M4/**BE.**/TH. DR**E**100LC4/**BE.**/TH. DR**N**100L4/**BE.**/TH.	MF../**MM40D**/Z.8F **1**/AF..	MQ../**MM40D**/Z.8F **1**/AF..

1) Combinations with increased short-term torque

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6.6.6 Hybrid cables for connecting Z.8 field distributors and motors

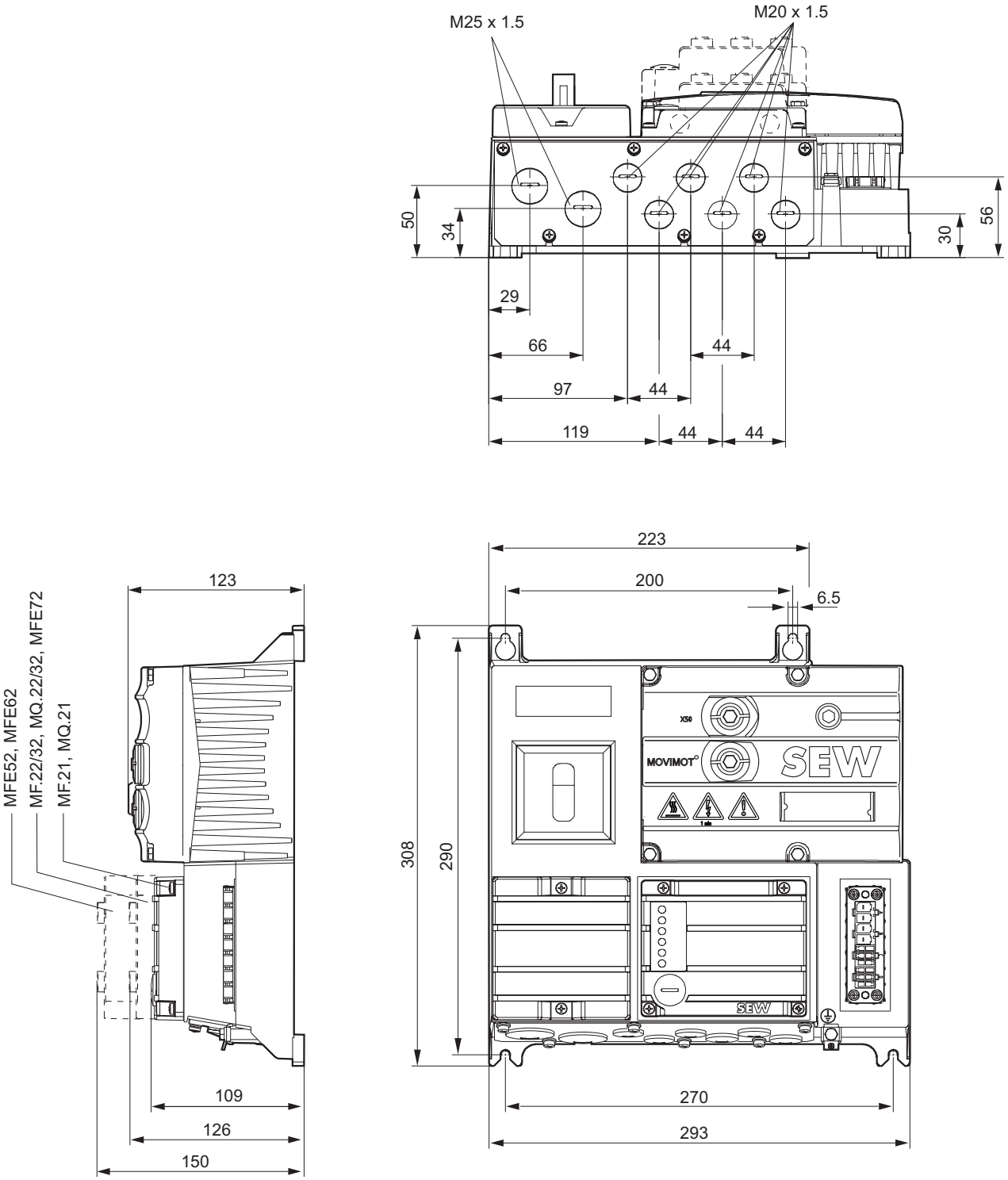
The following table shows the hybrid cables for connecting the motor to the field distributors MF../MM../Z.8. or MQ../MM../Z.8.:

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 

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6.6.7 Dimension drawing of MF../MM03 – MM15/Z.8., MQ../MM03 – MM15/Z.8. field distributors

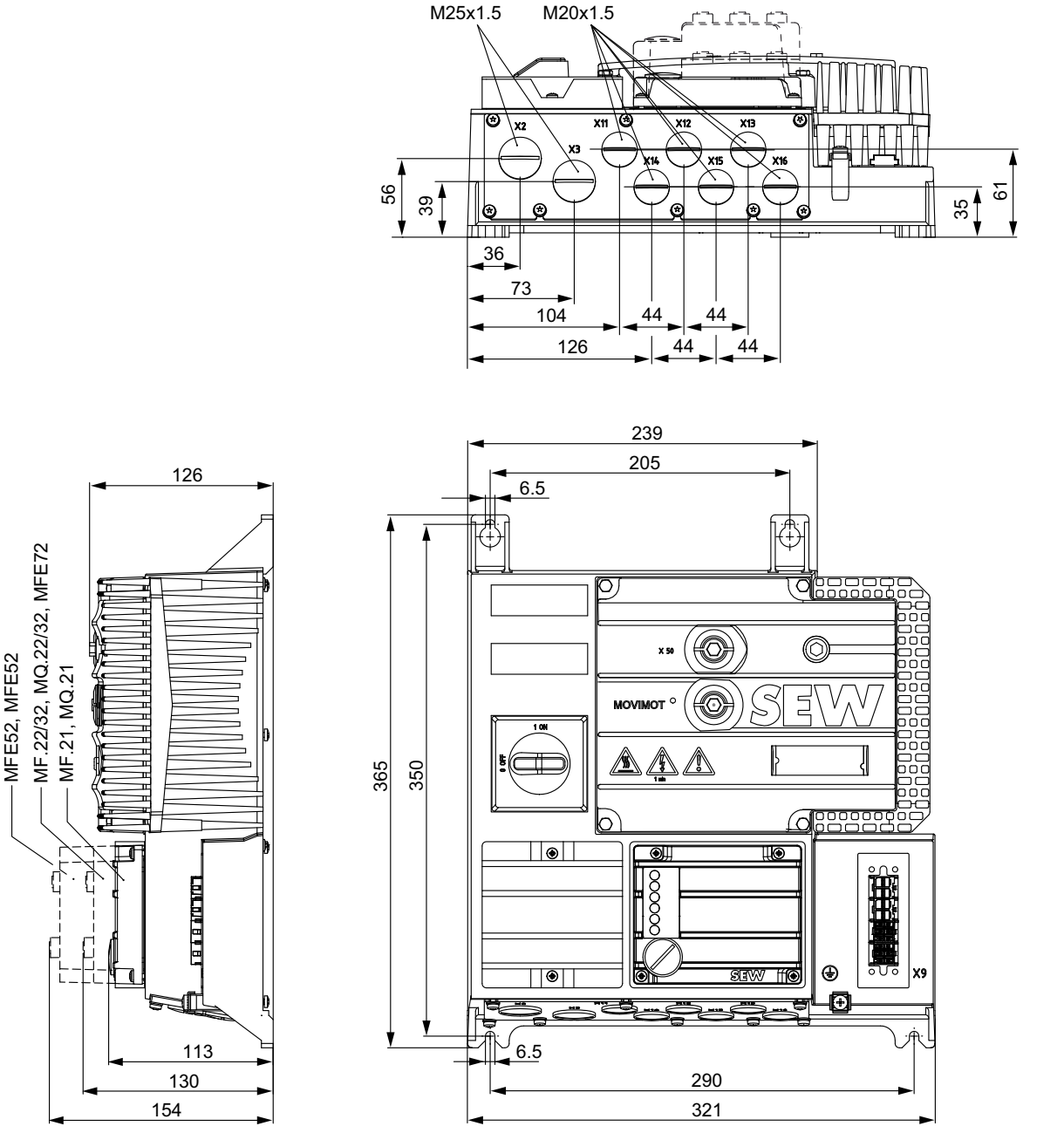
The following figure shows the dimensions of the field distributors MF../MM03 – MM15/Z.8., MQ../MM03 – MM15/Z.8.:



27021599307058827

6.6.8 Dimension drawing of MF../MM22 – MM30/Z.8., MQ../MM22 – MM30/Z.8. field distributors

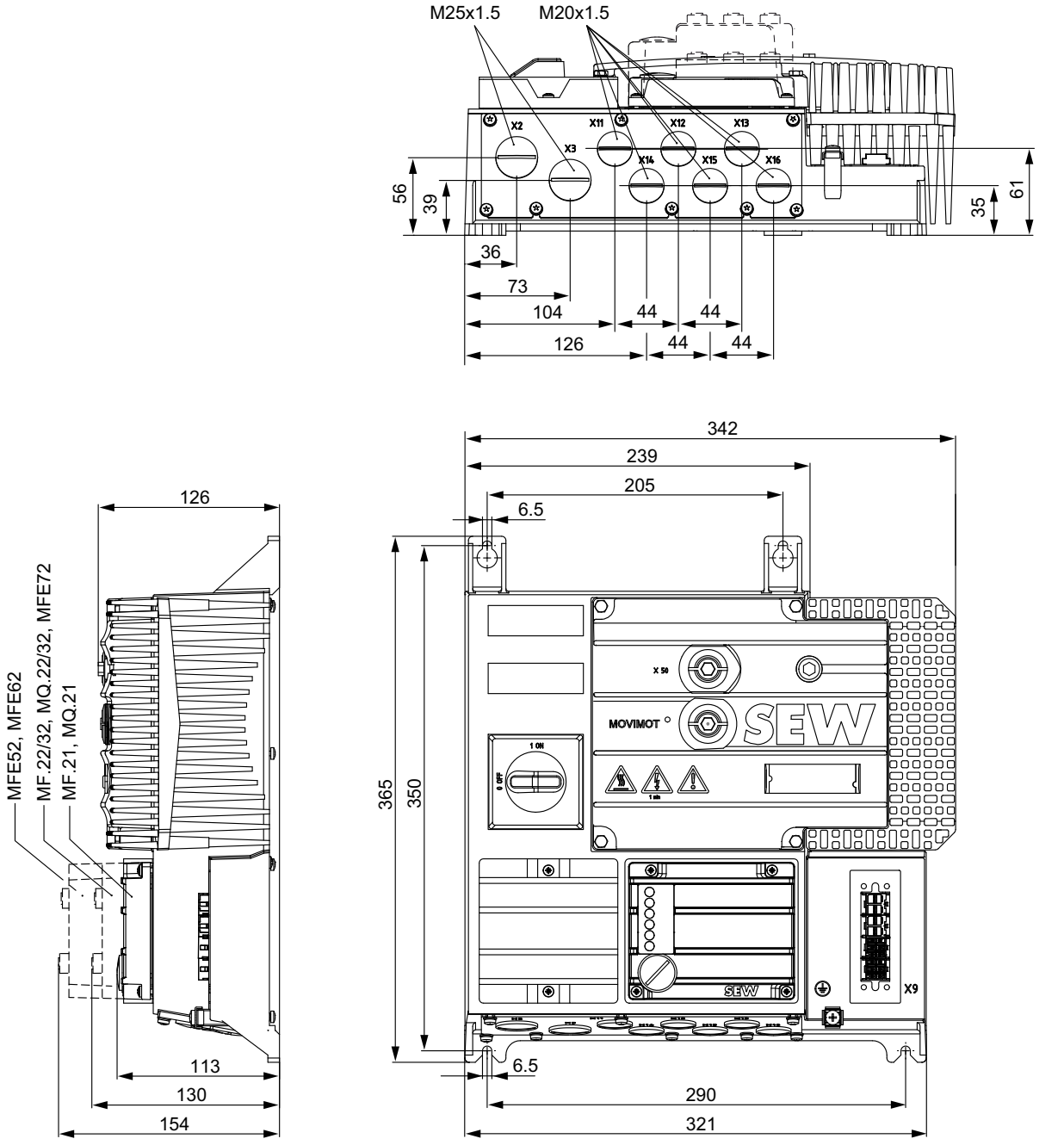
The following figure shows the dimensions of the field distributors MF../MM22 – MM30/Z.8., MQ../MM22 – MM30/Z.8.:



27021599307060747

6.6.9 Dimension drawing of MF../MM40/Z.8., MQ../MM40/Z.8. field distributors

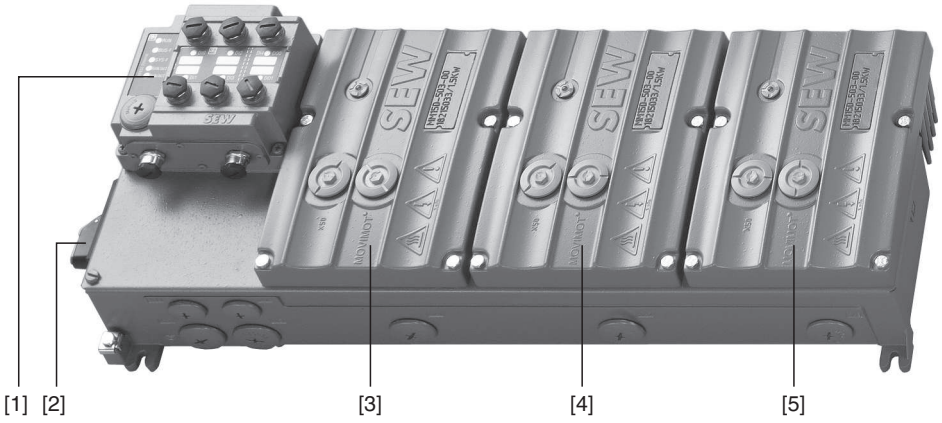
The following figure shows the dimensions of the field distributors MF../MM40/Z.8., MQ../MM40/Z.8.:



27021599449977355

6.7 MF../MM../Z.9 field distributors

The following figure shows the MF../MM../Z.9 field distributor:



[1] MF.. fieldbus interface
[2] Maintenance switch (optional)
[3] MOVIMOT® inverter 1
[4] MOVIMOT® inverter 2
[5] MOVIMOT® inverter 3

6.7.1 Device properties

MF../MM/Z.9 field distributors have the following functional characteristics:

- Communication interface with I/Os
- Separate wiring space for bus and power terminals
- 3 MOVIMOT® inverters integrated
- Optional maintenance switch
  - With triple lock
  - Color: black/red

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6.7.2 Example for type designation MF../MM../Z.9

The following table shows the type designation of the field distributor MFE52B/ MM15D-503-00/Z29F 0/BW1/3 as an example:

MFE 52B	**Fieldbus interface**		
	MFE..	=	PROFINET IO
/			
MM15D -503-00	**MOVIMOT® inverter**		
	No designation	=	Without inverter
	MM..D..	=	MOVIMOT® inverter
/			
Z29	**Connection module for controlling MOVIMOT®**		
	Z29	=	For PROFINET IO
F	**Variant**		
	N	=	Without maintenance switch
	F	=	With maintenance switch
	J	=	With maintenance switch and feedback
0	**Connection type**		
	0	=	⅄
	1	=	△
/			
BW1	**Braking resistor** (option)		
	BW1	=	Braking resistor for MOVIMOT® MM03 – MM15
/			
3	**Number of MOVIMOT® inverters**		
	0	=	Without inverter
	1	=	1 MOVIMOT® inverter
	2	=	2 identical MOVIMOT® inverters
	3	=	3 identical MOVIMOT® inverters

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

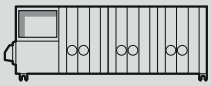
MF../MM..D/Z.9../**BW.**/AF.

└──► MM03 - MM15: **BW1**

For the regenerative current-carrying capacity of the braking resistors, refer to chapter "4Q operation with integrated BW.. braking resistor" (→ 🗎 457).

6.7.3 Possible combinations MF../MM../Z.9

The following table shows the possible combinations of the MF../MM../Z.9 field distributor with fieldbus interfaces:

		**4 × I, 2 × O (M12)** 
PROFINET IO	⅄	MFE52B/MM..D/Z29.0/.
	△	MFE52B/MM..D/Z29.1/.

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6.7.4 Assignment of motors to MF../MM../Z.9 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:

<table>
<tr><th>Characteristics</th><th colspan="3">Requirements for the assigned AC motor</th></tr>
<tr><td>Permitted motors</td><td colspan="3">Only motors listed in chapters
"Motor assignment 1400 min^{-1}" (→ 🗎 343) and
"Motor assignment 2900 min^{-1}" (→ 🗎 345) are approved.</td></tr>
<tr><td rowspan="6">Permitted nominal motor voltage</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Nominal voltage V</td><td>Line frequency Hz</td></tr>
<tr><td>DR2S..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS../DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRN..</td><td>230/400</td><td>50</td></tr>
<tr><td rowspan="11">Permitted brakes</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Standard brake type</td><td>Optional brake type</td></tr>
<tr><td>DR63L4</td><td>BR03</td><td>–</td></tr>
<tr><td>DR2S63M4</td><td>BR03</td><td>BR03</td></tr>
<tr><td>DRN71MS4</td><td>BR03</td><td>BE05</td></tr>
<tr><td>DR2S71MS4</td><td>BE05</td><td>BE05</td></tr>
<tr><td>DRS71S4
DRE80S4
DRN71M4</td><td>BE05</td><td>BE1</td></tr>
<tr><td>DR2S71M4
DR2S80MK4
DRS71M4
DRS80S4
DRE80M4
DRN80M4
DRN80MK4</td><td>BE1</td><td>BE05</td></tr>
<tr><td>DR2S80M4
DRS80M4
DRE90M4
DRN90S4</td><td>BE2</td><td>BE1</td></tr>
</table>

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Characteristics	Requirements for the assigned AC motor		
	DRS90M4 DRE90L4 DRN90L4	BE2	BE1
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 motor protection	SEW-EURODRIVE recommends that you always order the motor with **TH thermostat** (bimetallic switch). Motor protection can also be implemented in the Expert mode of the MOVIMOT® inverter.		

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Motor assignment 1400 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) ⅄	Field distributors With MF.. fieldbus interface
0.25	DR63L4/TH. DR**2S**63M4/TH. DR**E**80S4/TH. DR**N**71MS4/TH.	MF../**MM03D**/Z.9.**0**/**BW1**/.[1)]
	DR63L4/**BR..**/TH. DR**2S**63M4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71MS4/**BE.**/TH.	MF../**MM03D**/Z.9.**0**/.[1)]
0.37	DR**2S**71MS4/TH. DR**S**71S4/TH. DR**E**80S4/TH. DR**N**71M/TH.	MF../**MM03D**/Z.9.**0**/**BW1**/.
		MF../**MM05D**/Z.9.**0**/**BW1**[1)].
	DR**2S**71MS4/**BE.**/TH. DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MF../**MM03D**/Z.9.**0**/.
		MF../**MM05D**/Z.9.**0**/.[1)]
0.55	DR**2S**71M4/TH. DR**S**71M4/TH. DR**E**80M4/TH. DR**N**80MK4/TH.	MF../**MM05D**/Z.9.**0**/**BW1**/.
		MF../**MM07D**/Z.9.**0**/**BW1**/.[1)]
	DR**2S**71M4/**BE.**/TH. DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MF../**MM05D**/Z.9.**0**/.
		MF../**MM07D**/Z.9.**0**/.[1)]
0.75	DR**2S**80MK4/TH. DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MF../**MM07D**/Z.9.**0**/**BW1**/.
		MF../**MM11D**/Z.9.**0**/**BW1**/.[1)]
	DR**2S**80MK4/**BE.**/TH. DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MF../**MM07D**/Z.9.**0**/.
		MF../**MM11D**/Z.9.**0**/.[1)]

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Power kW	Motor (230/400 V, 50 Hz) ⅄	Field distributors With MF.. fieldbus interface
1.1	DR**2S**80M4/TH.	MF../**MM11D**/Z.9.**0**/**BW1**/.
	DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MF../**MM15D**/Z.9.**0**/**BW1**/.[1)]
	DR**2S**80M4/**BE.**/TH.	MF../**MM11D**/Z.9.**0**/.
	DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MF../**MM15D**/Z.9.**0**/.[1)]
1.5	DR**S**90M4/TH. DR**E**90L4/TH. DR**N**90L4/TH.	MF../**MM15D**/Z.9.**0**/**BW1**/.
	DR**S**90M4/**BE.**/TH. DR**E**90L4/**BE.**/TH. DR**N**90L4/**BE.**/TH.	MF../**MM15D**/Z.9.**0**/.

1) Combination with increased short-term torque

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Motor assignment 2900 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) △	Field distributors With MF.. fieldbus interface
0.37	DR63L4/TH	MF../**MM03D**/Z.9.**1**/**BW1**/.
	DR**2S**71MS4/TH. DR**E**80S4/TH. DR**N**71M4/TH.	MF../**MM05D**/Z.9.**1**/**BW1**/.[1)]
	DR63L4/**BR..**/TH.	MF../**MM03D**/Z.9.**1**/.
	DR**2S**71MS4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MF../**MM05D**/Z.9.**1**/.[1)]
0.55	DR**2S**71M4/TH.	MF../**MM05D**/Z.9.**1**/**BW1**/.
	DR**S**71S4/TH. DR**E**80S4/TH. DR**N**80MK4/TH.	MF../**MM07D**/Z.9.**1**/**BW1**/.[1)]
	DR**2S**71M4/**BE.**/TH.	MF../**MM05D**/Z.9.**1**/.
	DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MF../**MM07D**/Z.9.**1**/.[1)]
0.75	DR**2S**80MK4/TH.	MF../**MM07D**/Z.9.**1**/**BW1**/.
	DR**S**71M4/TH. DR**E**80M4/TH.	MF../**MM11D**/Z.9.**1**/**BW1**/.[1)]
	DR**2S**80MK4/**BE.**/TH.	MF../**MM07D**/Z.9.**1**/.
	DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH.	MF../**MM11D**/Z.9.**1**/.[1)]
1.1	DR**2S**80M4/TH.	MF../**MM11D**/Z.9.**1**/**BW1**/.
	DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MF../**MM15D**/Z.9.**1**/**BW1**/.[1)]
	DR**2S**80M4/**BE.**/TH.	MF../**MM11D**/Z.9.**1**/.
	DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MF../**MM15D**/Z.9.**1**/.[1)]

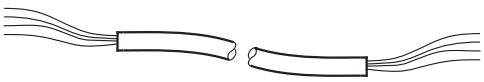
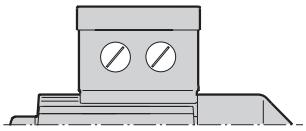
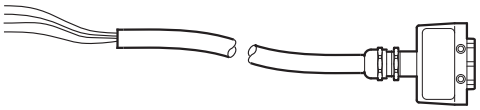
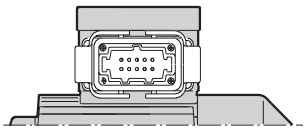
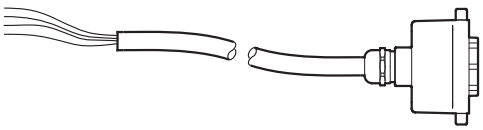
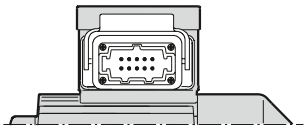
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Power kW	Motor (230/400 V, 50 Hz) △	Field distributors With MF.. fieldbus interface
1.5	DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MF../**MM15D**/Z.9.**1**/**BW1**/.
	DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MF../**MM15D**/Z.9.**1**/.

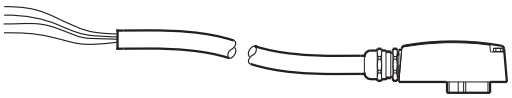
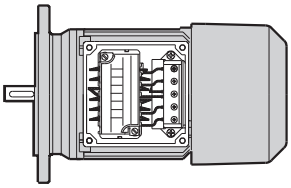
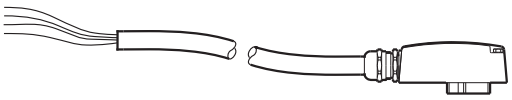
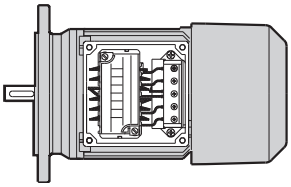
1) Combination with increased short-term torque

6.7.5 Hybrid cables for connecting Z.9 field distributors and motors

The following table shows the hybrid cables for connecting the motor to the MF../MM../Z.9. field distributors:

Field distributors	Hybrid cable	Cable type	Drive
Z.9	Part number 08184380  Preferred type (preferred lengths 1.5/2/3/5 m)[1)]	**A**	AC motors with cable gland 
	Part number: 05931142  Preferred type (preferred lengths 1.5/2/3/5 m)[1)]	**A**	AC motors with ASB4 plug connector 
	Part number: 18103375  Preferred type (preferred lengths 1.5/2/3/5 m)[1)]	**A**	AC motors with ASE4 plug connector 

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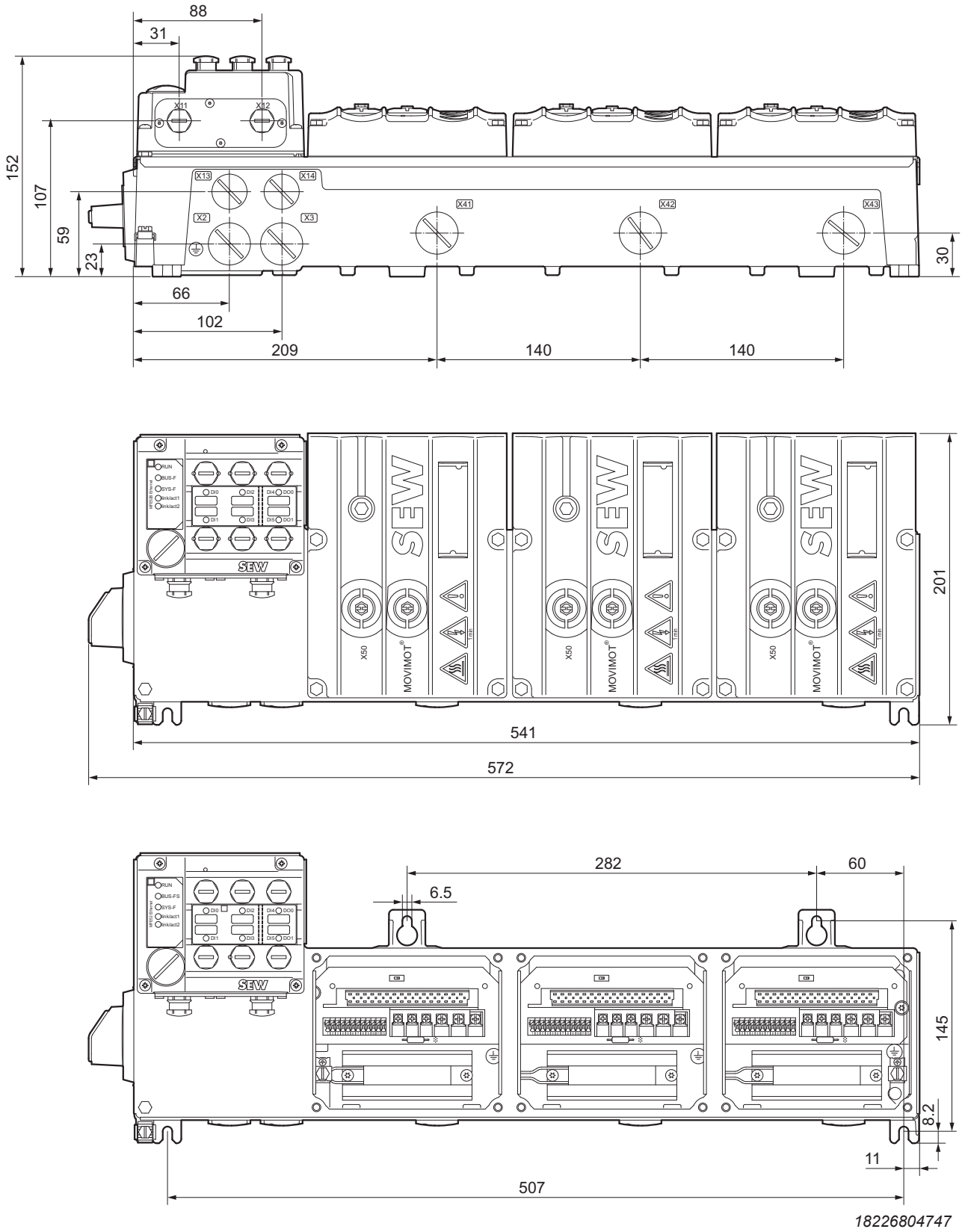
Field distributors	Hybrid cable	Cable type	Drive
	Part number: 08187843 (⅄) Part number: 08165262 (△)  Preferred type (preferred lengths 1.5/2/3/5 m)[1)]	**A**	AC motors with ISU4 plug connector size DR63 
	Part number: 08185336 (⅄) Part number: 08178178 (△)  Preferred type (preferred lengths 1.5/2/3/5 m)[1)]	**A**	AC motors with ISU4 plug connector size DR.71 – 132 

1) Preferred types with preferred lengths are usually available at short notice.

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6.7.6 Dimension drawing of MF../MM03 – MM15/Z.9 field distributors

The following figure shows the dimensions of the field distributors MF../MM03 – MM15/Z.9.:



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6.8 Functional safety

6.8.1 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.

6.8.2 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.

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MOVIMOT® with MFZ.6. field distributor

Connection via a prefabricated cable.

The following combinations are permitted:

MQ..	**Fieldbus interface**	
MF..	MFP21D, 22D, 22L, 32D MFP22H, 32H MQP21D, 22D, 32D	Permitted with Z26F, Z26J only
	MFE52A, 52B, 52G, 52H, 52L, 52M MFE62A MFE72A	Permitted with Z26F, Z26J, Z36F only
	MFD21A, 22A, 32A MFO21A, 22A, 32A MQD21A, 22A, 32A	Permitted with Z36F only
/		
Z.6	**Connection module** Z26F, Z26J, Z36F	
/		
AF.	**Connection technology**	
	AF0	Permitted with Z26F, Z26J only
	AF1	Permitted with Z36F only
	AF2, AF3	Permitted with Z26F, Z26J only

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MOVIMOT® frequency inverter integrated in the MFZ.7. field distributor

Connection of the AC motor via prefabricated cable.

The following combinations are permitted:

MQ..	**Fieldbus interface**	
MF..	MFP21D, 22D, 22L, 32D MFP22H, 32H MQP21D, 22D, 32D	Permitted with Z27F only
	MFE52A, 52B, 52G, 52H, 52L, 52M MFE62A MFE72A	Permitted with Z27F, Z37F only
	MFD21A, 22A, 32A MFO21A, 22A, 32A MQD21A, 22A, 32A	Permitted with Z37F only
/		
MM..	**MOVIMOT® inverter:** MM03D – MM15D	
/		
Z.7	**Connection module** Z27F, Z37F	
0	**Connection type** 0, 1	
/		
BW1	**Braking resistor** (option) BW1	
/		
AWSF	**Connection technology**	
	AWSF	Permitted only for special design with: • 1 × plug connector for STO • 2 × plug connector for 24 V

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MOVIMOT® frequency inverter integrated in the MFZ.8 field distributor.

Connection of the AC motor via prefabricated cable.

The following combinations are permitted:

MQ..	**Fieldbus interface**	
MF..	MFP21D, 22D, 22L, 32D MFP22H, 32H MQP21D, 22D, 32D	Permitted with Z28F, Z28N, Z28J only
	MFE52A, 52B, 52G, 52H, 52L, 52M MFE62A MFE72A	Permitted with Z28F, Z28N, Z28J, Z38F, Z38N, Z38G, Z38J only
	MFD21A, 22A, 32A MFO21A, 22A, 32A MQD21A, 22A, 32A	Permitted with Z38F, Z38N, Z38G, Z38J only
/		
MM..	**MOVIMOT® inverter:** MM03D – MM40D	
/		
Z.8	**Connection module** Z28F, Z38F, Z28N, Z38N, Z38G, Z28J, Z38J	
0	**Connection type** 0, 1	
/		
BW1	**Braking resistor** (option) BW1, BW2	
/		
AF.	**Connection technology**	
	AF0	Permitted with Z28F, Z28N, Z28J only
	AF1, AGA, AGB	Permitted with Z38F, Z38N, Z38G, Z38J only
	AF2, AF3	Permitted with Z28F, Z28N, Z28J only
	AFSL	Permitted only for special design with: • 1 × plug connector for STO • 2 × plug connector for 24 V

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MOVIMOT® frequency inverter integrated in the MFZ.9 field distributor.

Connection of the AC motor via prefabricated cable.

The following combinations are permitted:

MF..	**Fieldbus interface**	
	MFE52B, 52G, 52M	Permitted with Z29F, Z29N, Z29J only
/		
MM..	**MOVIMOT® inverter:**	
	MM03D – MM15D	
/		
Z.9	**Connection module**	
	Z29F, Z29N, Z29J	
0	**Connection type**	
	0, 1	
/		
BW1	**Braking resistor** (option)	
	BW1	
/		
3	**Number of MOVIMOT® inverters**	
	0, 1, 2, 3	

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7 MOVIMOT®

7.1 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.

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7.1.1 MOVIMOT® device properties

- Frequency inverter with vector-oriented motor control mode
- Power range: 0.37 – 4.0 kW (0.37 – 2.2 kW)
- Voltage range: 3 × 380 – 500 V (3 × 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 switching 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 a mechanical brake, the brake coil is used as the braking resistor.
  - For motors without a brake, MOVIMOT® is supplied with an 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, DeviceNet™, PROFINET IO, EtherNET/IP™, EtherCAT®).
- MOVIMOT® can be supplied with UL approval (UL listed) on request.

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7.1.2 MOVIMOT® options (/MO)

MOVIMOT® can be supplemented by many different "options" (→ 🗎 380).

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 (MM03 – MM15)
MLU11A MLU21A	DC 24 V voltage supply (380 – 500 V) DC 24 V voltage supply (200 – 240 V)
MLG11A MLG21A	Setpoint adjuster with DC 24 V voltage supply (380 – 500 V) Setpoint adjuster with DC 24 V voltage supply (200 – 240 V)
MFP...	PROFIBUS interface
MFE...	PROFINET IO, EtherNet/IP™, or EtherCAT® interface
MFD...	DeviceNet™ interface

AS-Interface

MOVIMOT® drives are also available with integrated AS-Interface. The AS-Interface option is located on the connection board in the connection box.

The following AS-Interface options are available:

- Binary slave MLK30A
- Double slave MLK31A
- Binary slave MLK32A in AB technology

The following table shows the main differences between the AS-Interface options:

AS-Interface option	Stations at the AS-Interface	Number of speed setpoints	Number of ramps	Can be parameterized via AS-Interface	24 V supply for MOVIMOT®
MLK30A	Max. 31	2 (16[1)])	$1 \times t_{UP}$ $1 \times t_{DOWN}$	No	AS-Interface or AUX PWR
MLK31A	Max. 31	6	$3 \times t_{UP}$ $3 \times t_{DOWN}$	Yes	AS-Interface or AUX PWR
MLK32A	Max. 62	6	$3 \times t_{UP}$ $3 \times t_{DOWN}$	No	AUX PWR

1) Due to the parameterization of scaling factors, 16 fixed setpoints are available.

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.

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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.

MLK32A

The MLK32A option works as a slave on the AS-Interface according to AS-Interface specification 3.0.

The MOVIMOT® inverter is controlled via the cyclic output bits. The coding of the data bits is specified in different function modules. The MOVIMOT® inverter interprets these bits as different control and status codes. You can switch between the function modules using acyclic parameter bits.

The input bits transmit the status of the drive and 2 additional sensor signals to the AS-Interface master.

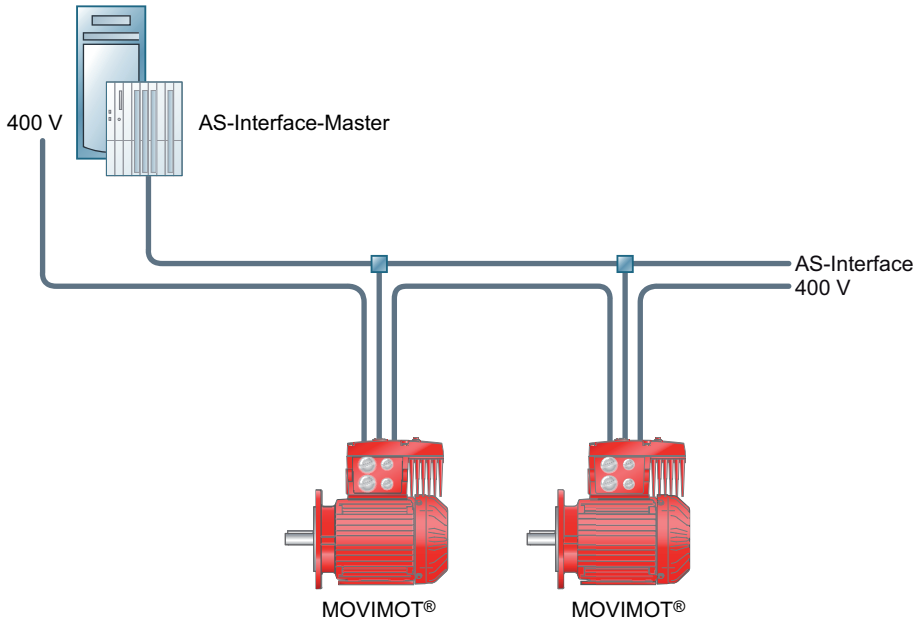
7.1.3 Advantages of MOVIMOT®

- 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

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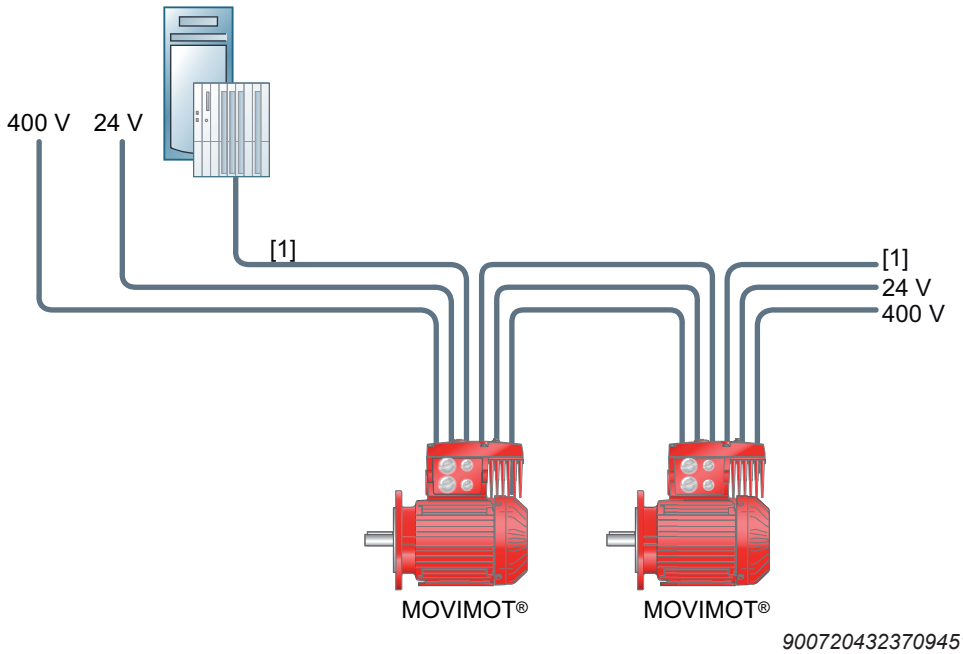
7.2 MOVIMOT® installation topology

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)

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7.3 Available MOVIMOT® motor combinations

7.3.1 Motor identification for MOVIMOT® (/MI)

Each MOVIMOT® drive has a motor identification module (drive ID module) for easy and fast startup. The drive ID module is included in the scope of delivery of the MOVIMOT® motor or MOVIMOT® gearmotor.

When a DR.. motor/brakemotor is ordered without a MOVIMOT® inverter, a drive ID module suitable for the energy efficiency class of the motor 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.

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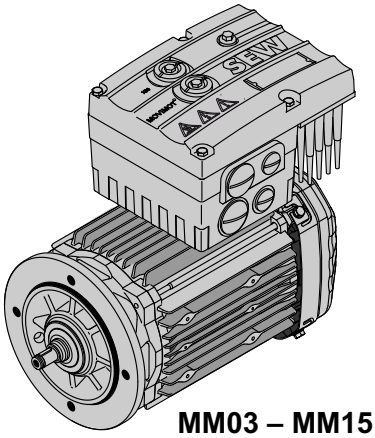
Assignment of the drive ID module

Motor			Drive ID module		
Type	Line voltage V	Line frequency Hz	Identification	Identification color	Part number
DR2S..	230/400	50	DR2S/400/50	Light gray/ white striped	28249720
DR2S..	266/460	60	DR2S/460/60[1)]	Yellow/ white striped	28249739
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 60	DRS/DRE/50/60	Violet	18214444
DRE...J..	230/400	50	DRE...J/400/50	Orange	28203816
DRU...J..	230/400	50	DRU...J/400/50	Gray	28203194
DRN..	220/380	60	DRN/380/60[1)]	Red/white striped	28240227
DRN..	230/400	50	DRN/400/50	Light blue	28222040
DRN..	266/460	60	DRN/460/60[1)]	Blue/white striped	28241819
DRS../DRN..	220 – 230/380 – 400 266/460	50 60	DRS/DRN/50/60	Green/ white striped	28241827
DRN..	220 – 230/380 – 400 266/460	50 60	DRN/50/60	Violet/ white striped	28249747
DRU..	230/400	50	DRU/400/50	Dark brown/ white striped	28291646
DRU..	266/460	60	DRU/460/60	Light brown/ white striped	28312406

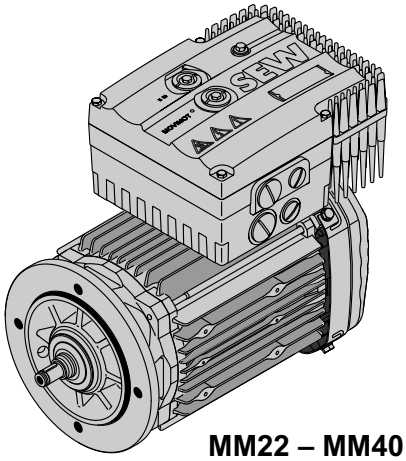
1) This drive ID module can also be combined with MOVIMOT® MM..D-233.

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7.3.2 MOVIMOT® drives with DRN.. motors



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 380 – 500 V (400 V, 50 Hz)

IEC or UL

Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DRN71M4/../MM03	0.37	2.5	1.5	1400	1.3	0.99	7.1	8.4	5	9.6	11.6
DRN80MK4/../MM05	0.55	3.65	1.5	1400	1.6	0.99	17.1	18.6	10	12.6	15.6
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	26.2
DRN90L4/../MM15	1.5	10.2	1.5	1400	3.5	0.99	67.2	71.9	20	24.6	29.2
DRN100LS4/../MM22	2.2	15.0	1.5	1400	5.0	0.99	81.4	87.4	28	29.3	35.2
DRN100L4/../MM30	3.0	20.5	1.5	1400	6.7	0.99	112	118	40	36.3	42.2
DRN112M4/../MM40	4.0	27.3	1.5	1400	7.3	0.99	178	183	55	48.2	55.4

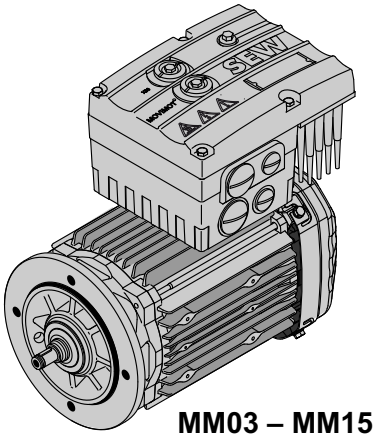
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V, 50 Hz)

IEC or UL

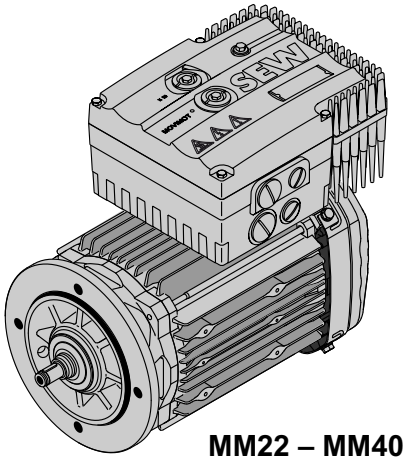
Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DRN71MS4/../MM03	0.37	1.22	1.5	2900	1.3	0.99	5.4	6.1	5	8.4	10.2
DRN71M4/../MM05	0.55	1.81	1.5	2900	1.6	0.99	7.1	8.4	5	9.6	11.6
DRN80MK4/../MM07	0.75	2.47	1.5	2900	1.9	0.99	17.1	18.6	10	12.6	15.6
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	26.2
DRN90L4/../MM22	2.2	7.25	1.5	2900	5.0	0.99	67.2	71.9	20	25.3	29.9
DRN100LS4/../MM30	3.0	9.9	1.5	2900	6.7	0.99	81.4	87.4	28	29.3	35.2
DRN100L4/../MM40	4.0	13.2	1.5	2900	7.3	0.99	112	118	40	37.2	43.1

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7.3.3 MOVIMOT® drives with DRN.. motors and increased short-term torque



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 380 – 500 V (400 V, 50 Hz)

IEC or UL

Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DRN71MS4/../MM03	0.25	1.69	2.1	1400	1.0	0.99	5.42	6.72	5	8.4	10.8
DRN71M4/../MM05	0.37	2.5	2.1	1400	1.3	0.99	7.1	8.4	5	9.6	11.6
DRN80MK4/../MM07	0.55	3.65	2.1	1400	1.6	0.99	17.1	18.6	10	12.6	15.6
DRN80M4/../MM11	0.75	5.1	2.1	1400	1.9	0.99	24.7	26.2	10	15.6	19.3
DRN90S4/../MM15	1.1	7.5	2.1	1400	2.4	0.99	54.0	58.7	20	21.6	26.2
DRN90L4/../MM22	1.5	10.2	2.1	1400	3.5	0.99	67.2	71.9	20	25.3	29.9
DRN100LS4/../MM30	2.2	15.0	2.1	1400	5.0	0.99	81.4	87.4	28	29.3	35.2
DRN100L4/../MM40	3.0	20.5	2.1	1400	6.7	0.99	112	118	40	37.2	43.1

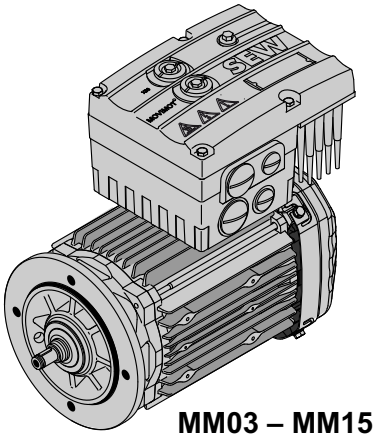
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V, 50 Hz)

IEC or UL

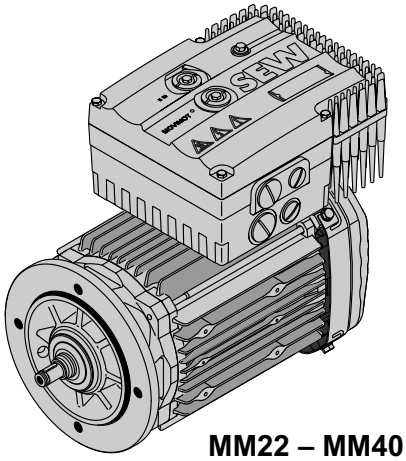
Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DRN71MS4/../MM05	0.37	1.22	2.2	2900	1.3	0.99	5.4	6.1	5	8.4	10.2
DRN71M4/../MM07	0.55	1.81	2.2	2900	1.6	0.99	7.1	8.4	5	9.6	11.6
DRN80MK4/../MM11	0.75	2.47	2.2	2900	1.9	0.99	17.1	18.6	10	12.6	15.6
DRN80M4/../MM15	1.1	3.62	2.1	2900	2.4	0.99	24.7	26.2	10	15.6	19.3
DRN90S4/../MM22	1.5	4.95	2.1	2900	3.5	0.99	54.0	58.7	20	22.3	26.9
DRN90L4/../MM30	2.2	7.25	2.1	2900	5.0	0.99	67.2	71.9	20	25.3	29.9
DRN100LS4/../MM40	3.0	9.9	2.1	2900	6.7	0.99	81.4	87.4	28	30.2	36.1

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7.3.4 MOVIMOT® drives with DRE.. motors



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 380 – 500 V (400 V)

IEC or UL

Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
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

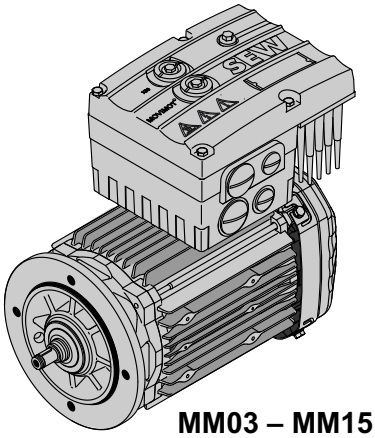
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

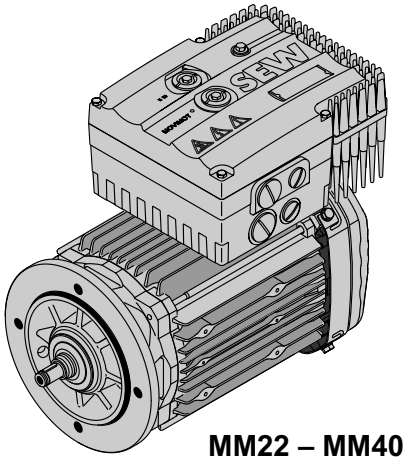
Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DRE80S4 /../MM03	0.37	1.22	1.5	2900	1.3	0.99	14.9	16.4	5	12.7	15.7
DRE80S4 /../MM05	0.55	1.81	1.5	2900	1.6	0.99	14.9	16.4	5	12.7	15.7
DRE80M4 /../MM07	0.75	2.47	1.5	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

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7.3.5 MOVIMOT® drives with DRE.. motors and increased short-term torque



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 380 – 500 V (400 V)

IEC or UL

Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
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

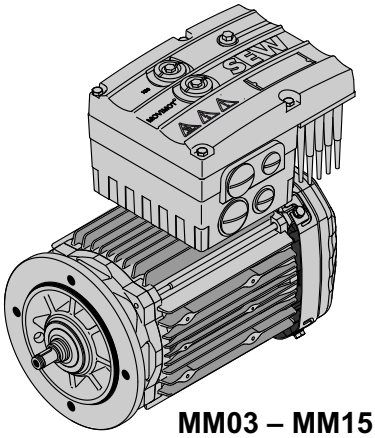
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

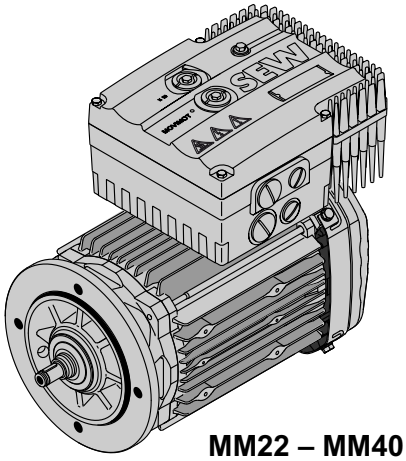
Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DRE80S4 /.../MM05	0.37	1.22	2.2	2900	1.3	0.99	14.9	16.4	5	12.7	15.7
DRE80S4 /.../MM07	0.55	1.81	2.2	2900	1.6	0.99	14.9	16.4	5	12.7	15.7
DRE80M4 /.../MM11	0.75	2.47	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

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7.3.6 MOVIMOT® drives with DRS.. motors



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 380 – 500 V (400 V)

IEC or UL

Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
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

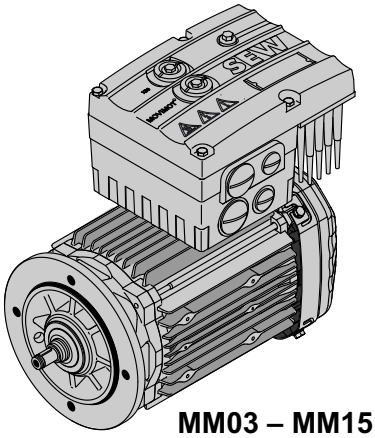
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

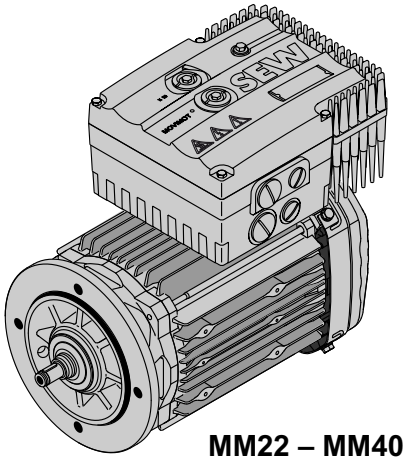
Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DRS71S4 /../MM05	0.55	1.81	2.0	2900	1.6	0.99	4.9	6.2	5	9.0	11.4
DRS71M4 /../MM07	0.75	2.47	2.0	2900	1.9	0.99	7.1	8.4	10	10.3	12.9
DRS80S4 /../MM11	1.1	3.62	2.0	2900	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

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7.3.7 MOVIMOT® drives with DRS.. motors and increased short-term torque



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 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_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
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

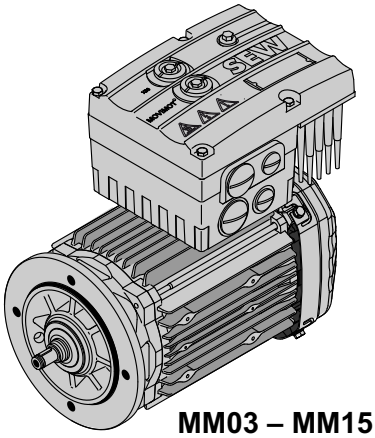
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

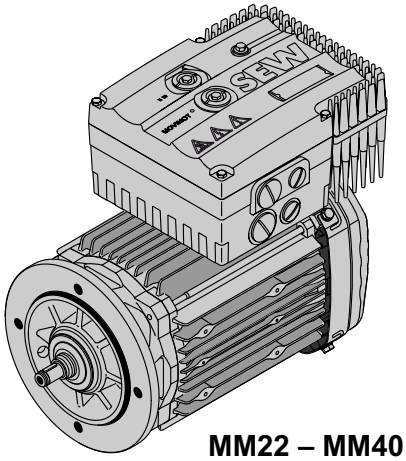
Type	P_N kW	M_N Nm	M_A/M_N f > 5 Hz	n_N min^{-1}	I_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRS71S4 /../MM07	0.55	1.81	2.4	2900	1.6	0.99	4.9	6.2	5	9.0	11.4
DRS71M4 /../MM11	0.75	2.47	2.4	2900	1.9	0.99	7.1	8.4	10	10.3	12.9
DRS80S4 /../MM15	1.1	3.62	2.4	2900	2.4	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

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7.3.8 MOVIMOT® drives with DR2S.. motors



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 380 – 500 V (400 V)

IEC or UL

Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DR2S71MS4/../MM03	0.37	2.6	1.5	1400	1.3	0.99	5.42	6.72	5	8.4	10.8
DR2S71M4/../MM05	0.55	3.85	1.5	1400	1.6	0.99	7.14	8.44	10	9.6	12.6
DR2S80MK4/../MM07	0.75	5.1	1.5	1400	1.9	0.99	17.1	18.6	10	12.6	15.6
DR2S80M4/../MM11	1.1	7.4	1.5	1400	2.4	0.99	24.7	29.2	14	15.6	19.6

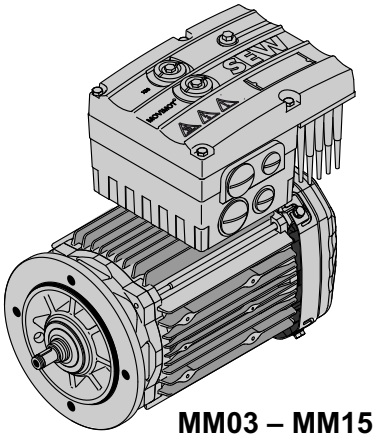
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

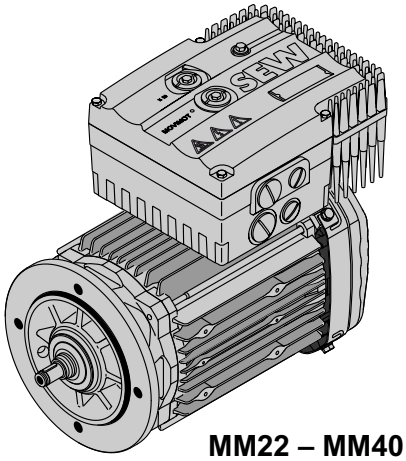
Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DR2S71MS4/../MM05	0.55	1.81	2	2900	1.6	0.99	5.42	6.72	5	8.4	10.8
DR2S71M4/../MM07	0.75	2.47	2	2900	1.9	0.99	7.14	8.44	10	9.6	12.6
DR2S80MK4/../MM11	1.1	3.62	2	2900	2.4	0.99	17.1	18.6	10	12.6	15.6
DR2S80M4/../MM15	1.5	4.95	1.6	2900	3.5	0.99	24.7	29.2	14	15.6	19.6

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7.3.9 MOVIMOT® drives with DR2S.. motors and increased short-term torque



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 380 – 500 V (400 V)

IEC or UL

Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DR2S71MS4/../MM05	0.37	2.6	2.1	1400	1.3	0.99	5.42	6.72	5	8.4	10.8
DR2S71M4/../MM07	0.55	3.85	2.1	1400	1.6	0.99	7.14	8.44	10	9.6	12.6
DR2S80MK4/../MM11	0.75	5.1	2.1	1400	1.9	0.99	17.1	18.6	10	12.6	15.6
DR2S80M4/../MM15	1.1	7.4	2.1	1400	2.4	0.99	24.7	29.2	14	15.6	19.6

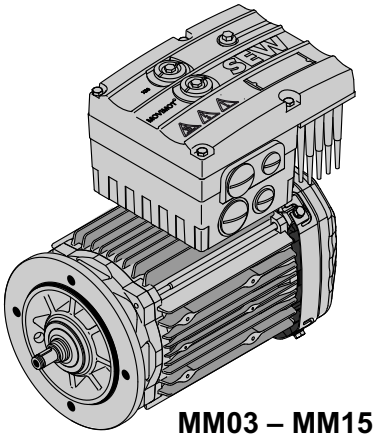
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

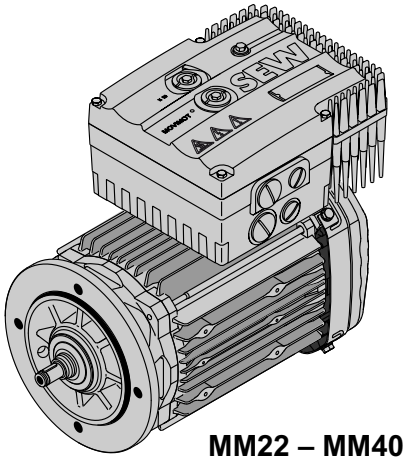
Type	P_N	M_N	M_A/M_N	n_N	I_N	cosφ	J_{Mot}	J_{BMot}	M_B	m_{Mot}	m_{BMot}
	kW	Nm	f > 5 Hz	min^{-1}	A		10^{-4} kgm^2	10^{-4} kgm^2	Nm	kg	kg
DR2S71MS4/../MM07	0.55	1.81	2.4	2900	1.6	0.99	5.42	6.72	5	8.4	10.8
DR2S71M4/../MM011	0.75	2.47	2.4	2900	1.9	0.99	7.14	8.44	10	9.6	12.6
DR2S80MK4/../MM15	1.1	3.62	2.4	2900	2.4	0.99	17.1	18.6	10	12.6	15.6
DR2S80M4/../MM22	1.5	4.95	2.2	2900	3.5	0.99	24.7	29.2	14	22.3	26.3

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7.3.10 MOVIMOT® drives with DRU.. motors (400 V)



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 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_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/.. /../MM07	0.75	5.1	1.5	1400	1.9	0.99	54	55.6	10	21.6	24.6
DRU100LSR4/../MM11	1.1	7.5	1.5	1400	2.4	0.99	81.4	86.1	20	28.6	33.6
DRU100LS4/../MM15	1.5	10.2	1.5	1400	3.5	0.99	81.4	86.1	20	28.6	33.6
DRU100L4/../MM22	2.2	15.0	1.5	1400	5.0	0.99	112	118	28	36.3	42.2
DRU112M4/../MM30	3.0	20.5	1.5	1400	6.7	0.99	178	183	40	47.3	54.3
DRU132S4/../MM40	4.0	27.3	1.5	1400	7.3	0.99	241	246	55	59.2	67.2

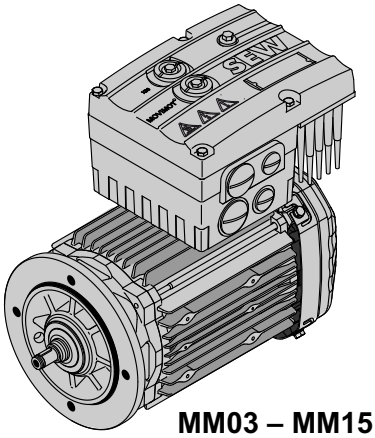
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

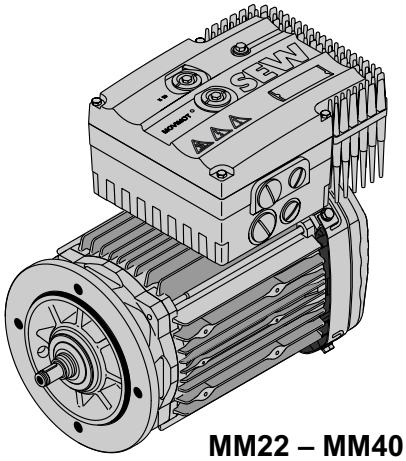
Type	P_N kW	M_N Nm	M_A/M_N f > 5 Hz	n_N min^{-1}	I_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/.. /../MM11	1.1	3.6	1.5	2900	2.4	0.99	54	55.6	10	21.6	24.6
DRU100LSR4/../MM15	1.5	4.9	1.5	2900	3.5	0.99	81.4	86.1	20	28.6	33.6
DRU100LS4/../MM22	2.2	7.2	1.5	2900	5.0	0.99	81.4	86.1	20	28.6	33.6
DRU100L4/../MM30	3.0	9.9	1.5	2900	6.7	0.99	112	118	28	36.3	42.2
DRU112M4/../MM40	4.0	13.2	1.5	2900	7.3	0.99	178	183	40	47.3	54.3

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7.3.11 MOVIMOT® drives with DRU.. motors and increased short-term torque (400 V)



MM03 – MM15



MM22 – MM40

280 – 1400 min^{-1} ⅄ 3 × 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_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/../MM11	0.75	5.1	2.1	1400	1.9	0.99	54	55.6	10	21.6	24.6
DRU100LSR4/../MM15	1.1	7.5	2.1	1400	2.4	0.99	81.4	86.1	20	28.6	33.6
DRU100LS4/../MM22	1.5	10.2	2.1	1400	3.5	0.99	81.4	86.1	20	28.6	33.6
DRU100L4/../MM30	2.2	15.0	2.1	1400	5.0	0.99	112	118	28	36.3	42.2
DRU112M4/../MM40	3.0	20.5	2.1	1400	6.7	0.99	178	183	40	47.3	54.3

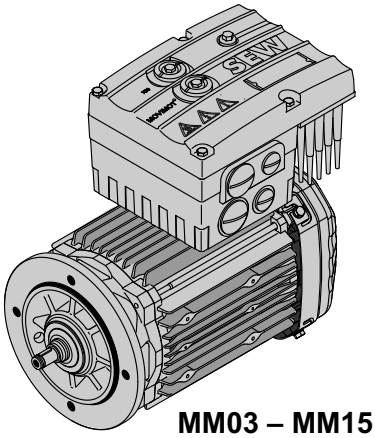
290 – 2900 min^{-1} △ 3 × 380 – 500 V (400 V)

IEC or UL

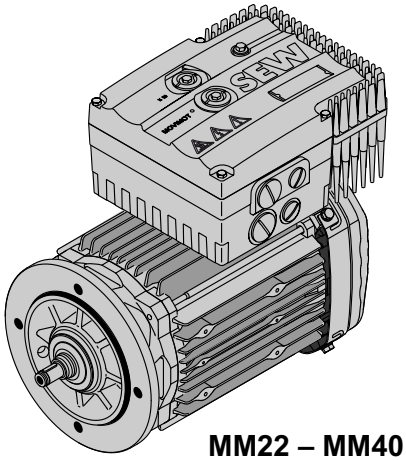
Type	P_N kW	M_N Nm	M_A/M_N f > 5 Hz	n_N min^{-1}	I_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/../MM15	1.1	3.6	2.1	2900	2.4	0.99	54	55.6	10	21.6	24.6
DRU100LSR4/../MM22	1.5	4.9	2.1	2900	3.5	0.99	81.4	86.1	20	28.6	33.6
DRU100LS4/../MM30	2.2	7.2	2.1	2900	5.0	0.99	81.4	86.1	20	28.6	33.6
DRU100L4/../MM40	3.0	9.9	2.1	2900	6.7	0.99	112	118	28	36.3	42.2

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7.3.12 MOVIMOT® drives with DRU.. motors (460 V)



MM03 – MM15



MM22 – MM40

280 – 1700 min^{-1} ⅄ 3 × 380 – 500 V (460 V)

UL

Type	P_N kW	M_N Nm	M_A/M_N f > 5 Hz	n_N min^{-1}	I_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/../MM07	0.75	4.2	1.5	1700	1.7	0.99	54	55.6	10	21.6	24.6
DRU90L4/../MM11	1.1	6.2	1.5	1700	2.1	0.99	67.2	71.9	14	24.6	28.6
DRU100LS4/../MM15	1.5	8.4	1.5	1700	3.0	0.99	81.4	86.1	20	28.6	33.6
DRU112MR4/../MM22	2.2	12.4	1.5	1700	4.3	0.99	178	183	28	47.3	54.3
DRU112M4/../MM30	3.0	16.9	1.5	1700	5.8	0.99	178	183	40	47.3	54.3
DRU132S4/../MM40	4.0	22.5	1.5	1700	6.9	0.99	241	246	55	59.2	67.2

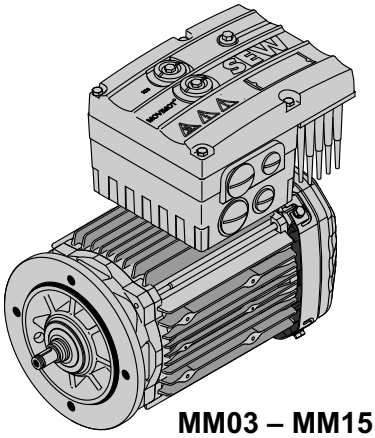
290 – 2900 min^{-1} △ 3 × 380 – 500 V (460 V)

UL

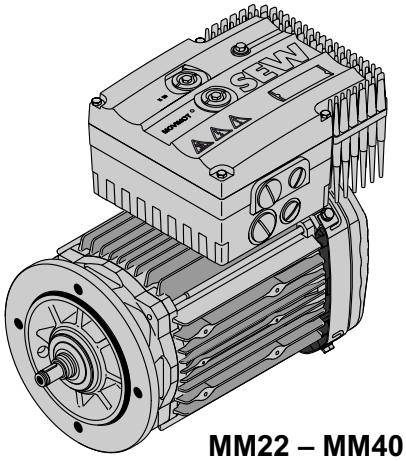
Type	P_N kW	M_N Nm	M_A/M_N f > 5 Hz	n_N min^{-1}	I_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/../MM11	1.1	3.6	1.5	2900	2.1	0.99	54	55.6	10	21.6	24.6
DRU90L4/../MM15	1.5	4.9	1.5	2900	3.0	0.99	67.2	71.9	14	24.6	28.6
DRU100LS4/../MM22	2.2	7.2	1.5	2900	4.3	0.99	81.4	86.1	20	28.6	33.6
DRU112MR4/../MM30	3.0	9.9	1.5	2900	5.8	0.99	178	183	28	47.3	54.3
DRU112M4/../MM40	4.0	13.2	1.5	2900	6.9	0.99	178	183	40	47.3	54.3

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7.3.13 MOVIMOT® drives with DRU.. motors and increased short-term torque (460 V)



MM03 – MM15



MM22 – MM40

280 – 1700 min^{-1} ⅄ 3 × 380 – 500 V (460 V)

UL

Type	P_N kW	M_N Nm	M_A/M_N f > 5 Hz	n_N min^{-1}	I_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/../MM11	0.75	4.2	2.8	1700	1.7	0.99	54	55.6	10	21.6	24.6
DRU90L4/../MM15	1.1	6.2	2.8	1700	2.1	0.99	67.2	71.9	14	24.6	28.6
DRU100LS4/../MM22	1.5	8.4	2.8	1700	3.0	0.99	81.4	86.1	20	28.6	33.6
DRU112MR4/../MM30	2.2	12.4	2.8	1700	4.3	0.99	178	183	28	47.3	54.3
DRU112M4/../MM40	3.0	16.9	2.8	1700	5.8	0.99	178	183	40	47.3	54.3

290 – 2900 min^{-1} △ 3 × 380 – 500 V (460 V)

UL

Type	P_N kW	M_N Nm	M_A/M_N f > 5 Hz	n_N min^{-1}	I_N A	cosφ	J_{Mot} 10^{-4} kgm^2	J_{BMot} 10^{-4} kgm^2	M_B Nm	m_{Mot} kg	m_{BMot} kg
DRU90S4/../MM15	1.1	3.6	3.0	2900	2.1	0.99	54	55.6	10	21.6	24.6
DRU90L4/../MM22	1.5	4.9	3.0	2900	3.0	0.99	67.2	71.9	14	24.6	28.6
DRU100LS4/../MM30	2.2	7.2	3.0	2900	4.3	0.99	81.4	86.1	20	28.6	33.6
DRU112MR4/../MM40	3.0	9.9	3.0	2900	5.8	0.99	178	183	28	47.3	54.3

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7.4 Functional safety

7.4.1 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.

7.4.2 Permitted SafetyDRIVE designs

Only the following combinations with MOVIMOT® are permitted for safety-relevant applications:

Permitted designs	MOVIMOT® type designation
MOVIMOT® with binary control (control via terminals)	D../MM.. – SafetyDRIVE MM..D-503-00 – SafetyDRIVE
MOVIMOT® with AS-Interface option MLK32A	
MOVIMOT® with MBG11A option	
MOVIMOT® with MWA 21A option	
MOVIMOT® with MBK11A or MBK12A option	
MOVIMOT® with BEM option	
MOVIMOT® with URM option	
MOVIMOT® with MNF21A option	
MOVIMOT® and MOVIFIT® MC with FS logo and externally switched 24 V supply (STO)	
MOVIMOT® and MOVIFIT® MC with FS logo and PROFIsafe option S11	
MOVIMOT® and MOVIFIT® MC with FS logo and safety option S12	
MOVIMOT® with field distributors Z.6, Z.7, Z.8 or Z.9	

For information on the safety function and the safety-related requirements, refer to the "MOVIMOT® MM..D – Functional Safety" manual.

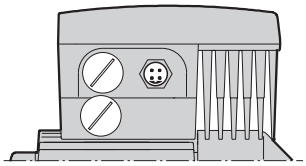
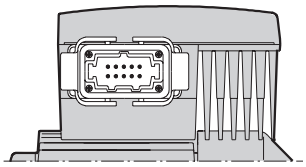
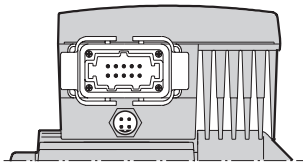
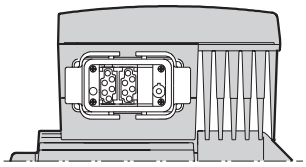
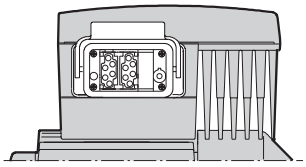
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7.5 Connection technology

7.5.1 Overview of MOVIMOT® standard design connection technology

MOVIMOT® MM..D is supplied without plug connector if not specified otherwise in the order.

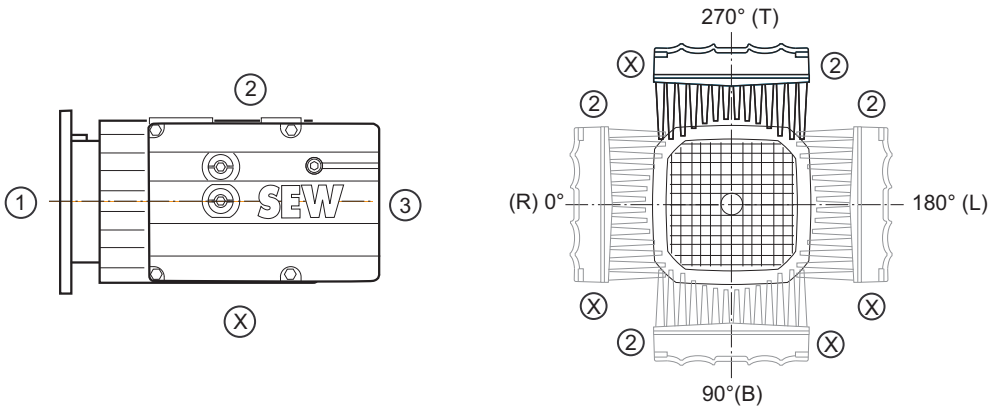
The following table shows the available plug connector variants:

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)

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Possible plug connector positions (MOVIMOT® standard design)

The following positions are possible for plug connectors:



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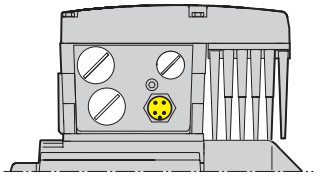
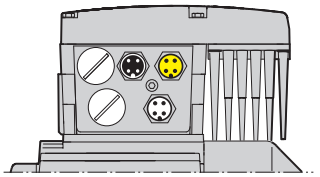
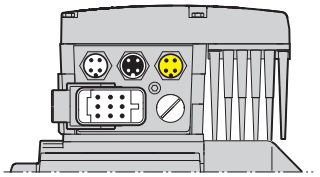
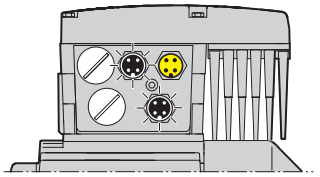
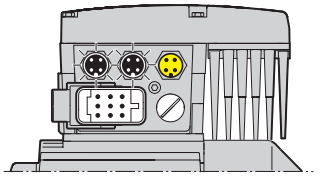
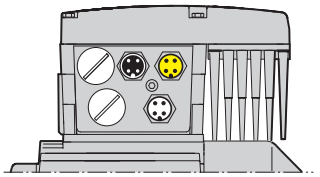
Plug connector	Possible positions
AVT1	X (standard)
	2
ASA3	X (standard)
	2
ASA3/AVT1	ASA3 = X (standard) + AVT1 = X (standard)
	ASA3 = 2 + AVT1 = 2
AMA6	X (standard)
AMD6	2

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7.5.2 Overview of connection technology MOVIMOT® with integrated AS-Interface

MOVIMOT® MM..D with integrated AS-Interface is supplied with the AVSK plug connector if not specified otherwise in the order.

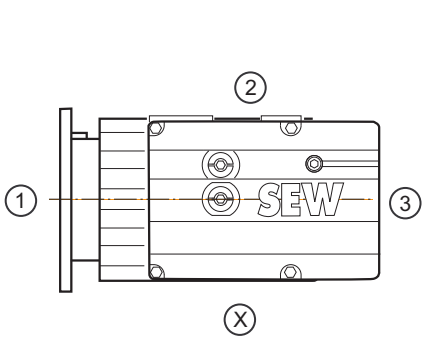
The following table shows the available plug connector designs:

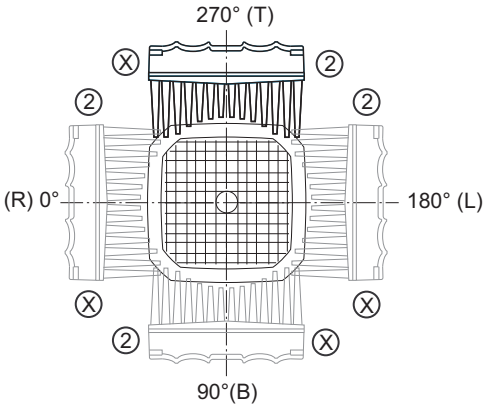
Order designation	Function	Manufacturer's designation
MM../AVSK 	• AS-Interface	1 × round plug connector M12 × 1
MM../AZSK 	• AS-Interface • AUX PWR • Sensor port	3 × round plug connector M12 × 1
MM../AND3/AZSK 	• Power • AS-Interface • AUX PWR • Sensor port	Harting Han® Q8/0 pin insert (built-on housing with 1 clip) + 3 × round plug connector M12 × 1
MM../AZZK 	• AS-Interface/ AUX PWR • Sensor port • Sensor port	3 × round plug connector M12 × 1
MM../AND3/AZZK 	• Power • AS-Interface/ AUX PWR • Sensor port • Sensor port	Harting Han® Q8/0 pin insert (built-on housing with 1 clip) + 3 × round plug connector M12 × 1
MM../AZFK 	• AUX PWR • AS-Interface • Sensor port	3 × M12 plug connector

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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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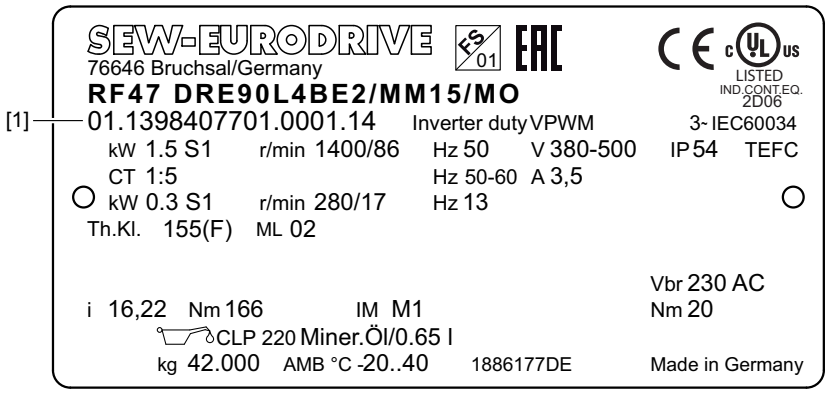
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7.6 Sample type designation

7.6.1 Standard design

Nameplate

The following figure gives an example of a MOVIMOT® drive nameplate. The nameplate is attached to the motor.



18014399029659147

[1] Serial 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**
DRN	**Motor series** (DRN.., DR2S..)
90L	**Motor size**
J	**Rotor** C = copper rotor J = LSPM rotor
4	**Number of motor poles**
BE2	**Additional motor design (brake)**
/	
MM15	**MOVIMOT® inverter**
/	
MO	**Additional feature: inverter** [1]

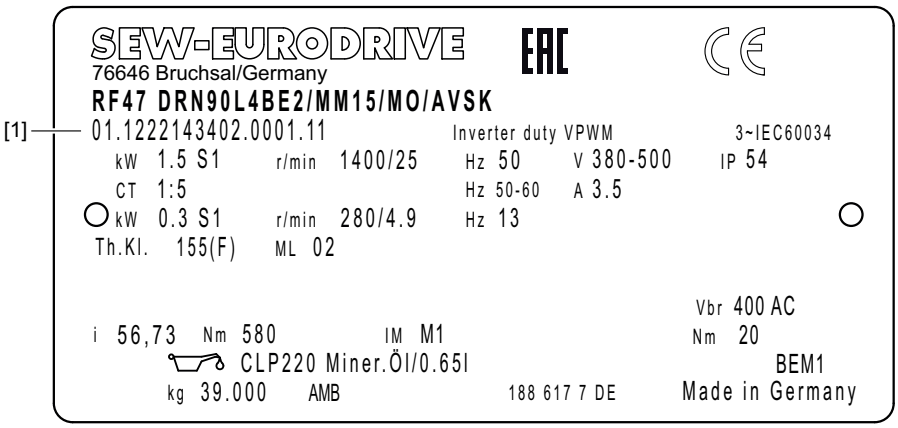
1) The nameplate only displays options installed at the factory.

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7.6.2 MOVIMOT® with integrated AS-interface

Nameplate

The following figure gives an example of a MOVIMOT® drive nameplate. The nameplate is attached to the motor.



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[1] Serial number

Type designation

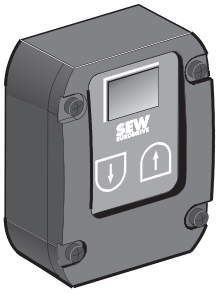
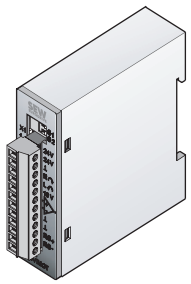
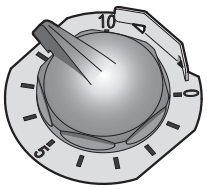
The following table shows an example of the type designation of the MOVIMOT® drive **RF47 DRE90L4BE2 /MM15/MO/AVSK**:

RF	**Gear unit series**
47	**Gear unit size**
DRN	**Motor series** (DRN.., DR2S..)
90L	**Motor size**
J	**Rotor** C = copper rotor J = LSPM rotor
4	**Number of motor poles**
BE2	**Additional motor feature (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.

7.7 Options

The following tables show the options for MOVIMOT® MM..D.

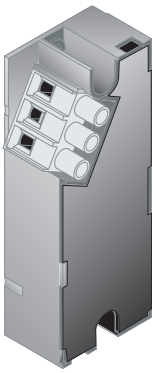
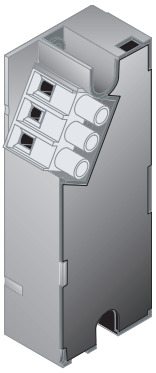
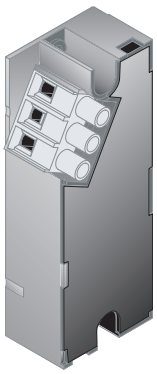
Option	Image	Description
DC 24 V supply **MLU11A** (input voltage AC 380 – 500 V) Part number: 08233837 **MLU21A** (input voltage AC 200 – 240 V) Part number: 0823387X		The MLU.1A option is mounted with a MOVIMOT® cable gland. The option provides the DC 24 V voltage supply for the MOVIMOT® inverter, 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 IP54.

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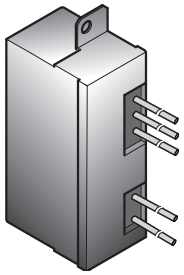
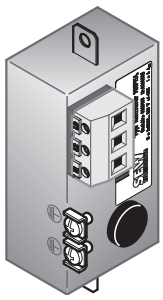
7.7.1 Options integrated in connection box

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® terminal box.
- The MLU13A and MNF21A options can only be ordered in combination with the modular terminal box.
- The modular terminal box is assigned depending on the ordered option and the MOVIMOT® size.

Option	Image	Description
BEM brake control Part number: 08296111		The BEM brake rectifier serves to control the brake of the MOVIMOT® drive. 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 a 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).**

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Option	Image	Description
Internal DC 24 V voltage 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 in accordance with EN 61800-3 with respect to interference emission. The option requires the modular terminal box with increased dimensions. Note that the height of the terminal box is higher for MOVIMOT® MM03 to MM15 by **18 mm**.

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7.7.2 Factory-installed external options

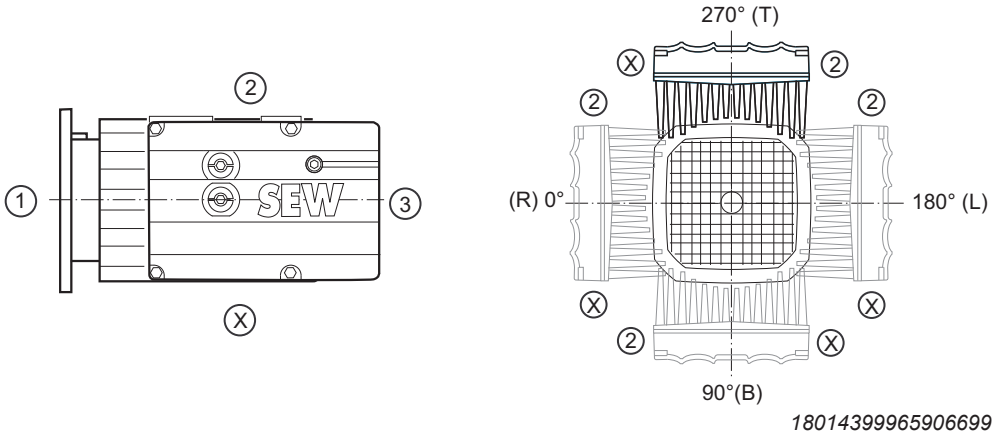
On request, the following options can be installed at the connection box at the factory (mounted, wired, and ready for operation):

- Local DC 24 V supply (MLU.1A)
- Local speed control module with DC 24 V supply (MLG.1A)
- PROFIBUS fieldbus interface (MFP../MQP..)
- PROFINET IO fieldbus interface (MFE52..)
- EtherNet/IP™ fieldbus interface (MFE62..)
- EtherCAT® fieldbus interface (MFE72..)
- Hybrid cable for connection between MF.../Z.3. or MF../.6. field distributor and MOVIMOT® (1–5 m)

Important order information

The external options can be installed in the following positions as standard:

- Position "2"
- Position "X" (normal)

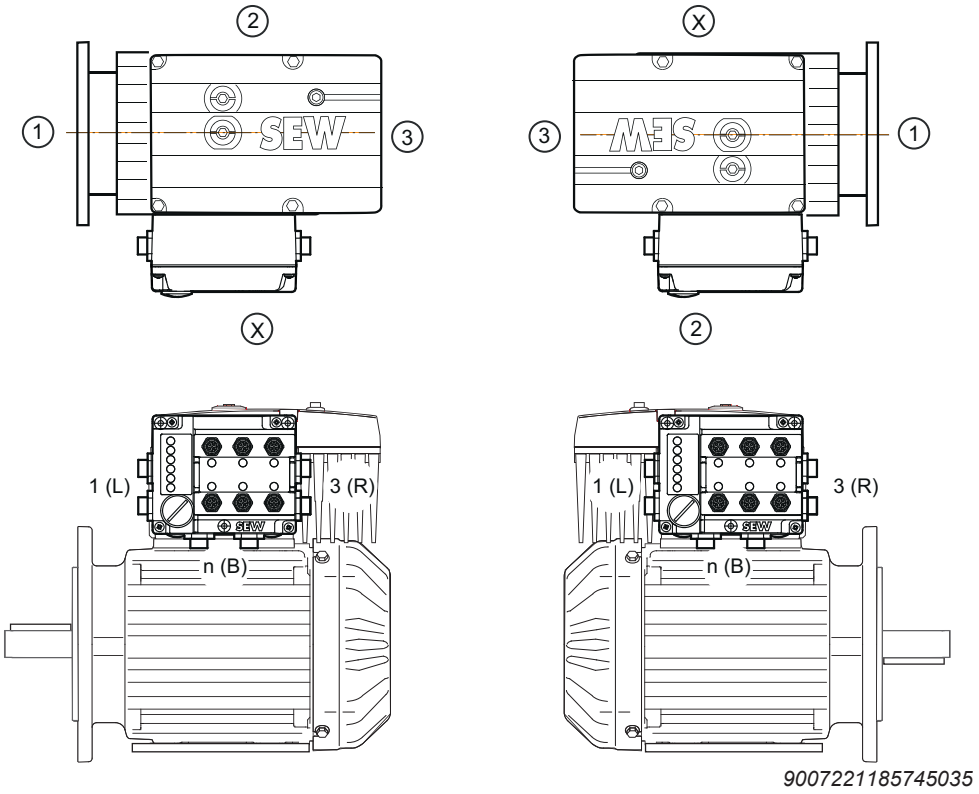


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Possible plug connector locations on the fieldbus interface

It is possible to install the fieldbus interface in location "X" or location "2" on the MOVIMOT® connection box.

The plug connectors on the fieldbus interface are available in positions (L), (B), or (R) in accordance with the following figure:



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7.8 Braking resistors

7.8.1 Assignment of internal braking resistors

The following table shows the assignments of internal braking resistors to MOVIMOT®.

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 × 8 included in the delivery.

7.8.2 Assignment of external braking resistors

The following table shows the assignments of external braking resistors to MOVIMOT®.

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	–

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7.9 Brake coil assignment

The following table shows the assignment of the brake coil to the respective motor. For the regenerative current-carrying capacity of the brake coil, refer to chapter "4Q operation with motors with mechanical brake" (→ 🗎 458).

Motor	Brake coil assignment	
	Standard brake	Optional brake
DR63L4	BR03	–
DR2S63M4	BE03	BE03
DRN71MS4	BE03	BE05
DR2S71MS4 DRS71S4 DRE80S4 DRN71M4	BE05	BE1
DR2S71M4 DR2S80MK4 DRS71M4 DRS80S4 DRE80M4 DRN80M4 DRN80MK4	BE1	BE05
DRS80M4 DRE90M4 DRN90S4	BE2	BE1
DR2S80M4 DRS90M4 DRE90L4 DRN90L4	BE2	BE1
DRS90L4 DRE100M4 DRE100L4 DRN100LS4	BE5	BE2
DRS100M4 DRS100L4 DRS100LC4 DRE100LC4 DRN100L4	BE5	BE2
DRE132S4 DRN112M4	BE5	BE11

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8 MOVIMOT® mounting close to the motor (remote)

8.1 Description

The following figure shows the MOVIMOT® design for mounting close to the motor (left: size MM03 to MM15, right: size MM22 to MM40):



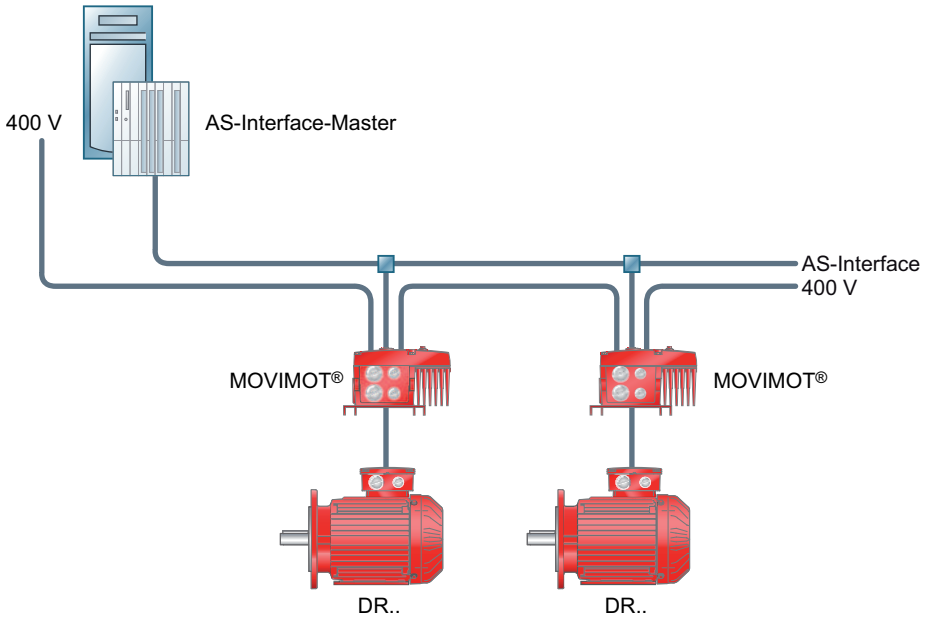
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- The P2.A option is used to mount the MOVIMOT® inverter in close proximity to the motor (i.e. separate from the motor).
- The inverter is connected to the "assigned motor" (→ 🗎 393) using a prefabricated "hybrid cable" (→ 🗎 397).
- MOVIMOT® with option P2.A is with IP65 degree of protection.

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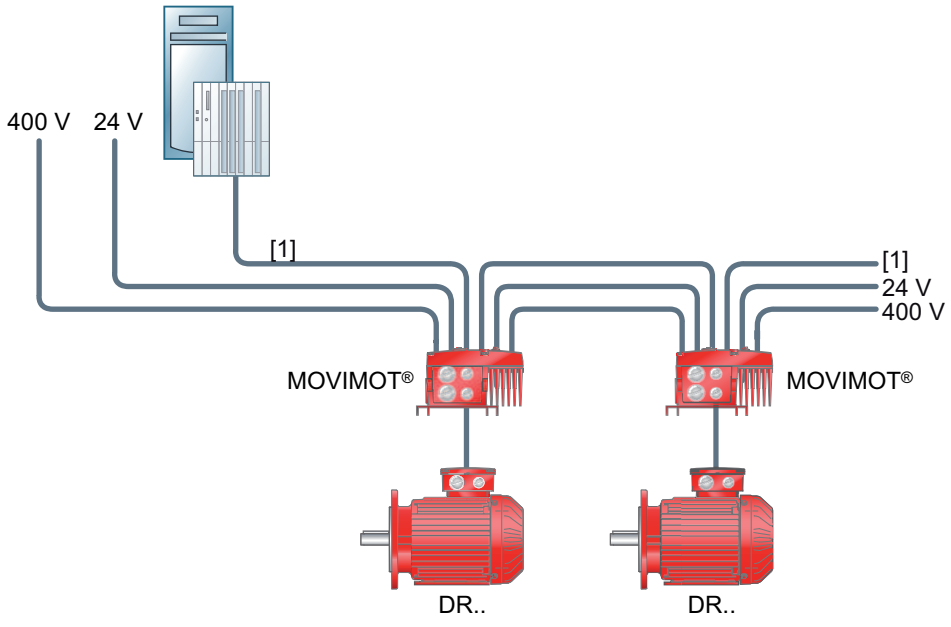
8.2 Installation topology of MOVIMOT®, mounting close to the motor

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:

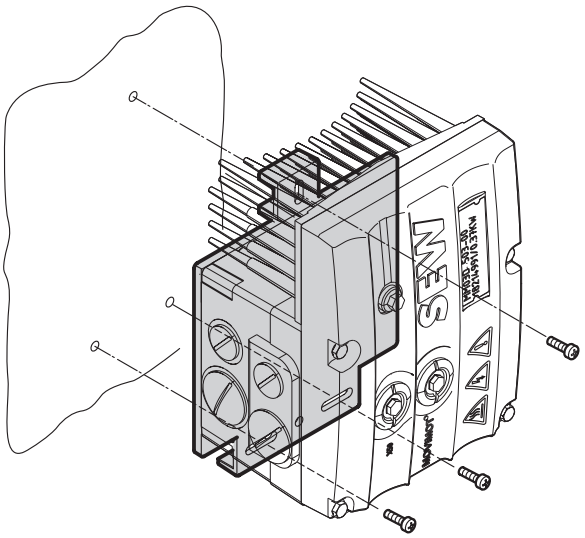


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[1] Control: Binary (+ RS485)

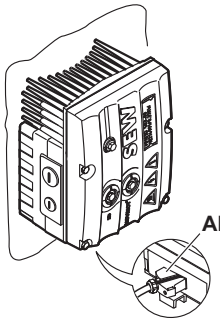
8.3 Available variants

The following figure shows an example of the P21A option for MOVIMOT® sizes MM03 to MM15:



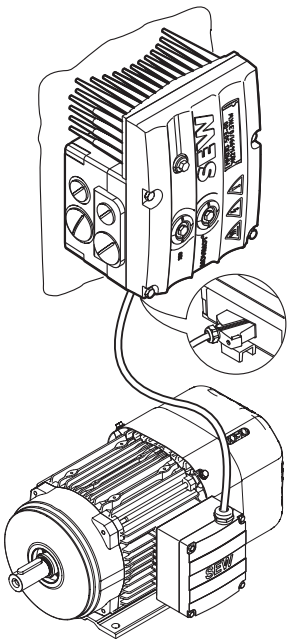
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The following designs are available:

Connection to motor	MOVIMOT® size	1)	MOVIMOT® standard design	MOVIMOT® with integrated AS-interface
APG4 	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

8.4 Type designation of MOVIMOT® MM..D, mounting close to the motor



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8.4.1 Type designation

The following table shows the type designation for the MOVIMOT® inverter **MM15D-503-00/0/P21/RO1A/APG4** with mounting close to the motor:

MM15D-503-00	MOVIMOT® inverter
/	
0	**Connection type** 0 = ⅄ 1 = △
/	
P21A	**Adapter for mounting close to the motor**
/	
RO1A	**Connection box design**
/	
APG4	**Plug connector** for connection to motor

8.4.2 Ordering of an integrated braking resistor

MM22D-503-00/0/**BW.**/P22A/RO2A/APG4

→ 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" (→ 🗎 457).

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8.5 Motor assignment

8.5.1 Motor requirements

The following table lists the basic requirements and restrictions for assigned motors. Observe these specifications without fail when ordering the drive assigned to MOVIMOT® drive (design for installation close to the motor):

<table>
<tr><th>Characteristics</th><th colspan="3">Requirements for the assigned AC motor</th></tr>
<tr><td>Permitted motors</td><td colspan="3">Only motors listed in chapters
"Motor assignment 1400 min^{-1}" (→ 🗎 393) and
"Motor assignment 2900 min^{-1}" (→ 🗎 395) are approved.</td></tr>
<tr><td rowspan="6">Permitted nominal voltage</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Nominal voltage V</td><td>Line frequency Hz</td></tr>
<tr><td>DR2S..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRS../DRE..</td><td>230/400</td><td>50</td></tr>
<tr><td>DRN..</td><td>230/400</td><td>50</td></tr>
<tr><td rowspan="11">Permitted brakes</td><td colspan="3">Depending on motor series:</td></tr>
<tr><td>Motor type</td><td>Standard brake type</td><td>Optional brake type</td></tr>
<tr><td>DR63L4</td><td>BR03</td><td>–</td></tr>
<tr><td>DR2S63M4</td><td>BE03</td><td>BE03</td></tr>
<tr><td>DRN71MS4</td><td>BE03</td><td>BE05</td></tr>
<tr><td>DR2S71MS4</td><td>BE05</td><td>BE1</td></tr>
<tr><td>DRS71S4
DRE80S4
DRN71M4</td><td>BE05</td><td>BE1</td></tr>
<tr><td>DR2S71M4
DR2S80MK4
DRS71M4
DRS80S4
DRE80M4
DRN80M4
DRN80MK4</td><td>BE1</td><td>BE05</td></tr>
<tr><td>DR2S80M4
DRS80M4
DRE90M4
DRN90S4</td><td>BE2</td><td>BE1</td></tr>
</table>

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Characteristics	Requirements for the assigned AC motor		
	DRS90M4 DRE90L4 DRN90L4	BE2	BE1
	DRS90L4 DRE100M4 DRE100L4 DRN100LS4	BE5	BE2
	DRS100M4 DRS100L4 DRS100LC4 DRE100LC4 DRN100L4	BE5	BE2
	DRE132S4 DRN112M4	BE5	BE11
Preferred brake voltage	MM..D-503, size 1 (MM03.. – MM15..)		230 V
	MM..D-503, size 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" (→ 🗎 397) for additional information.		
Permitted motor protection	SEW-EURODRIVE recommends that you 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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8.5.2 Motor assignment 1400 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) 人	MOVIMOT® with option P.2A
0.25	DR63L4/TH DR**2S**63M4/TH DR**E**80S4/TH. DR**N**71MS4/TH.	MM03D-503-00/**0**/**BW1**/P21A..[1)]
	DR63L4/**BR..**/TH. DR**2S**63M4/**BE..**/TH. DR**E**80S4/**BE.**/TH. DR**N**71MS4/**BE.**/TH.	MM03D-503-00/**0**/P21A/..[1)]
0.37	DR**2S**71MS4/TH. DR**S**71S4/TH. DR**E**80S4/TH. DR**N**71M4/TH.	MM03D-503-00/**0**/**BW1**/P21A.. MM05D-503-00/**0**/**BW1**/P21A..[1)]
	DR**2S**71MS4/**BE.**/TH. DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MM03D-503-00/**0**/P21A.. MM05D-503-00/**0**/P21A..[1)]
0.55	DR**2S**71M4/TH. DR**S**71M4/TH. DR**E**80M4/TH. DR**N**80MK4/TH.	MM05D-503-00/**0**/**BW1**/P21A.. MM07D-503-00/**0**/**BW1**/P21A..[1)]
	DR**2S**71M4/**BE.**/TH. DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MM05D-503-00/**0**/P21A.. MM07D-503-00/**0**/P21A..[1)]
0.75	DR**2S**80MK4/TH. DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MM07D-503-00/**0**/**BW1**/P21A.. MM11D-503-00/**0**/**BW1**/P21A..[1)]
	DR**2S**80MK4/**BE.**/TH. DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MM07D-503-00/**0**/P21A.. MM11D-503-00/**0**/P21A..[1)]

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Power kW	Motor (230/400 V, 50 Hz)	MOVIMOT® with option P.2A
1.1	DR**2S**80M4/TH. DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MM11D-503-00/**0**/**BW1**/P21A.. MM15D-503-00/**0**/**BW1**/P21A..[1]
	DR**2S**80M4/**BE.**/TH. DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MM11D-503-00/**0**/P21A.. MM15D-503-00/**0**/P21A..[1]
1.5	DR**S**90M4/TH. DR**E**90L4/TH. DR**N**90L4/TH.	MM15D-503-00/**0**/**BW1**/P21A.. MM22D-503-00/**0**/**BW2**/P22A..[1]
	DR**S**90M4/**BE.**/TH. DR**E**90L4/**BE.**/TH. DR**N**90L4/**BE.**/TH.	MM15D-503-00/**0**/P21A.. MM22D-503-00/**0**/P22A..[1]
2.2	DR**S**90L4/TH. DR**E**100M4/TH. DR**N**100LS4/TH.	MM22D-503-00/**0**/**BW2**/P22A.. MM30D-503-00/**0**/**BW2**/P22A..[1]
	DR**S**90L4/**BE.**/TH. DR**E**100M4/**BE.**/TH. DR**N**100LS4/**BE.**/TH.	MM22D-503-00/**0**/P22A.. MM30D-503-00/**0**/P22A..[1]
3.0	DR**S**100M4/TH. DR**E**100LC4/TH. DR**N**100L4/TH.	MM30D-503-00/**0**/**BW2**/P22A.. MM40D-503-00/**0**/**BW2**/P22A..[1]
	DR**S**100M4/**BE.**/TH. DR**E**100LC4/**BE.**/TH. DR**N**100L4/**BE.**/TH.	MM30D-503-00/**0**/P22A.. MM40D-503-00/**0**/P22A..[1]
4.0	DR**S**100LC4/TH. DR**E**132S4/TH. DR**N**112M4/TH.	MM40D-503-00/**0**/**BW2**/P22A..
	DR**E**100LC4/**BE.**/TH. DR**E**132S4/**BE.**/TH. DR**N**112M4/**BE.**/TH.	MM40D-503-00/**0**/P22A..

1) Combination with increased short-term torque

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8.5.3 Motor assignment 2900 min^{-1}

Power kW	Motor (230/400 V, 50 Hz) ▵	MOVIMOT® with option P2A
0.37	DR63L4/TH	MM03D-503-00/**1**/**BW1**/P21A..
	DR**2S**63M4/TH DR**E**80S4/TH DR**N**71MS4/TH	MM05D-503-00/**1**/**BW1**/P21A..[1)]
	DR63L4/**BR..**/TH.	MM03D-503-00/**1**/P21A..
	DR**2S**63M4/**BE..**/TH. DR**E**80S4/**BE..**/TH. DR**N**71MS4/**BE..**/TH.	MM05D-503-00/**1**/P21A..[1)]
0.55	DR**2S**71MS4/TH.	MM05D-503-00/**1**/**BW1**/P21A..
	DR**S**71S4/TH. DR**E**80S4/TH. DR**N**71M4/TH.	MM07D-503-00/**1**/**BW1**/P21A..[1)]
	DR**2S**71MS4/**BE.**/TH.	MM05D-503-00/**1**/P21A..
	DR**S**71S4/**BE.**/TH. DR**E**80S4/**BE.**/TH. DR**N**71M4/**BE.**/TH.	MM07D-503-00/**1**/P21A..[1)]
0.75	DR**2S**71M4/TH.	MM07D-503-00/**1**/**BW1**/P21A..
	DR**S**71M4/TH. DR**E**80M4/TH. DR**N**80MK4/TH.	MM11D-503-00/**1**/**BW1**/P21A..[1)]
	DR**2S**71M4/**BE.**/TH.	MM07D-503-00/**1**/P21A..
	DR**S**71M4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80MK4/**BE.**/TH.	MM11D-503-00/**1**/P21A..[1)]
1.1	DR**2S**80MK4/TH.	MM11D-503-00/**1**/**BW1**/P21A..
	DR**S**80S4/TH. DR**E**80M4/TH. DR**N**80M4/TH.	MM15D-503-00/**1**/**BW1**/P21A..[1)]
	DR**2S**80MK4/**BE.**/TH.	MM11D-503-00/**1**/P21A..
	DR**S**80S4/**BE.**/TH. DR**E**80M4/**BE.**/TH. DR**N**80M4/**BE.**/TH.	MM15D-503-00/**1**/P21A..[1)]

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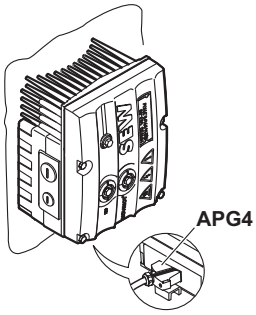
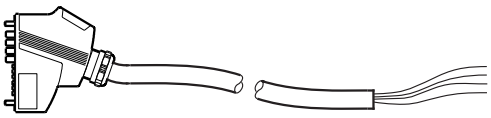
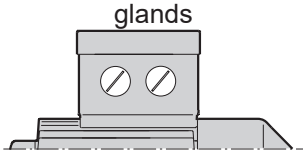
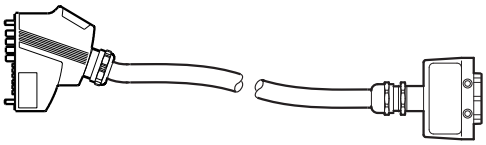
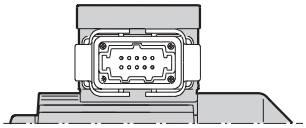
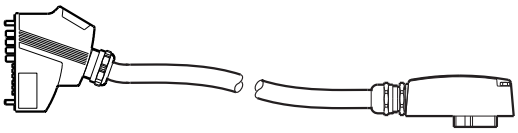
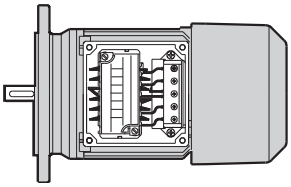
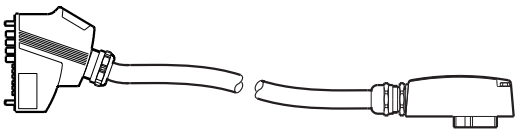
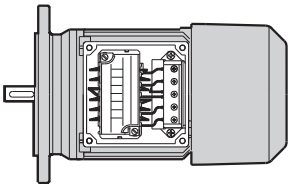
Power kW	Motor (230/400 V, 50 Hz) △	MOVIMOT® with option P2A
1.5	DR**2S**80M4/**BE.**/TH. DR**S**80M4/TH. DR**E**90M4/TH. DR**N**90S4/TH.	MM15D-503-00/**1**/**BW1**/P21A..
		MM22D-503-00/**1**/**BW2**/P22A..[1)]
	DR**2S**80M4/**BE.**/TH. DR**S**80M4/**BE.**/TH. DR**E**90M4/**BE.**/TH. DR**N**90S4/**BE.**/TH.	MM15D-503-00/**1**/P21A..
		MM22D-503-00/**1**/P22A..[1)]
2.2	DR**S**90M4/TH. DR**E**90L4/TH. DR**N**90L4/TH.	MM22D-503-00/**1**/**BW2**/P22A..
		MM30D-503-00/**1**/**BW2**/P22A..[1)]
	DR**S**90M4/**BE.**/TH. DR**E**90L4/**BE.**/TH. DR**N**90L4/**BE.**/TH.	MM22D-503-00/**1**/P22A..
		MM30D-503-00/**1**/P22A..[1)]
3.0	DR**S**90L4/TH. DR**E**100M4/TH. DR**N**100LS4/TH.	MM30D-503-00/**1**/**BW2**/P22A..
		MM40D-503-00/**1**/**BW2**/P22A..[1)]
	DR**S**90S4/**BE.**/TH. DR**E**100M4/**BE.**/TH. DR**N**100LS4/**BE.**/TH.	MM30D-503-00/**1**/P22A..
		MM40D-503-00/**1**/P22A..[1)]
4.0	DR**S**100M4/TH. DR**E**100LC4/TH. DR**N**100L4/TH.	MM40D-503-00/**1**/**BW2**/P22A..
	DR**S**100M4/**BE.**/TH. DR**E**100LC4/**BE.**/TH. DR**N**100L4/**BE.**/TH.	MM40D-503-00/**1**/P22A..

1) Combination with increased short-term torque

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8.6 Hybrid cables

8.6.1 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 

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8.7 Options

8.7.1 Factory-installed external options

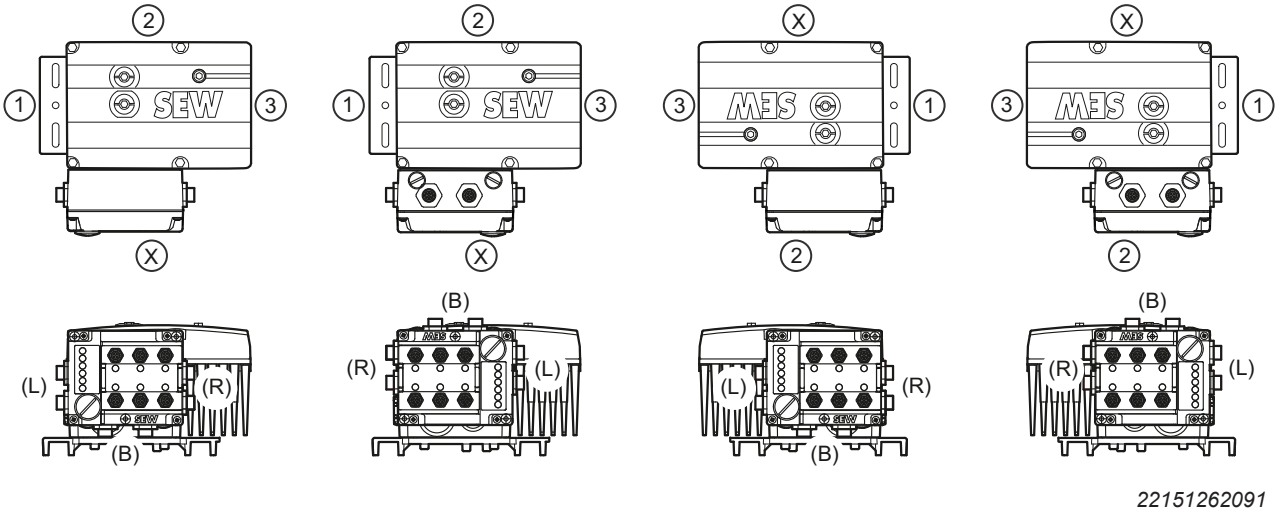
On request, the following options can be installed at the connection box at the factory (mounted, wired, and ready for operation):

- Local DC 24 V supply (MLU.1A)
- Local speed control module with DC 24 V supply (MLG.1A)
- PROFIBUS fieldbus interface (MFP../MQP..)
- PROFINET IO fieldbus interface (MFE52..)
- EtherNet/IP™ fieldbus interface (MFE62..)
- EtherCAT® fieldbus interface (MFE72..)
- Hybrid cable for connection between MF.../Z.3. or MF../.6. field distributor and MOVIMOT® (1–5 m)

Possible plug connector locations on the fieldbus interface

It is possible to install the fieldbus interface in location "X" or location "2" on the MOVIMOT® connection box.

The plug connectors on the fieldbus interface are available in positions (L), (B), or (R) in accordance with the following figure:



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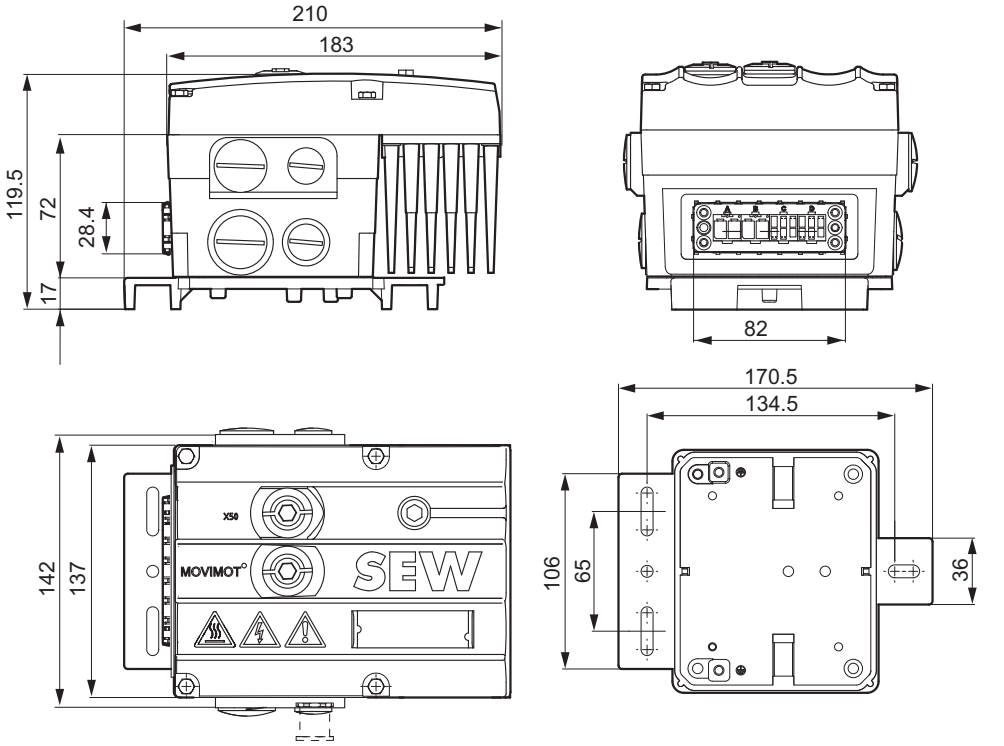
Fieldbus interface | Fieldbus interface, turned by 180° | Fieldbus interface | Fieldbus interface, turned by 180°

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8.8 Dimension drawings

8.8.1 Dimension drawing of MM03 to MM15 with option P21A (APG4 plug connector)

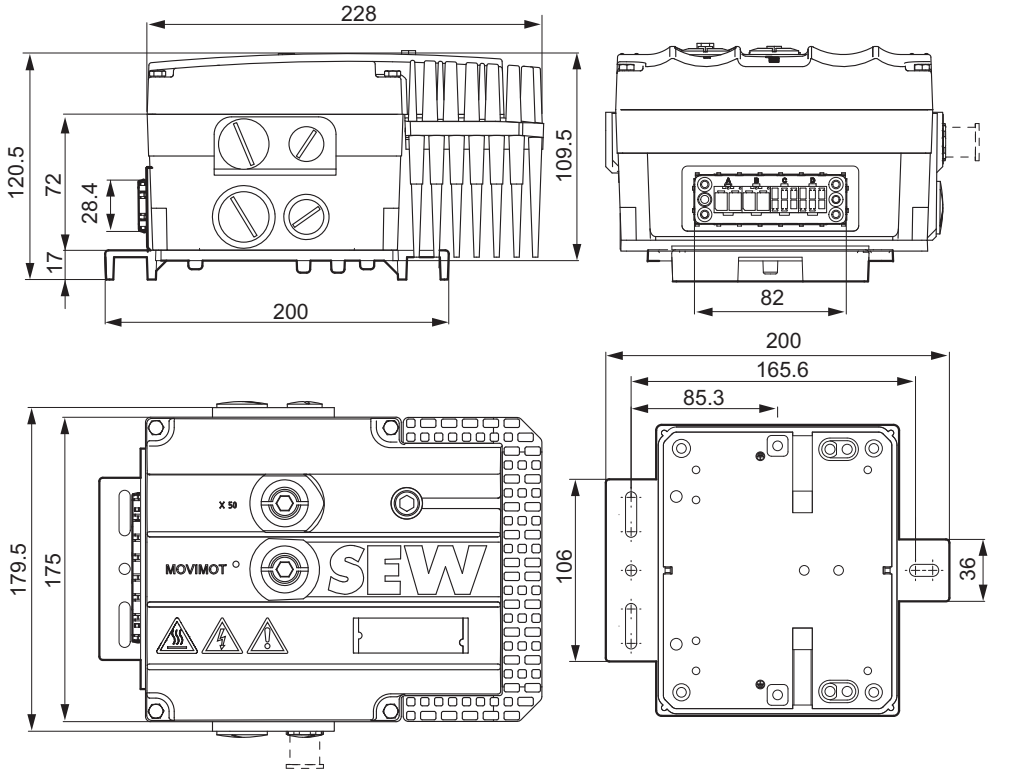
The following figure shows the dimensions of MM03 to MM15 with option P21A (APG4 plug connector):



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8.8.2 Dimension drawing of MM22 to MM30 with option P22A (APG4 plug connector)

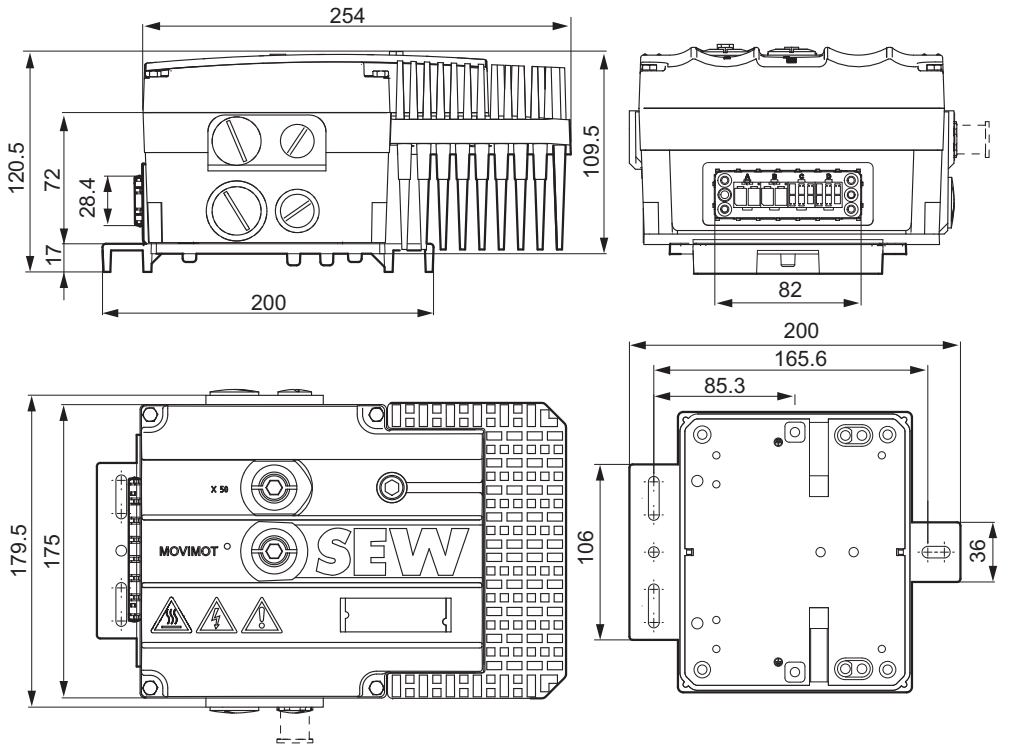
The following figure shows the dimensions of MM22 to MM30 with option P22A (APG4 plug connector):



9007200786059147

8.8.3 MM40 dimension drawing with option P22A (APG4 plug connector)

The following figure shows the dimensions of MM40 with option P22A (APG4 plug connector):



9007200940484875

9 Explosion-protected MOVIMOT® drives

9.1 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:



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Explosion-proof MOVIMOT® drives are approved for use in potentially explosive areas of category 3D (zone 22) in compliance with standard EN 6079-0.

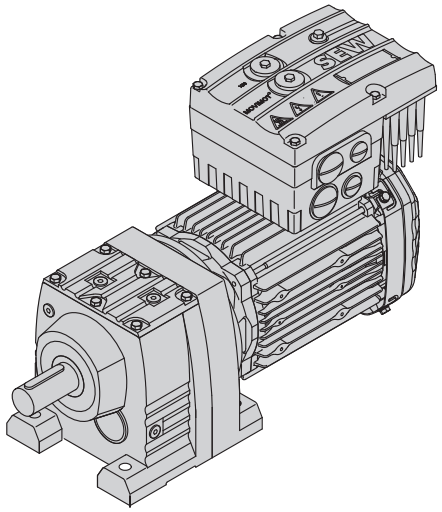
The following information must be adhered:

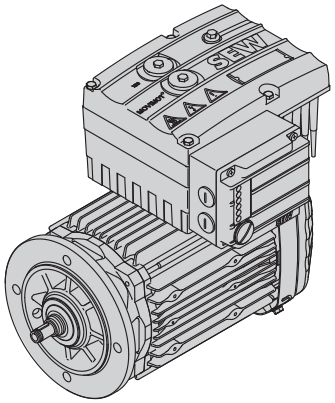
- The requirements of the type examination certificate and/or the delivered documentation must be adhered.
- Note the specifications on the nameplate.
- The MOVIMOT® inverter must be installed on the motor. Mounting the inverter close to the motor is not permitted.
- There may be no aggressive substances 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.

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9.2 Available MOVIMOT® motor combinations

9.2.1 MOVIMOT® MM..D in category 3D





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1400 min^{-1} ⅄ 3 × 400 – 500 V (400 V)

Type	P_N kW	M_N Nm	M_A/M_N Nm	n_N min^{-1}	I_{line} A	cos φ	Brake	M_B Nm
EDRN71MS4../MM03/3D	0.25	1.7	1.8	1400	1.0	0.99	BE05	3.5
EDRN71M4../MM05/3D	0.37	2.5	1.8	1400	1.3	0.99	BE1	5
EDRN80MK4../MM07/3D	0.55	3.75	1.8	1400	1.6	0.99	BE1	7
EDRN80M4../MM11/3D	0.75	5.1	1.8	1400	1.9	0.99	BE2	10
EDRN90S4../MM15/3D	1.1	7.5	1.8	1400	2.4	0.99	BE2	14
EDRN90L4../MM22/3D	1.5	10.2	1.8	1400	3.5	0.99	BE2	14
EDRN100LS4../MM30/3D	2.2	15	1.8	1400	5.0	0.99	BE5	28
EDRN100L4../MM40/3D	3.0	20.5	1.8	1400	6.7	0.99	BE5	28

2900 min^{-1} △ 3 × 400 – 500 V (400 V)

Type	P_N kW	M_N Nm	M_A/M_N Nm	n_N min^{-1}	I_{line} A	cos φ	Brake	M_B Nm
EDRN71MS4../MM05/3D	0.37	1.2	1.8	2900	1.3	0.99	BE05	3.5
EDRN71M4../MM07/3D	0.55	1.8	1.8	2900	1.6	0.99	BE1	5
EDRN80MK4../MM11/3D	0.75	2.5	1.8	2900	1.9	0.99	BE1	7
EDRN80M4../MM15/3D	1.1	3.6	1.8	2900	2.4	0.99	BE2	10
EDRN90S4../MM22/3D	1.5	4.9	1.8	2900	3.5	0.99	BE2	14
EDRN90L4../MM30/3D	2.2	7.2	1.8	2900	5.0	0.99	BE2	14
EDRN100LS4../MM40/3D	3.0	9.9	1.8	2900	6.7	0.99	BE5	28

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9.3 Sample type designation

9.3.1 Type designation of MOVIMOT® drives

Type designation

The following table shows an example of the type designation of the MOVIMOT® drive **RF47/II2GD EDRN90L4 BE2/MM15/3D/MO**:

RF	**Gear unit series**
47	**Gear unit size**
II2GD	**Explosion-protected gear unit to directive 94/9/EG**
E	**Code letter for explosion protection of the motor**
DRN	**Motor series**
90L4	**Size, number of poles on motor**
BE2	**Additional motor feature (brake)**
/	
MM15	**MOVIMOT® inverter**
/	
3D	**Category 3D (explosion protection)**
/	
MO	**Additional feature: inverter** [1]

1) The nameplate only displays options installed at the factory.

9.3.2 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)**	

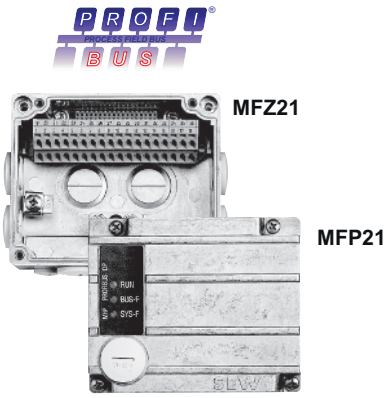
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9.4 Options

The following explosion-protected options for MOVIMOT® drives are approved for use in potentially explosive areas of category 3D (zone 22) according to EN 60079-0.

9.4.1 Fieldbus interface in category 3D

The following figure shows the available fieldbus interfaces in category 3D:



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Available variants

PROFIBUS variants

Fieldbus interface + module terminal box	MFP21D/Z21D/3D
Part number	08236801
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**:

MFP	**Fieldbus interface** MFP.. = PROFIBUS
21	**Connections** 21 = 4 × I, 2 × O (connection via terminals)
D	**Variant**
/	
Z21	**Connection module** Z21 = For PROFIBUS
D	**Variant**
/	
3D	**Category 3D (explosion protection)**

9.4.2 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.

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10 MOVI-SWITCH®

10.1 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):



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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).

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10.1.1 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:
  - **B**0: Binary control
  - **K**0: With integrated AS-Interface
- The various operating states are indicated by a status LED.
- MOVI-SWITCH® 1EM is also available with a brake.

10.1.2 Features of MOVI-SWITCH® 1E

- MOVI-SWITCH® 1E is an AC motor with 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).

10.1.3 Features of MOVI-SWITCH® 2S

- MOVI-SWITCH® 2S is an AC motor with integrated electronic 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:
  - C**B**0: Binary control
  - C**K**0: 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 with MOVI-SWITCH® 1E.
- With the CK0 design (with integrated AS-Interface), the connection assignment is compatible with MOVIMOT® with integrated AS-Interface.

10.1.4 Advantages of MOVI-SWITCH®

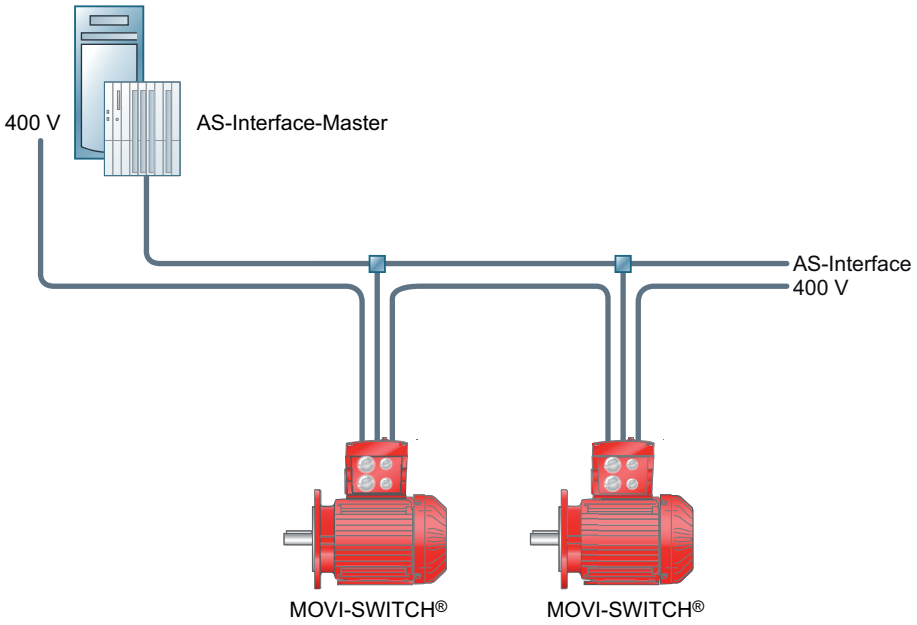
MOVI-SWITCH® offers the following advantages:

- The switching and protection functions are completely integrated, saving control cabinet space and cabling.
- Integrated mechatronic solution, robust and compact.

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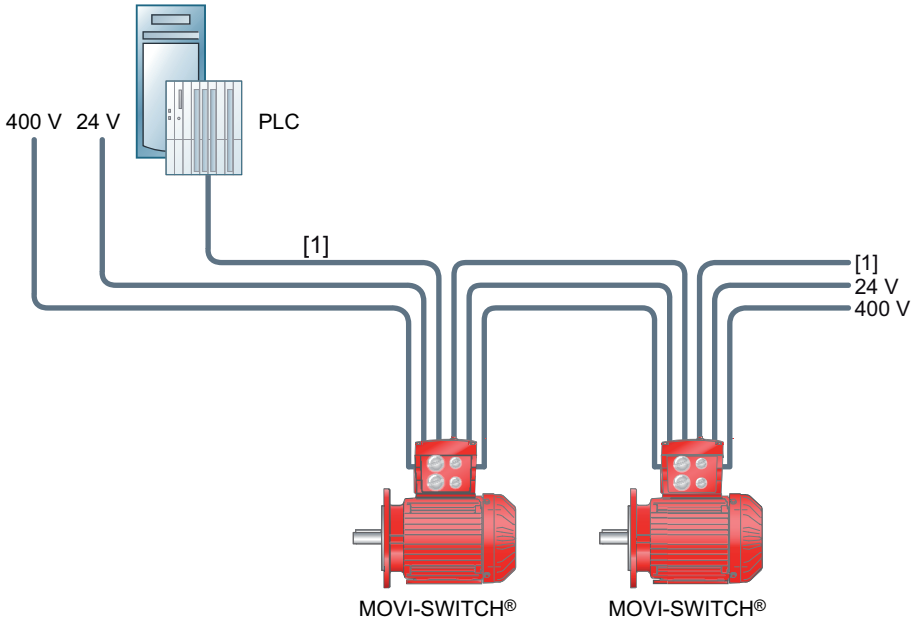
10.2 Installation topology of MOVI-SWITCH®

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

10.3 Available MOVI-SWITCH® motor combinations

10.3.1 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.

10.3.2 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	$\eta_{75\%}$ $\eta_{100\%}$ %[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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses

2) Valid for foot-mounted motor without brake

3) Only in combination with helical gear units R07, RF07, R07F or Spiroplan® gear units DT56L4 0.12 W10, WF10, WA10, WAF10

10.3.3 MOVI-SWITCH® 1EM with AC motor DRN63: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg[2]	J_{Mot} 10^{-4} kgm^2
DRN63MS4/MSW	0.12	0.83	1380	0.40	–	0.64	63.9 64.8	3.6	2.7 2.6	5.7	2.95
DRN63M4/MSW	0.18	1.25	1375	0.57	–	0.65	69.4 69.9	3.7	2.6 2.6	6.6	3.76

1) Efficiency levels to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses

2) Valid for foot-mounted motor without brake

10.3.4 MOVI-SWITCH® 1EM with AC motor DR2S63: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg[2]	J_{Mot} 10^{-4} kgm^2
DR2S63MSR4/MSW	0.12	0.83	1380	0.40	–	0.64	61.0 61.9	3.6	2.7 2.6	5.7	2.95
DR2S63MS4/MSW	0.18	1.29	1330	0.59	–	0.71	57.1 57.0	2.9	2.0 2.0	5.7	2.95
DR2S63M/MSW	0.25	1.79	1330	0.78	–	0.70	62.5 61.5	3.4	2.3 2.3	6.6	3.76

1) Efficiency levels to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses

2) Valid for foot-mounted motor without brake

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10.3.5 MOVI-SWITCH® 1E with AC motor DRN..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg [2]	m kg [3]	J_{Mot} 10^{-4} kgm^2 [2]	J_{Mot} 10^{-4} kgm^2 [3]
DRN71MS4/MSW	0.25	1.7	1405	0.72	–	0.66	73.5 73.5	4.3	2.5 2.3	7.8	8.6	5.42	6.11
DRN71M4/MSW	0.37	2.5	1415	1.03	–	0.66	77.3 77.3	4.8	2.8 2.5	9.0	10	7.14	8.44
DRN80MK4/MSW	0.55	3.65	1435	1.29	–	0.75	81.1 80.8	6.1	2.6 2.1	12	14	17.1	18.6
DRN80M4/MSW	0.75	4.95	1440	1.75	–	0.74	82.9 82.9	6.7	3.1 2.7	15	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	21	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	24	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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake
3) Valid for foot-mounted motor with brake

10.3.6 MOVI-SWITCH® 1E with AC motor DRE..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake

10.3.7 MOVI-SWITCH® 1E with AC motor DRS..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake

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10.3.8 MOVI-SWITCH® 1E with AC motor DR2S..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg [2]	m kg [3]	J_{Mot} 10^{-4} kgm^2 [2]	J_{Mot} 10^{-4} kgm^2 [3]
DR2S71MS4/MSW	0.37	2.6	1350	1.05	–	0.73	– 66.0	3.6	2.0 1.9	7.8	9.2	5.42	6.72
DR2S71M4/MSW	0.55	3.85	1360	1.5	–	0.72	– 70.0	4.1	2.4 2.2	9.0	11	7.14	8.44
DR2S80MK4/MSW	0.75	5.1	1410	1.8	–	0.70	– 75.3	5.2	2.4 2.0	12	14	17.1	18.6
DR2S80M4/MSW	1.1	7.4	1415	2.45	–	0.80	80.3 78.9	5.5	2.5 2.0	15	18	24.7	29.2

1) Efficiency levels to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake
3) Valid for foot-mounted motor with brake

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10.3.9 MOVI-SWITCH® 2S with AC motor DRN..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg [2]	m kg [3]	J_{Mot} 10^{-4} kgm^2 [2]	J_{Mot} 10^{-4} kgm^2 [3]
DRN71MS4/MSW	0.25	1.7	1405	0.72	–	0.66	73.5 73.5	4.3	2.5 2.3	7.8	8.6	5.42	6.11
DRN71M4/MSW	0.37	2.5	1415	1.03	–	0.66	77.3 77.3	4.8	2.8 2.5	9.0	10	7.14	8.44
DRN80MK4/MSW	0.55	3.65	1435	1.29	–	0.75	81.1 80.8	6.1	2.6 2.1	12	14	17.1	18.6
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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake
3) Valid for foot-mounted motor with brake

10.3.10 MOVI-SWITCH® 2S with AC motor DRE..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake

10.3.11 MOVI-SWITCH® 2S with AC motor DRS..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake

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10.3.12 MOVI-SWITCH® 2S with AC motor DR2S..: 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	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg [2]	m kg [3]	J_{Mot} 10^{-4} kgm^2 [2]	J_{Mot} 10^{-4} kgm^2 [3]
DR2S71MS4/MSW	0.37	2.6	1350	1.05	–	0.73	– 66.0	3.6	2.0 1.9	7.8	9.2	5.42	6.72
DR2S71M4/MSW	0.55	3.85	1360	1.5	–	0.72	– 70.0	4.1	2.4 2.2	9.0	11	7.14	8.44
DR2S80MK4/MSW	0.75	5.1	1410	1.8	–	0.70	– 75.3	5.2	2.4 2.0	12	14	17.1	18.6
DR2S80M4/MSW	1.1	7.4	1415	2.45	–	0.80	80.3 78.9	5.5	2.5 2.0	15	18	24.7	29.2

1) Efficiency levels to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake
3) Valid for foot-mounted motor with brake

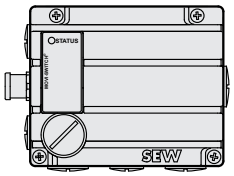
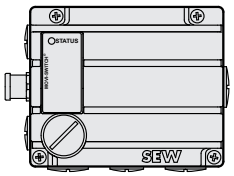
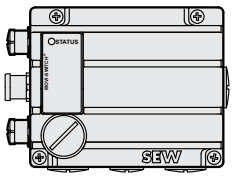
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10.4 Connection technology

10.4.1 Connection technology of MOVI-SWITCH® 1EM

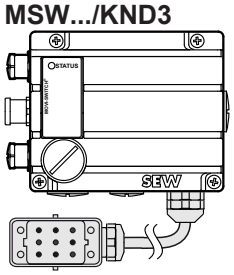
Overview

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

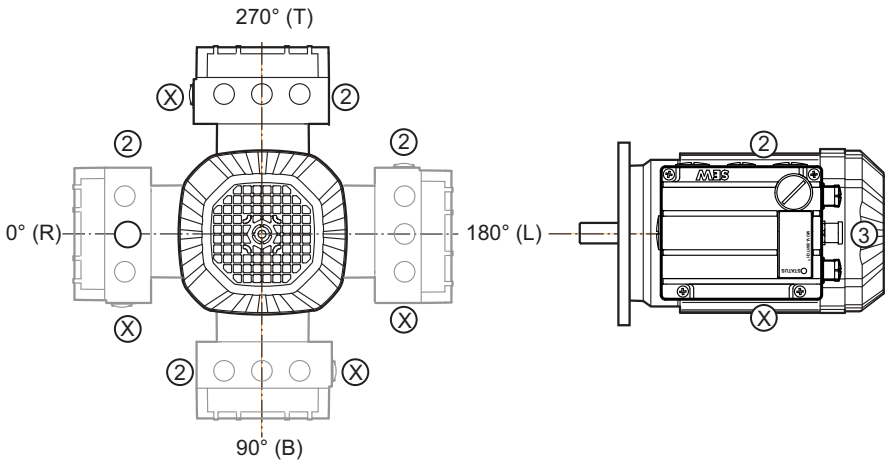
The following table shows the optional power plug connector:

Order designation	Function	Manufacturer's designation
MSW.../KND3 	AC 400 V supply	Cable with Harting Han® plug connector Q8/0 male

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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

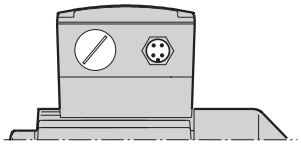
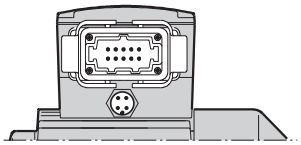
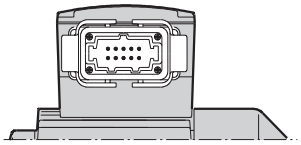
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10.4.2 Connection technology of MOVI-SWITCH® 1E

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:

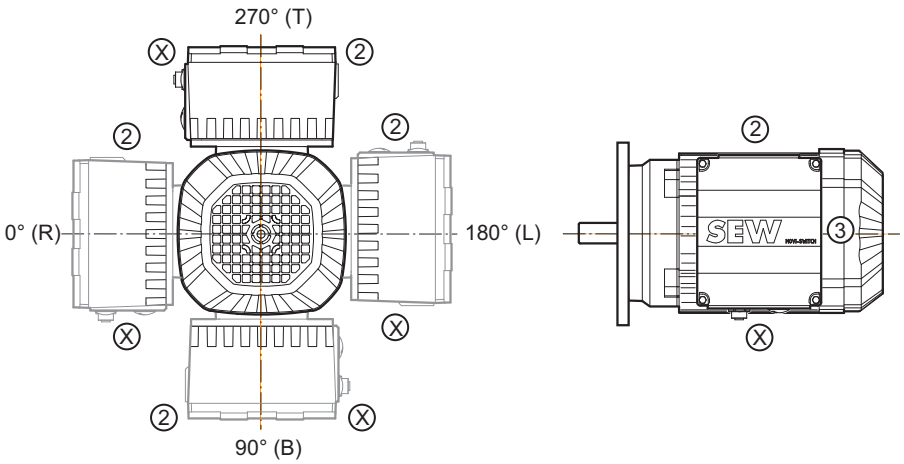
Order designation	Function	Manufacturer's designation
MSW../AVS1 	Control signals	1 × round plug connector M12 × 1
MSW../AVS1/ASA3 	Control signals Power rating	1 × round plug connector M12 × 1 + Harting Han® 10 ES pin insert (built-on housing with 2 clips)
MSW../ASAW 	Connection to field distributor Z.3**W** or Z.6**W**	Harting Han® 10 ES pin insert (built-on housing with 2 clips)

For other types, contact SEW-EURODRIVE.

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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)

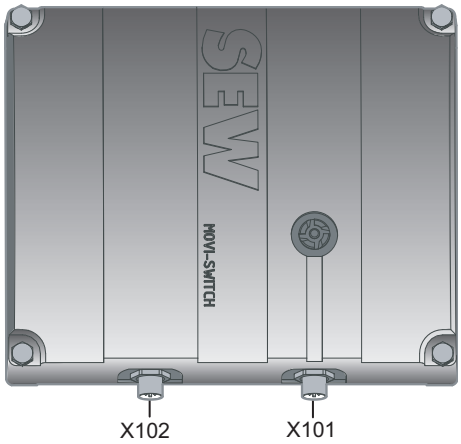
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10.4.3 Connection technology of MOVI-SWITCH® 2S

Connection technology of CB0 design (binary control)

As standard, MOVI-SWITCH® 2S is equipped with 2 plug connectors for connecting control signals and a 24 V supply. The plug connectors are integrated in the control unit, see the following figure.

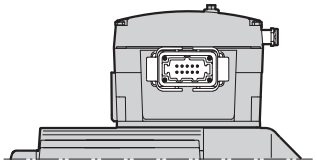
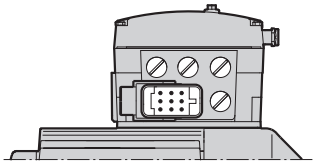
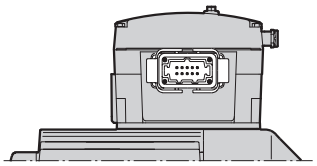
Order designation of the standard design: MSW/C**B**0/RA2A.



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).

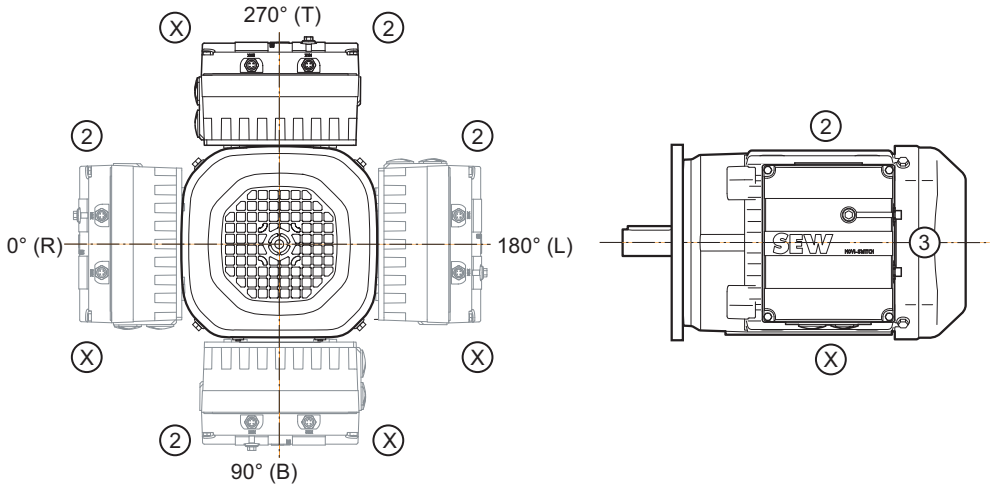
Order designation	Function	Manufacturer's designation
MSW/CB0/ASA3 	Power rating	Harting Han® 10 ES pin insert (built-on housing with 2 clips)
MSW/CB0/AND3 	Power rating	Harting Han® Q8/0 pin insert (built-on housing with 1 clip)
MSW/CB0/ASAW 	Connection to field distributor Z.3**W** or Z.6**W**	Harting Han® 10 ES pin insert (built-on housing with 2 clips)

For other types, contact SEW-EURODRIVE.

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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).

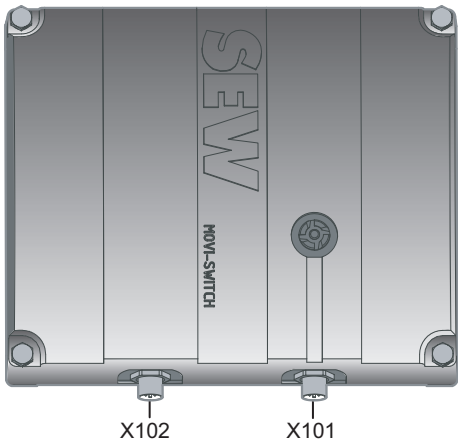


9007200725688331

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.

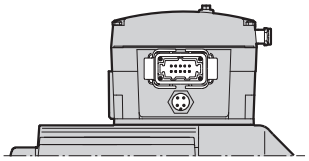
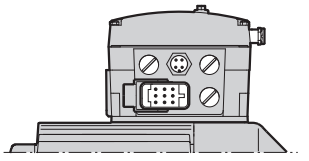
Order designation of the standard design: MSW/C**K**0/RA2A.



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).

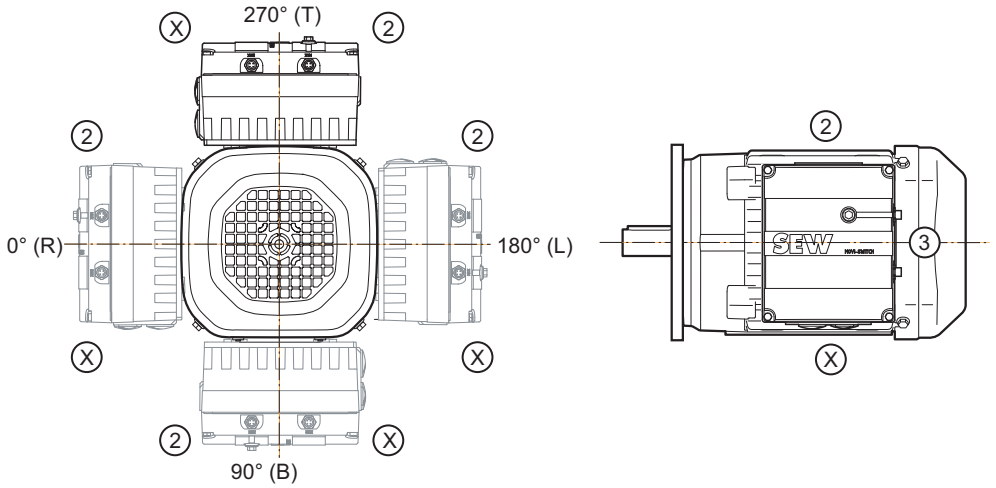
Order designation	Function	Manufacturer's designation
MSW/CK0/ASA3/AVS0 	Power + AUX PWR	Harting Han® 10 ES pin insert (built-on housing with 2 clips) +1 × round plug connector M12 × 1
MSW/CK0/AND3/AVS0 	Power + AUX PWR	Harting Han® Q8/0 pin insert (built-on housing with 1 clip) +1 × round plug connector M12 × 1

For other types, contact SEW-EURODRIVE.

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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).



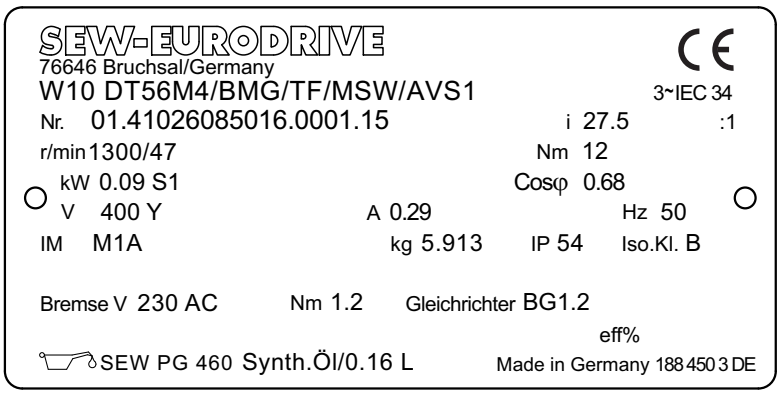
9007200725688331

10.5 Sample type designation

10.5.1 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:

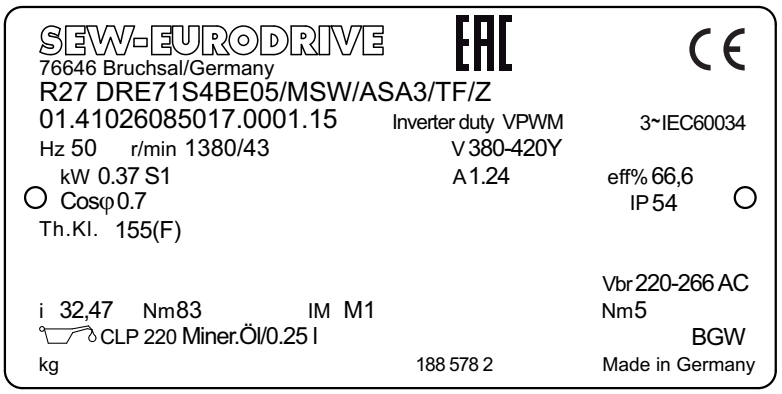
W	**Gear unit series**
10	**Gear unit size**
DT	**Motor series** (DT.., DR..)
56M	**Motor size**
4	**Number of motor poles**
/	
BMG	**Mechanical brake option**
/	
TF	**Thermistor (standard)**
/	
MSW	**MOVI-SWITCH® motor starter**
/	
AVS1	**Optional M12 plug connector for control signals**

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10.5.2 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:

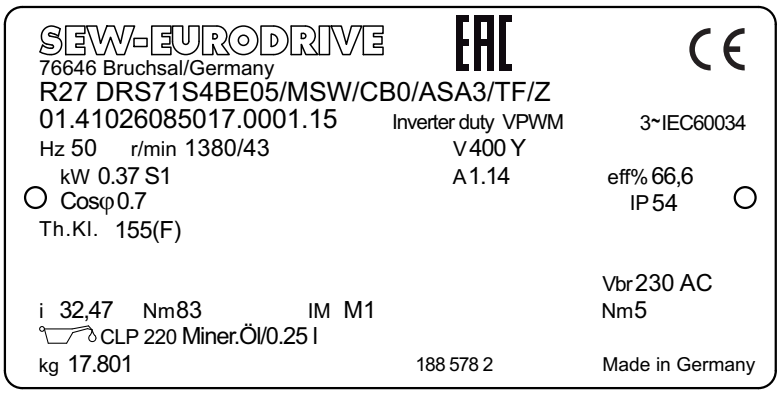
R	**Gear unit series**
27	**Gear unit size**
DRE	**Motor series** (DRS.., DRE.., DRN..)
71S	**Motor size**
4	**Number of motor poles**
BE05	**Optional design motor (brake)**
/	
MSW	**MOVI-SWITCH® motor starter**
/	
ASA3	**Plug connector option**
/	
TF	**Thermistor (standard)**
/	
Z	**Motor option flywheel fan**

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10.5.3 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**	

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11 Mounting MOVI-SWITCH® 2S close to the motor

11.1 Description

The following figure shows the MOVI-SWITCH® design for mounting close to the motor:



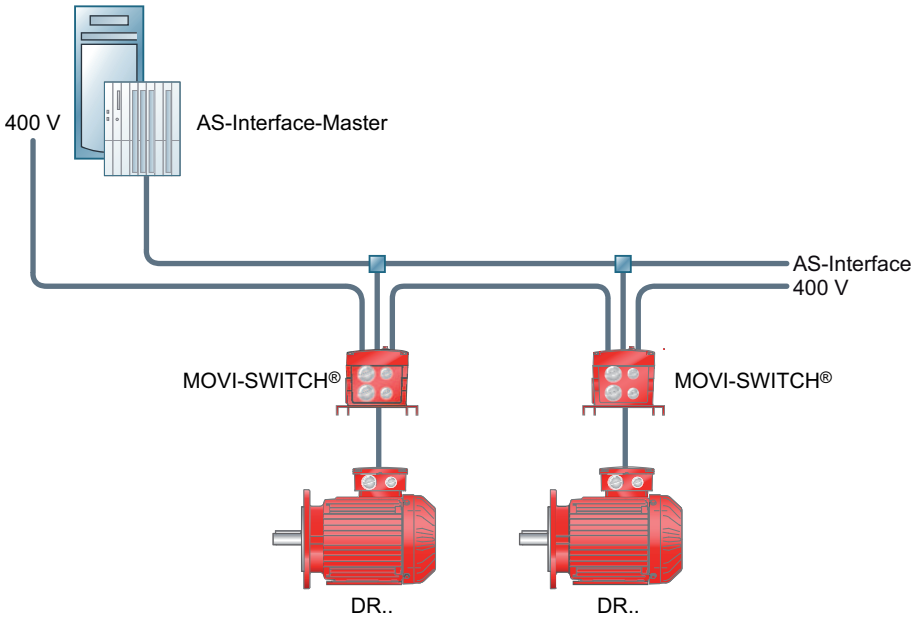
13917341579

- 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" (→ 🗎 434).
- **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.

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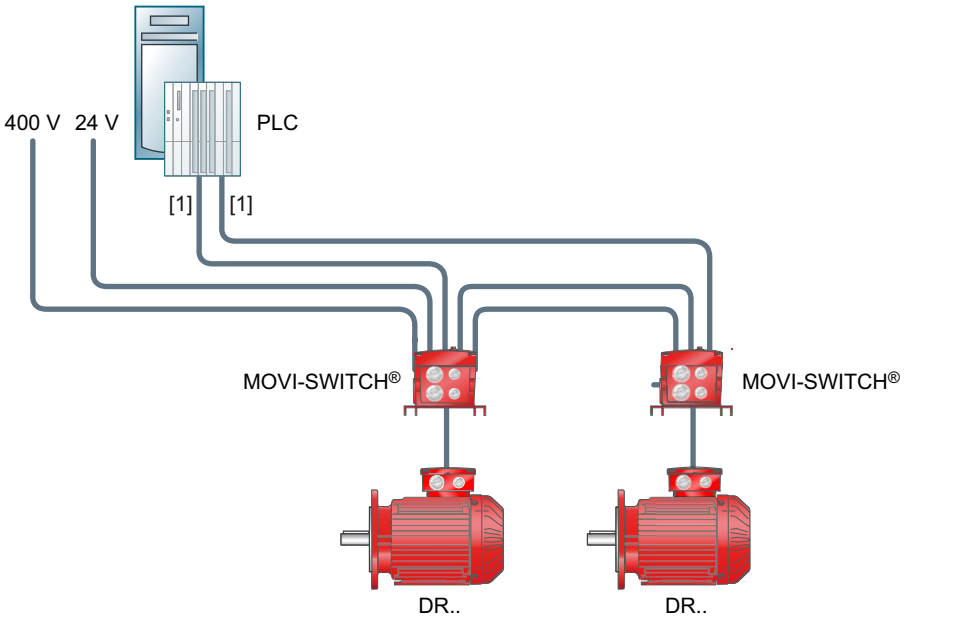
11.2 Installation topology of MOVI-SWITCH®, mounted close to the motor

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):



5255121163

The following figure shows the basic installation topology of the MOVI-SWITCH® drive when mounted close to the motor:

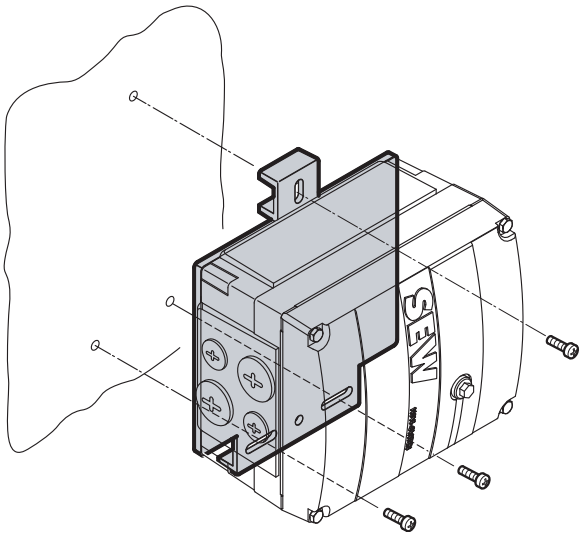


5068999307

[1] Control: Binary

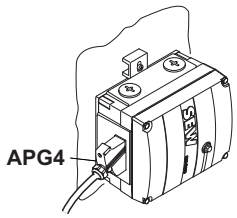
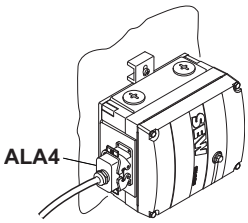
11.3 Available designs

The following figure shows option P22A for installing the MOVI-SWITCH® 2S close to the motor:



1531957643

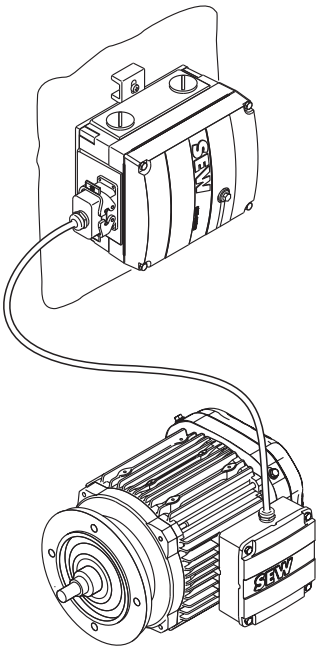
The following designs are available. They can be combined with all the motors listed in chapter "Motor assignment" (→ 🗎 430).

Connection to the 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

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11.4 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:



1475556235

11.4.1 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	

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11.5 Motor assignment

11.5.1 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 installation close to the motor):

Characteristics	Requirements for the assigned AC motor
Permitted motors	Only the motors listed in chapters "DRN..: 1500 min^{-1} .." (→ 🗎 431), "DRE..: 1500 min^{-1} .." (→ 🗎 432), "DRS..: 1500 min^{-1} .." (→ 🗎 433), and "DR2S..: 1500 min^{-1} .." (→ 🗎 433) are approved.
Permitted nominal motor voltage	AC 380 to 500 V
Permitted brakes	No limitations
Permitted brake voltage	In the 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	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" (→ 🗎 434) for additional information.
Permitted motor protection	Always order the assigned motor with **TF temperature sensor** (PTC thermistor or PTC resistor).

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11.5.2 DRN..: 1500 min^{-1} – S1 (50 Hz) IE3

Motor type	P_N kW	M_N Nm	n_N min^{-1}	I_N 400 V A	I_N 380 – 420 V A	cos φ	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg[2]	J_{Mot} 10^{-4} kgm^2
DRN71MS4	0.25	1.7	1405	0.72	–	0.66	73.5 73.5	4.3	2.5 2.3	7.8	5.42
DRN71M4	0.37	2.5	1415	1.03	–	0.66	77.3 77.3	4.8	2.8 2.5	9.0	7.14
DRN80MK4	0.55	3.65	1435	1.29	–	0.75	81.1 80.8	6.1	2.6 2.1	12	17.1
DRN80M4	0.75	4.95	1440	1.75	–	0.74	82.9 82.9	6.7	3.1 2.7	15	24.7
DRN90S4	1.1	7.2	1455	2.55	–	0.73	85.0 84.5	6.9	2.7 2.1	21	54.0
DRN90L4	1.5	9.8	1461	3.4	–	0.74	86.1 85.6	7.5	2.7 2.0	24	67.2
DRN100LS4	2.2	14.5	1450	4.75	–	0.76	87.5 86.9	7.1	2.9 2.2	27	81.4
DRN100L4	3.0	19.7	1456	6.4	–	0.76	88.3 87.8	8.2	3.4 2.3	34	112

1) Efficiency levels to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses

2) Valid for foot-mounted motor without brake

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11.5.3 DRE..: 1500 min^{-1} – S1 (50 Hz) IE2

Motor type	P_N kW	M_N Nm	n_N min^{-1}	I_N 400 V A	I_N 380 – 420 V A	cos φ	$\eta_{75\%}$ $\eta_{100\%}$ %[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	13.1	14.9
DRE80M4	0.55	3.63	1445	1.27	–	0.76	82.0 82.3	6.7	3.1 2.2	15.9	21.5
DRE80M4	0.75	5.0	1435	1.68	1.75	0.79	81.3 81.0	6.2	2.8 2.1	15.9	21.5
DRE90M4	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	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	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	3	19.7	1455	6.2	6.3	0.81	87.1 86.3	7.5	2.7 2.4	32.8	90
DRE112M4	3	19.7	1455	6	6.2	0.83	87.4 86.5	7.3	2.4 2.0	43.1	146

1) Efficiency levels to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses
2) Valid for foot-mounted motor without brake

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11.5.4 DRS..: 1500 min^{-1} – S1 (50 Hz) IE1

Motor type	P_N kW	M_N Nm	n_N min^{-1}	I_N 400 V A	I_N 380 – 420 V A	cos φ	$\eta_{75\%}$ $\eta_{100\%}$ %[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 to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses

2) Valid for foot-mounted motor without brake

11.5.5 DR2S..: 1500 min^{-1} – S1 (50 Hz) IE1

Motor type	P_N kW	M_N Nm	n_N min^{-1}	I_N 400 V A	I_N 380 – 400 V A	cos φ	$\eta_{75\%}$ $\eta_{100\%}$ %[1]	I_A/I_N	M_A/M_N M_H/M_N	m kg[2]	J_{Mot} 10^{-4} kgm^2[2]
DR2S63M4	0.25	1.79	1330	0.78	–	0.70	62.5 61.5	3.4	2.3 2.3	6.8	3.76
DR2S71MS4	0.37	2.6	1350	1.05	–	0.73	– 66.0	3.6	2.0 1.9	7.8	5.42
DR2S71M4	0.55	3.85	1360	1.5	–	0.72	– 70.0	4.1	2.4 2.2	9.0	7.14
DR2S80MK4	0.75	5.1	1410	1.8	–	0.70	– 75.3	5.2	2.4 2.0	12	17.1
DR2S80M4	1.1	7.4	1415	2.45	–	0.80	80.3 78.9	5.5	2.5 2.0	15	24.7

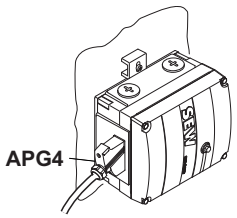
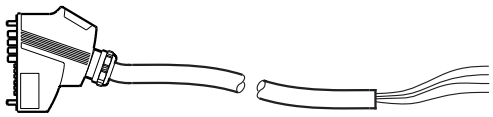
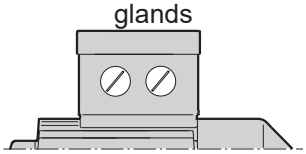
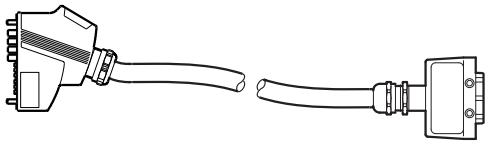
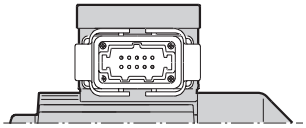
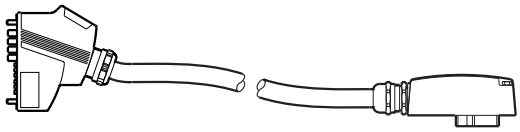
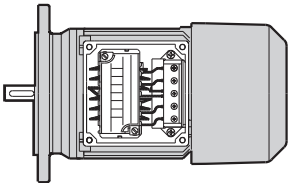
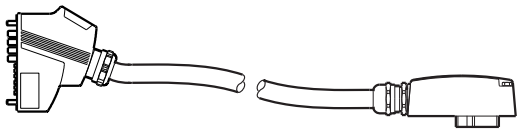
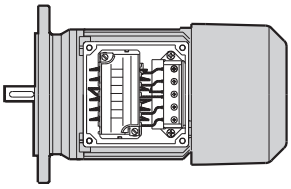
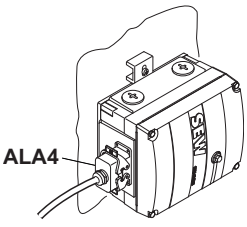
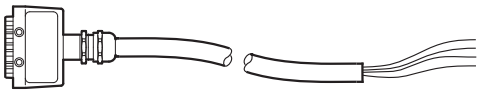
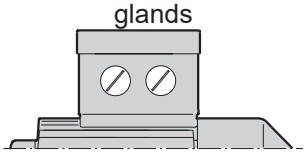
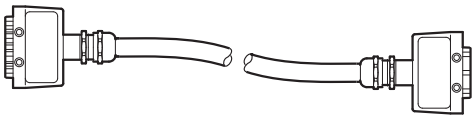
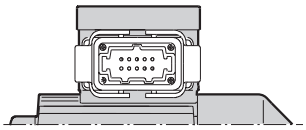
1) Efficiency levels to IEC 60034-2-1 Ed.1 (2007)/PLL from Residual Losses

2) Valid for foot-mounted motor without brake

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11.6 Hybrid cables

11.6.1 Connection between MOVI-SWITCH® and motor when mounted close to the motor

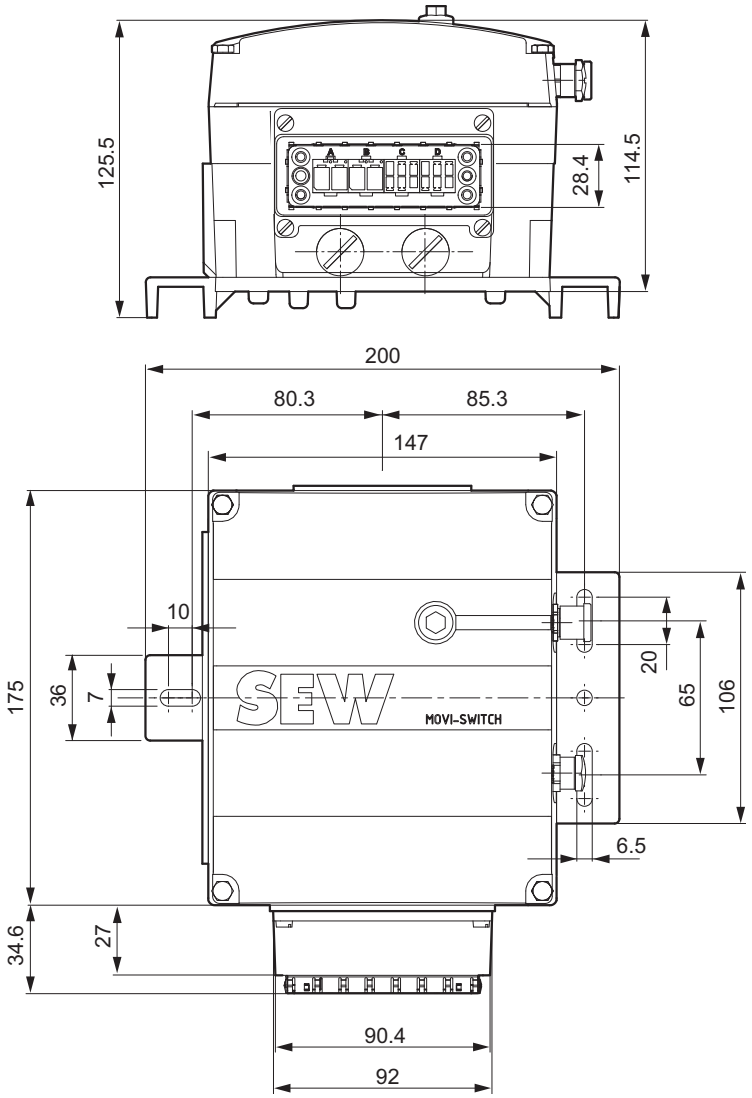
MOVI-SWITCH®	Hybrid cables	Drive
MSW-2S../C.0/ P22A/RI2A/APG4 	Part number 08178879 	AC motors with cable glands 
	Part number: 08178895 	AC motors with ASB4 plug connector 
	Part number: 0 5932785 (人) 	AC motors with ISU4 plug connectors size DR63 
	Part number: 05937558 (人) 	AC motors with ISU4 plug 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 

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11.7 Dimension drawings

11.7.1 Dimension drawing of MOVI-SWITCH® 2S with option P22A (APG4 plug connector)

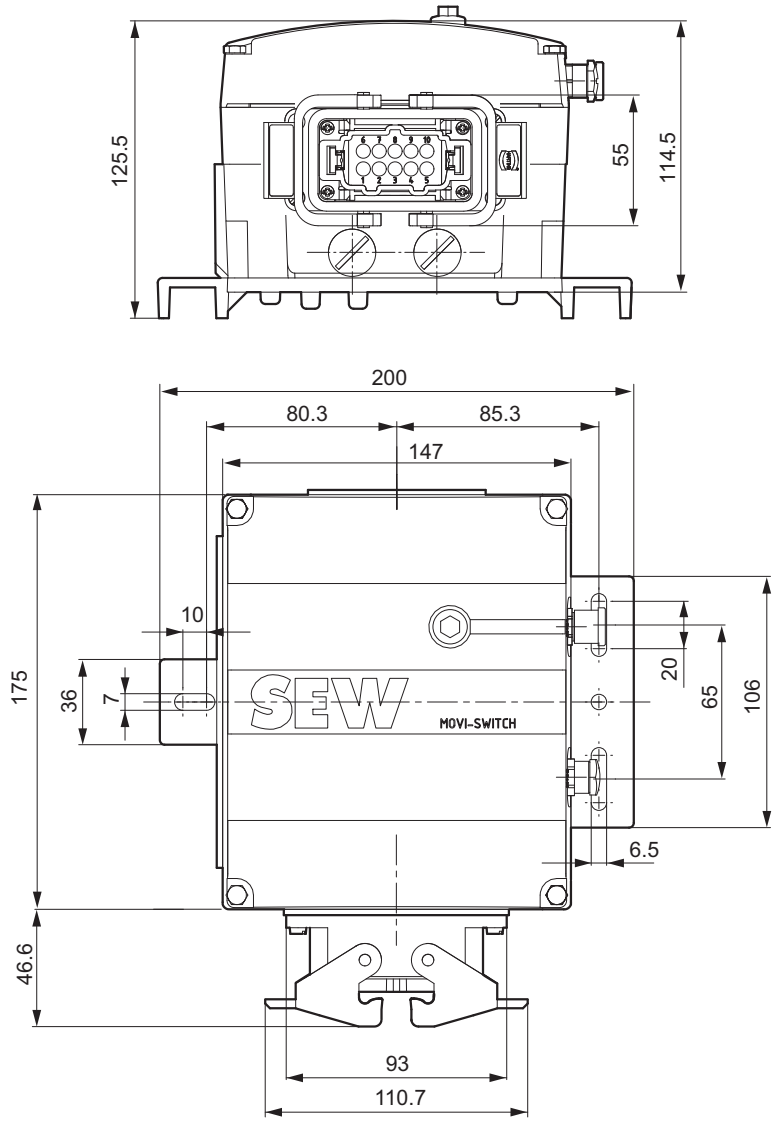
The following figure shows the dimensions of MOVI-SWITCH® 2S with option P22A (APG4 plug connector):



1477170315

11.7.2 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

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12 Options for diagnostics, startup and manual operation

INFORMATION

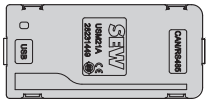
This chapter provides an overview of options regarding diagnostics, startup and manual operation for decentralized components from SEW-EURODRIVE.

For additional information on the functionality, refer to the MOVIMOT®, MOVIFIT® operating instructions, or to the manuals for the fieldbus interfaces and field distributors.

12.1 Overview

Option	Description	Type	Part no.	Compatible with
Keypad	**Features:** • Illuminated text display, range of languages • 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-10** (DE/EN/FR/IT/ES/PT/NL/FI/SV/DA/TR/RU/PL/CS/ZH) 	28229150	• MOVIMOT® • MOVIFIT®
Extension cable	• Extension cable for DBG60B (length 5 m)	**DKG60B**	08175837	• DBG60B

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Option	Description	Type	Part no.	Compatible with
Interface adapter USM21A	The USM21A interface adapter is used to connect the PC and the engineering interface of the device. The data is transferred according to the USB 2.0 standard. It is also possible to work with a USB 3.0 interface. Scope of delivery: • USM21A interface adapter • USB connection cable type USB A-B to connect PC to USM21A • Serial interface cable with 2 × RJ10 connectors • CD-ROM with drivers and MOVITOOLS® MotionStudio software	**USM21A** 	28231449	• MOVIMOT® • MOVIFIT® • Fieldbus interfaces MF../MQ..

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13 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.

13.1 Description

The following figure shows examples of hybrid cables from SEW-EURODRIVE:



1507296907

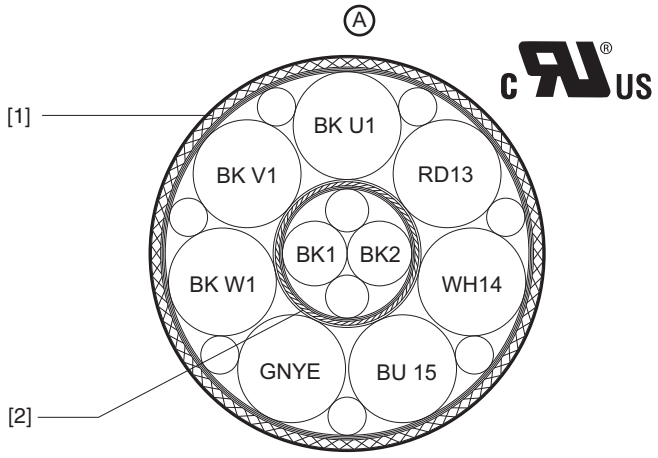
Hybrid cables from SEW-EURODRIVE...

- 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.

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13.2 Hybrid cable type "A"

13.2.1 Mechanical design



839041931

[1] Overall shield
[2] Shield

Cable type	A
	8179530
• Supply cores:	7 × 1.5 mm²
• Control core pair:	2 × 0.75 mm²
• 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)

13.2.2 Electrical properties

• Conductor resistance for 1.5 mm² (at 20 °C):	Max. 13 Ω/km
• Conductor resistance for 0.75 mm² (at 20 °C):	Max. 26 Ω/km
• Operating voltage for 1.5 mm² conductor:	Max. 600 V according to c UL us
• Operating voltage for 0.75 mm² conductor:	Max. 600 V according to c UL us
• Insulation resistance at 20 °C:	Min. 20 MΩ × km

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13.2.3 Mechanical properties

- Suitable for cable carriers
  - Bending cycles > 2.5 million
  - Travel speed ≤ 3 m/s
- Bending radius in the cable carrier: 10 × diameter
  for fixed routing: 5 × 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.

13.2.4 Thermal properties

- Processing and operation: -30 °C – +90 °C (load capacity according to DIN VDE 0298-4)
  -30 – +80 °C according to c UL us
- Transport and storage: -40 °C – +90 °C (load capacity according to DIN VDE 0298-4)
  -30 – +80 °C according to c UL us
- Flame retardant according to UL1581 Vertical Wiring Flame Test (VW-1)
- Flame retardant according to CSA C22.2 Vertical Flame Test (FT-1)

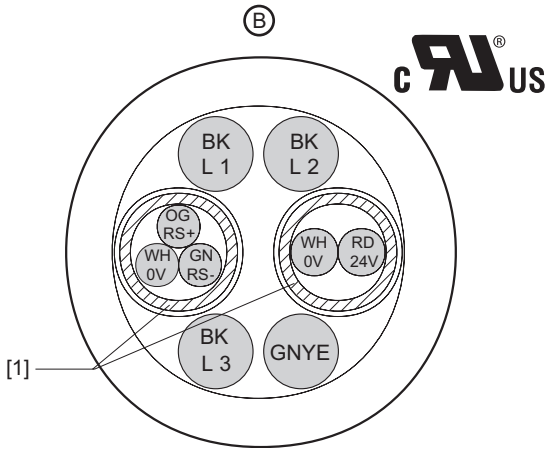
13.2.5 Chemical properties

- 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)

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13.3 Hybrid cable type "B" and "B/2.5"

13.3.1 Mechanical design



1031705739

Cable type	B	B/2.5
	8145172	13284363
• Supply cores:	4 × 1.5 mm²	4 × 2.5 mm²
• Control core pair:	2 × 0.75 mm²	2 × 0.75 mm²
• Control core group:	3 × 0.75 mm²	3 × 0.75 mm²
• 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)

13.3.2 Electrical properties

Cable type	B	B/2.5
• Conductor resistance for 1.5/2.5 mm² (at 20° C):	Max. 13 Ω/km	Max. 8 Ω/km
• Conductor resistance for 0.75 mm² (at 20° C):	Max. 26 Ω/km	Max. 26 Ω/km
• Operating voltage for 1.5/2.5 mm² conductor:	Max. 600 V according to c UL us	Max. 600 V according to c UL us
• Operating voltage for 0.75 mm² conductor:	Max. 600 V according to c UL us	Max. 600 V according to c UL us

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• Insulation resistance at 20° C:	Min. 20 MΩ × km	Min. 20 MΩ × km

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13.3.3 Mechanical properties

- Suitable for cable carriers
  - Bending cycles > 2.5 million
  - Travel speed ≤ 3 m/s
- Bending radius in the cable carrier: 10 × diameter
  for fixed installation: 5 × 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.

13.3.4 Thermal properties

- Processing and operation: -30 to +90 °C (current-carrying capacity according to DIN VDE 0298-4)
  -30 to +80 °C according to c UL us
- Transport and storage: -40 to +90 °C (current-carrying capacity according to DIN VDE 0298-4)
  -30 to +80 °C according to c UL us
- Flame-retardant according to UL1581 Vertical Wiring Flame Test (VW-1)
- Flame-retardant according to CSA C22.2 Vertical Flame Test (FT-1)

13.3.5 Chemical properties

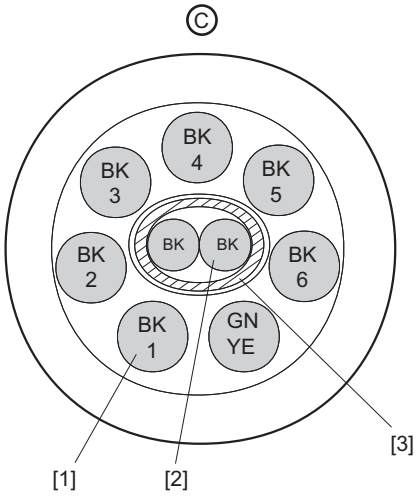
Cable type	B	B/2.5
• Oil resistant:	In accordance with VDE 0472 part 803, method B	In accordance with VDE 0282 part 10 HD 22.10 S1

- 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)

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13.4 Hybrid cable type "C"

13.4.1 Mechanical design



1484841483

[1] Cores 2.5 mm²
[2] Cores 0.75 mm²
[3] Shield

Cable type	**C**
	0152072
• Supply cores:	7 × 2.5 mm²
• Control cores:	2 × 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

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13.4.2 Electrical properties

- Conductor resistance for 2.5 mm^2: 8.5 Ω/km
- Conductor resistance for 0.75 mm^2: 26 Ω/km
- Operating voltage for 2.5 mm^2 cores: 600 V/1000 V
- Operating voltage for 0.75 mm^2 cores: AC 48 V
- Insulation resistance: 20 MΩ × km

13.4.3 Mechanical properties

- Bending radius For fixed installation: 6 × diameter

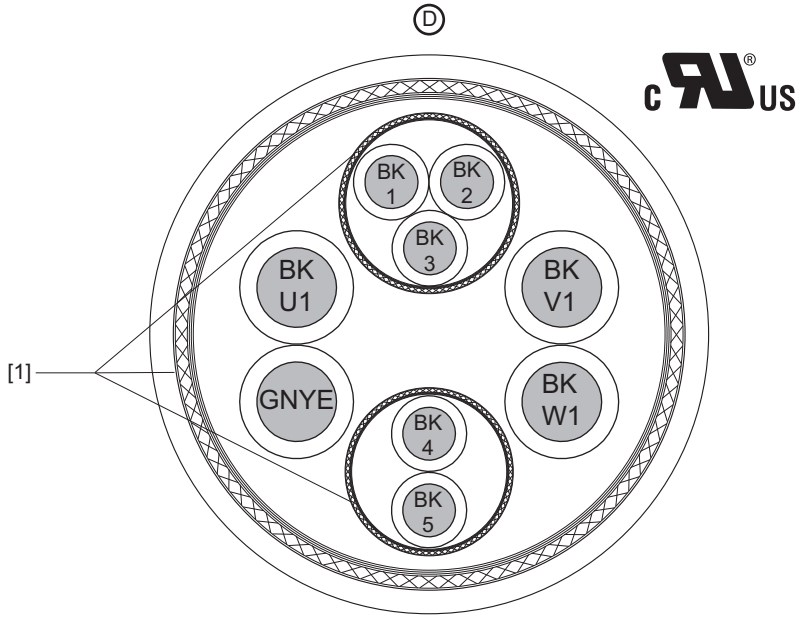
13.4.4 Thermal properties

- 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)

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13.5 Hybrid cable type "D"

13.5.1 Mechanical design



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 × 1.5 mm²	4 × 2.5 mm²	4 × 4.0 mm²	4 × 6.0 mm²	4 × 10.0 mm²
Control core pair	2 × 0.75 mm²	2 × 0.75 mm²	2 × 0.75 mm²	2 × 0.75 mm²	2 × 0.75 mm²
Brake control	3 × 1.0 mm²	3 × 1.0 mm²	3 × 1.5 mm²	3 × 1.5 mm²	3 × 1.5 mm²
Conductor insulation	PP (polypropylene)				
Conductor	Bare E-Cu strand, extra fine wires with individual wire 0.15 mm				
Shield	Made of tinned E-Cu wire				
Overall diameter	15.0 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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13.5.2 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 ≤ 3 ms^{-1}
  - Minimum bending radius: 10 × cable diameter
- Minimum bending radius for fixed installation: 5 × 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 jacket 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:

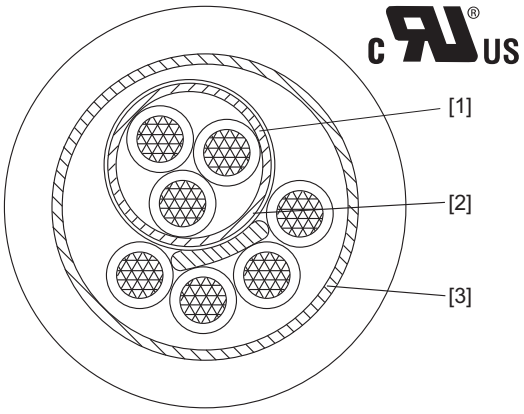
Fixed installation	Cable carrier installation
-40 °C to +90 °C (load capacity according to DIN VDE 0298-4)	-5 °C to +90 °C (load capacity according to DIN VDE 0298-4)
-30 °C to +80 °C according to UL758	-5 °C to +80 °C according to UL758

- Temperature range for transportation and storage:
  - -40 °C to +90 °C (load capacity according to DIN VDE 0298-4)
  - -30 °C to +80 °C according to UL758

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13.6 Hybrid cable type "E"

13.6.1 Mechanical design



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 × 1.5 mm²	4 × 2.5 mm²	4 × 4.0 mm²	4 × 6.0 mm²
Brake control	3 × 1.0 mm²	3 × 1.0 mm²	3 × 1.0 mm²	3 × 1.5 mm²
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)			

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13.6.2 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 ≤ 3 ms^{-1}
  - Minimum bending radius: 10 × cable diameter
- Minimum bending radius for fixed installation: 5 × 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 jacket 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 °C to +80 °C
  - -20 °C to +60 °C
- Temperature range for transportation and storage:
  - -40 °C to +90 °C (load capacity according to DIN VDE 0298-4)
  - -30 °C to +80 °C according to UL758

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14 Braking resistors

14.1 External braking resistors for MOVIPRO®

NOTICE

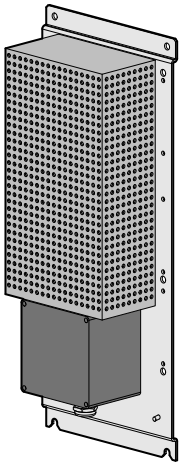
In case of incorrect assignment of the inverters, an overload may occur at the braking resistor and damage the braking resistor.

Damage to braking resistor.

- Observe the assignment of the braking resistor to the inverter and the project planning guidelines.

For regenerative operation, an external braking resistor is connected to MOVIPRO®. Observe the following technical data regarding the connection.

Flat-type resistors have internal thermal protection (fuse cannot be replaced) that interrupts the current circuit in the event of overload. Additional components for thermal monitoring are not necessary. The following figure shows an example of a size 1 braking resistor:



9007201338768011

14.1.1 Braking resistors – assignment

The following table shows the assignment of the external braking resistors to the different MOVIPRO® devices:

Braking resistor	Part number	Size	Terminal cross section	MOVIPRO®					
				Up to 2.2 kW	Up to 4 kW	Up to 7.5 kW	Up to 11 kW	Up to 15 kW	Up to 22 kW
BW100-004-00	17962188	Size 0	pre-assembled connection cable	•	•	•			
BW050-008-01	17962242	Size 1	6 mm²			•	•	•	•
BW033-012-01	17962196	Size 1	6 mm²				•	•	•
BW017-024-02	17962218	Size 2	6 mm²					•	•
BW014-028-02	17962226	Size 2	6 mm²						•

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14.1.2 Technical data according to IEC

		Braking resistor				
		BW100-004 -00	BW050-008 -01	BW033-012 -01	BW017-024 -02	BW014-028 -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	14.3 Ω
Continuous braking power	100% cdf	0.4 kW	0.8 kW	1.2 kW	2.4 kW	2.8 kW
	50% cdf	0.8 kW	1.6 kW	2.4 kW	4.8 kW	5.6 kW
	25% cdf	1.5 kW	3 kW	4.5 kW	9 kW	10.5 kW
	12% cdf	2.2 kW	4.4 kW	6.6 kW	13.2 kW	15.4 kW
	6% cdf	3.6 kW	7.2 kW	10.8 kW	21.6 kW	25.2 kW
	3% cdf	6 kW	12 kW	18 kW	36 kW	42 kW
	2% cdf	7.7 kW	15.4 kW	23.1 kW	46.2 kW	53.9 kW
	1% cdf	14.4 kW	28.8 kW	43.2 kW	86.4 kW	100.8 kW
Dimensions W × H × D		320 × 70 × 106 mm	550 × 105 × 230 mm		550 × 158 × 330 mm	

14.1.3 Technical data according to UL

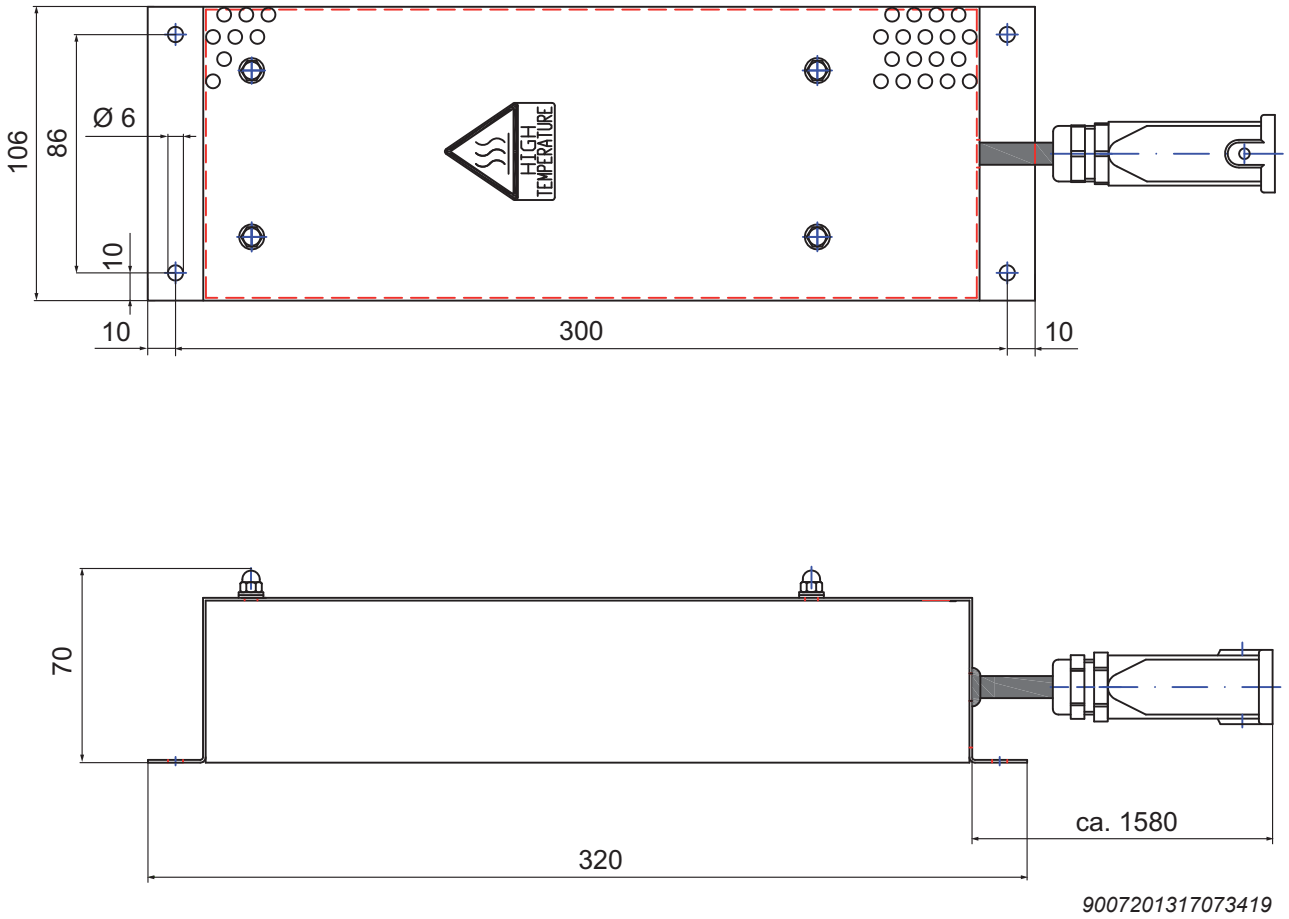
		Braking resistor				
		BW100-004 -00	BW050-008 -01	BW033-012 -01	BW017-024 -02	BW014-028 -02
Function		Carrying off of regenerative energy				
Degree of protection		IP65				
Mounting position		Flat-type resistor				
Resistance		100 Ω	50 Ω	33.3 Ω	16.7 Ω	14.3 Ω
Continuous braking power	100% cdf	0.24 kW	0.48 kW	0.72 kW	1.44 kW	1.68 kW
	50% cdf	0.5 kW	1 kW	1.5 kW	3 kW	3.5 kW
	25% cdf	1 kW	2 kW	3 kW	6 kW	7 kW
	12% cdf	2.2 kW	4.4 kW	6.6 kW	13.2 kW	15.4 kW
	6% cdf	3.6 kW	7.2 kW	10.8 kW	21.6 kW	25.2 kW
	3% cdf	6 kW	12 kW	18 kW	36 kW	42 kW
	2% cdf	7.7 kW	15.4 kW	23.1 kW	46.2 kW	53.9 kW
	1% cdf	14.4 kW	28.8 kW	43.2 kW	86.4 kW	100.8 kW
Dimensions W × H × D		320 × 70 × 106 mm	550 × 105 × 230 mm		550 × 158 × 330 mm	

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14.1.4 Dimension drawings

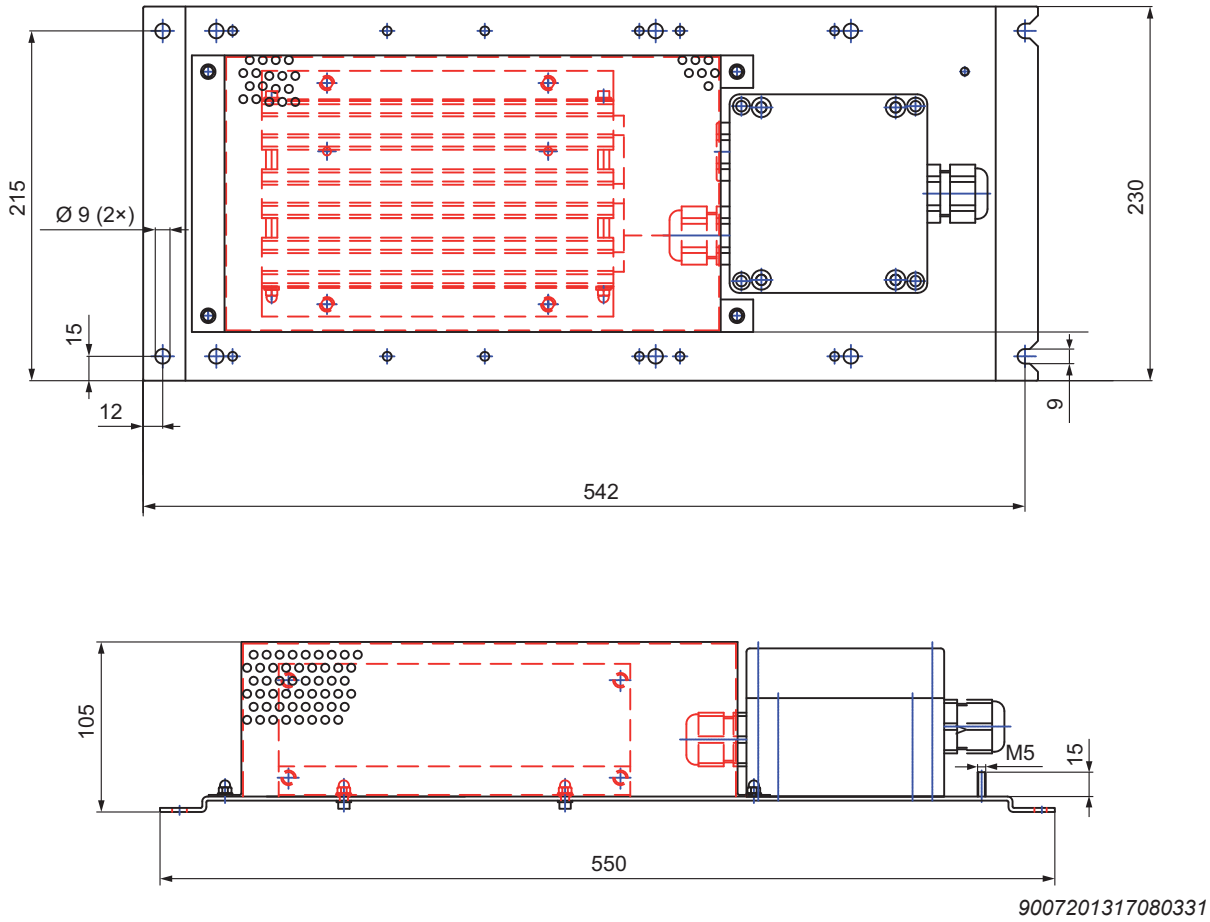
Size 0 braking resistor

The dimension drawing shows the mechanical dimensions in mm:



Size 1 braking resistors

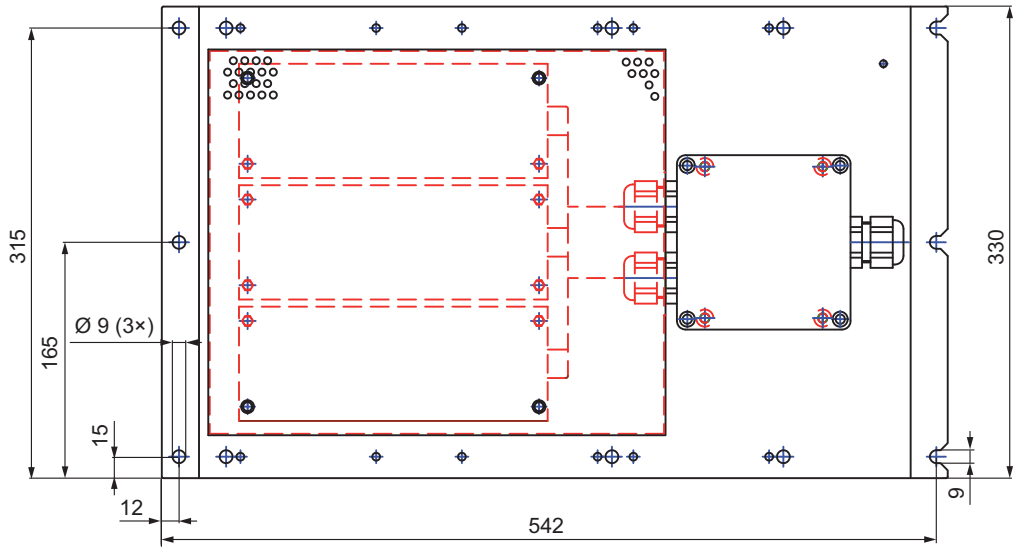
The dimension drawing shows the mechanical dimensions in mm:

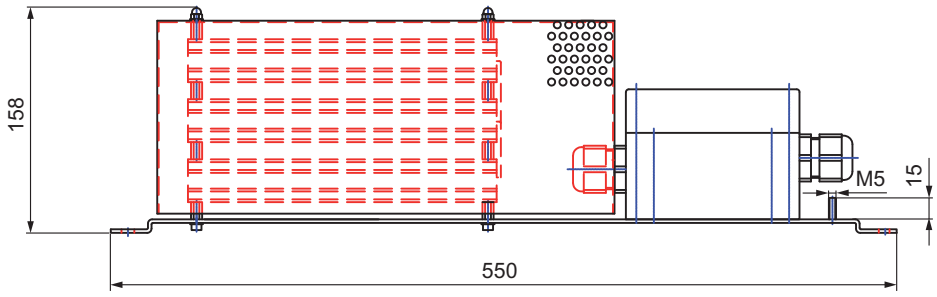


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Size 2 braking resistors

The dimension drawing shows the mechanical dimensions in mm:





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14.2 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 × 8 included in the scope of delivery.

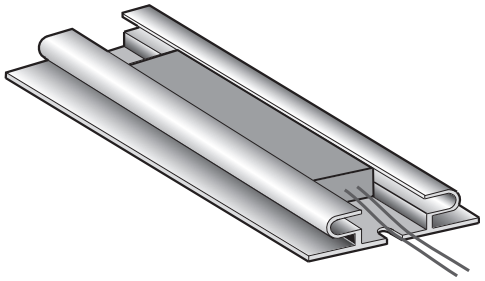
The following table shows the available external braking resistors:

MOVIFIT® FC/MOVIMOT®	Braking resistor	Part number	Protective grid
MTF11A003 – MTF11A015 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	–
MTF11A022 – MTF11A040 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	–

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14.2.1 4Q operation with integrated BW.. braking resistor

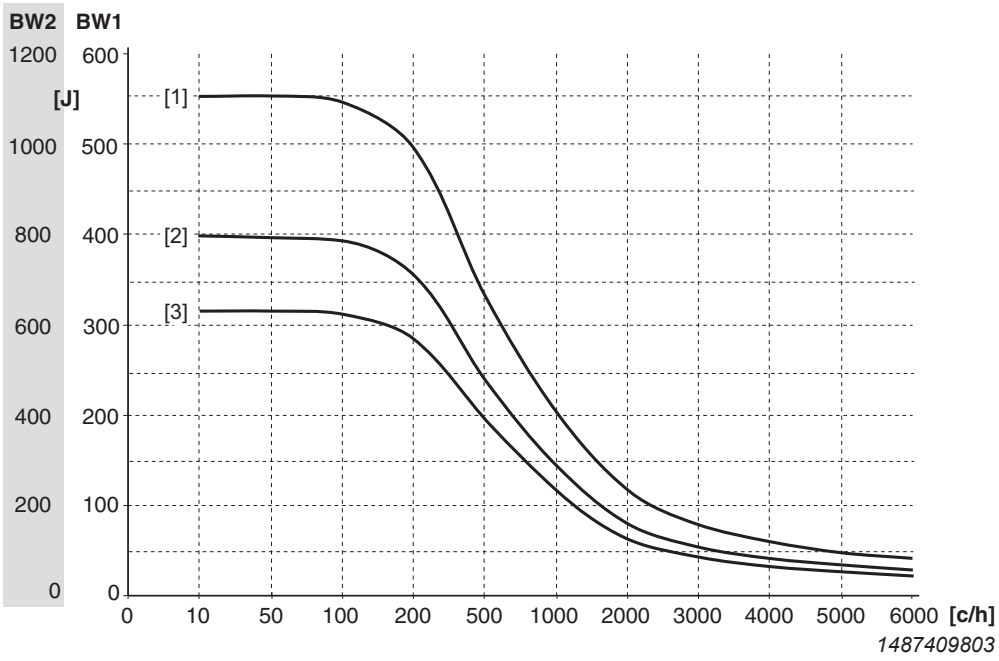
- 4Q operation with integrated braking resistor is recommended for applications in which the level of regenerative energy is low.
- The resistor protects itself (reversible) against regenerative overload by changing abruptly to high resistance and no longer consuming any more energy. The inverter then 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:



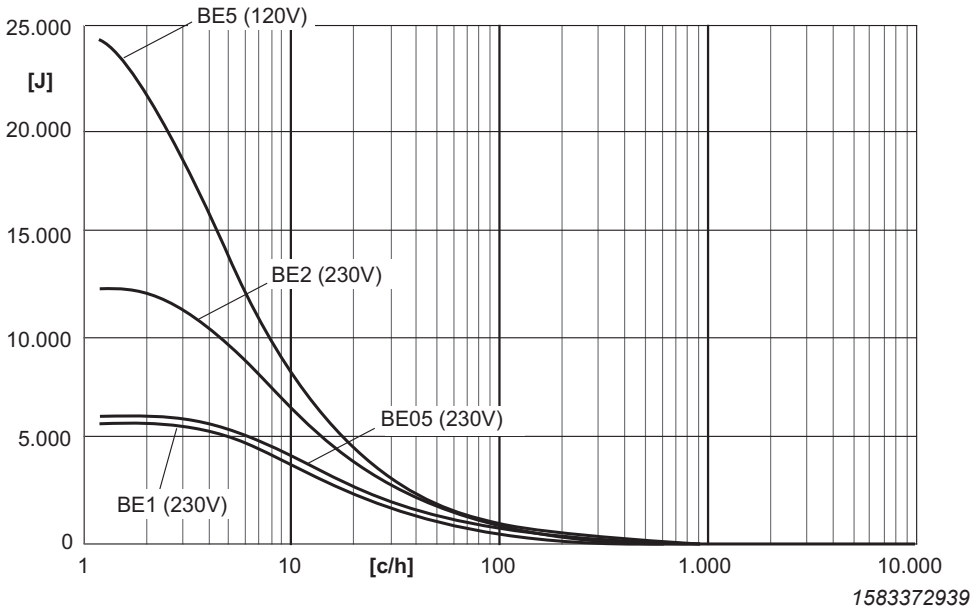
1487409803

[c/h] Cycles/hour
[1] Brake ramp 10 s
[2] Brake ramp 4 s
[3] Brake ramp 0.2 s

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14.2.2 4Q operation for motors with mechanical brake

- The brake coil can be used as a braking resistor in 4-Q operation.
- Brake voltage is generated internally within the unit, which means it is grid-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" (→ 🗎 459):
- The following figure shows the current-carrying capacity of the DR.. motor brake coils:



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14.2.3 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.

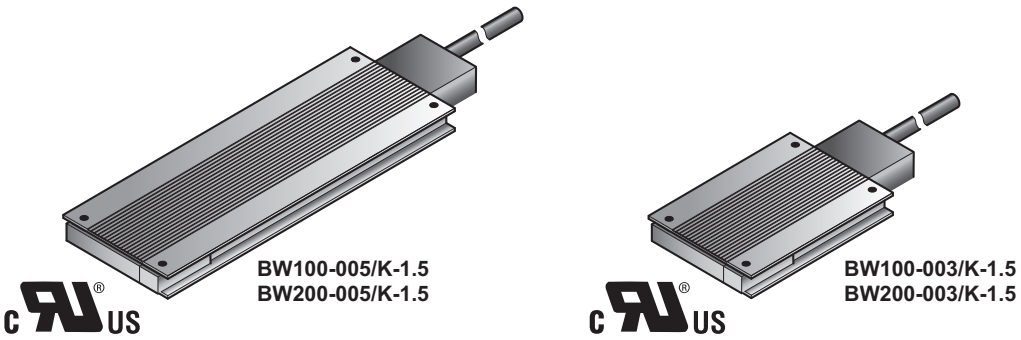
Damage to braking resistor.

- Observe the assignment of the braking resistor to the inverter and the project planning guidelines.

Flat-type resistors have internal thermal protection (fuse cannot be replaced) that interrupts the current circuit in the event of overload. Additional components for thermal monitoring are not necessary.

Braking resistors with IP65 degree of protection

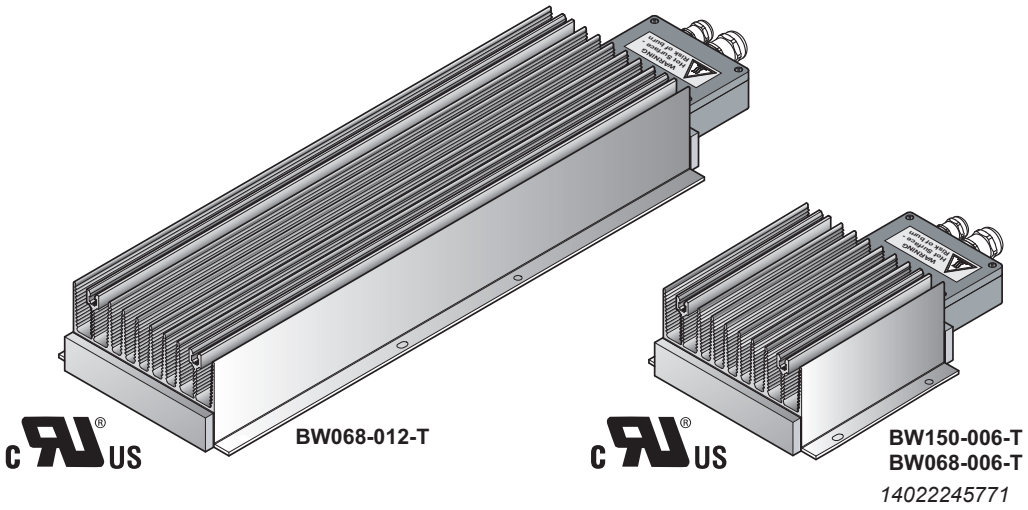
The following figure shows the external braking resistors with IP65 degree of protection:



14022228235

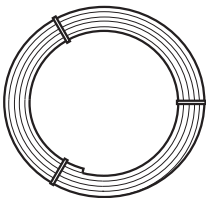
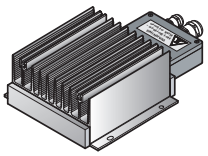
Braking resistors with IP66 degree of protection

The following figure shows the external braking resistors with IP66 degree of protection:



Connection cable

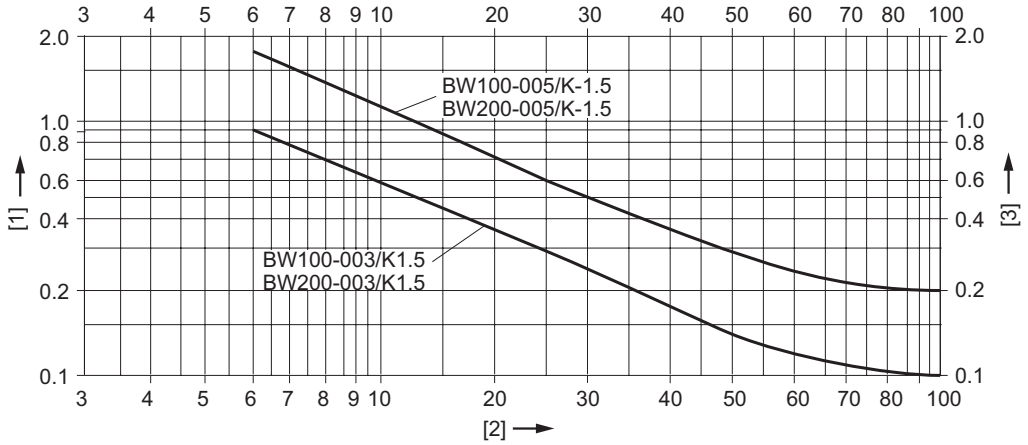
The following cable is available for connecting the external braking resistors:

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 

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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:

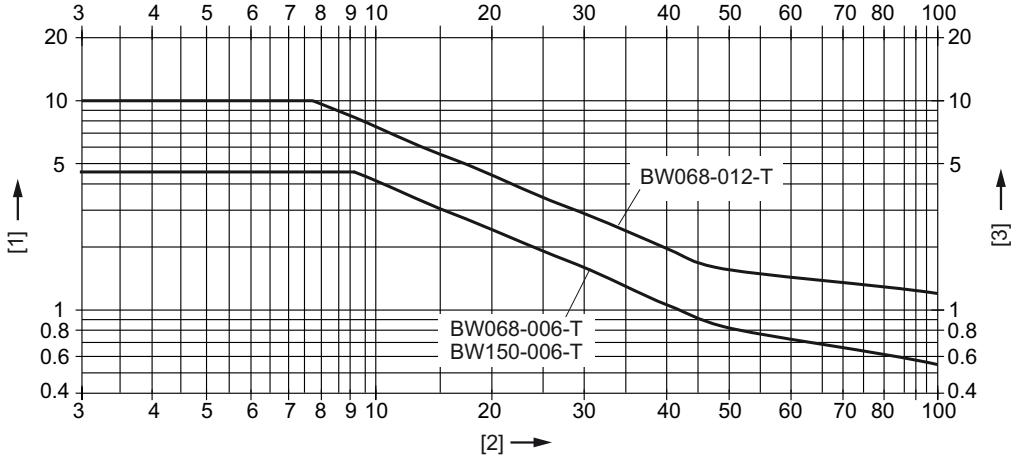


9007200744805003

[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

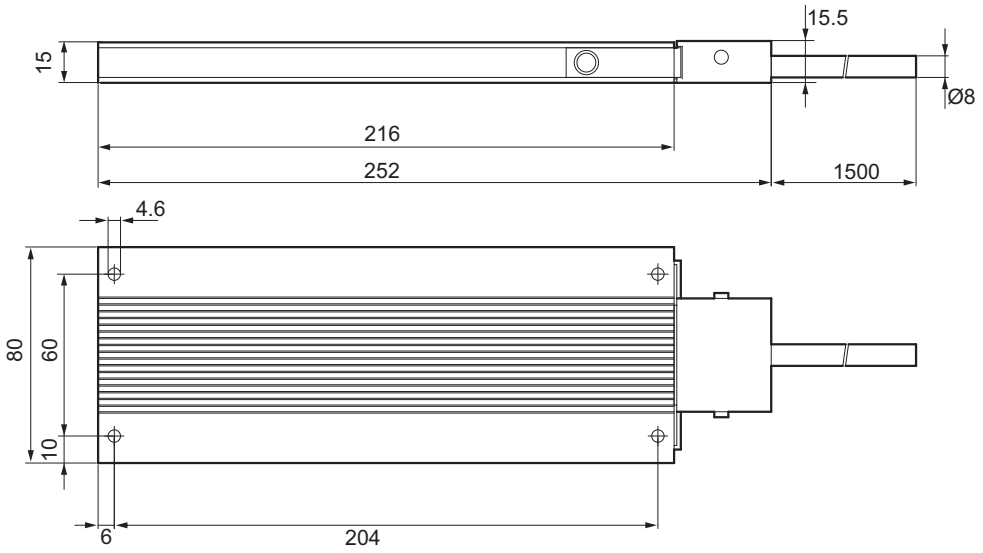
[1] Short-term braking power in kW
[2] Cyclic duration factor cdf in %
[3] Continuous power 100% cdf in kW

cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T_D \leq$ 120 s.

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Dimension drawing of BW100-005/K-1.5 and BW200-005/K-1.5

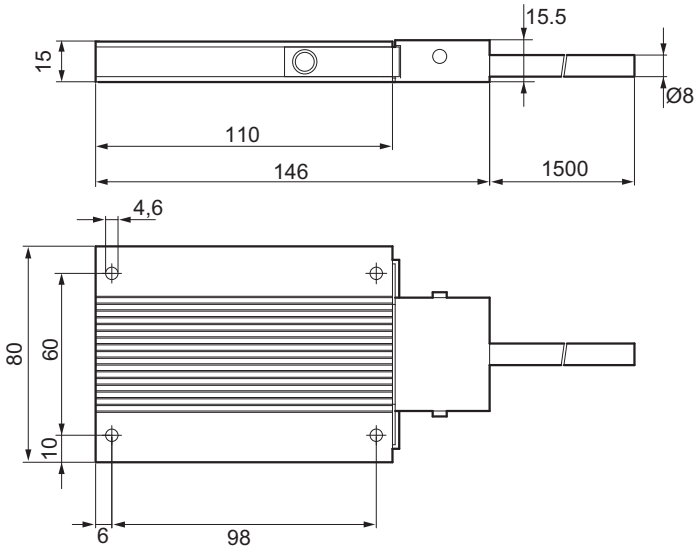
The following figure shows the dimensions of the external braking resistors BW100-005/K-1.5 and BW200-005/K-1.5:



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:

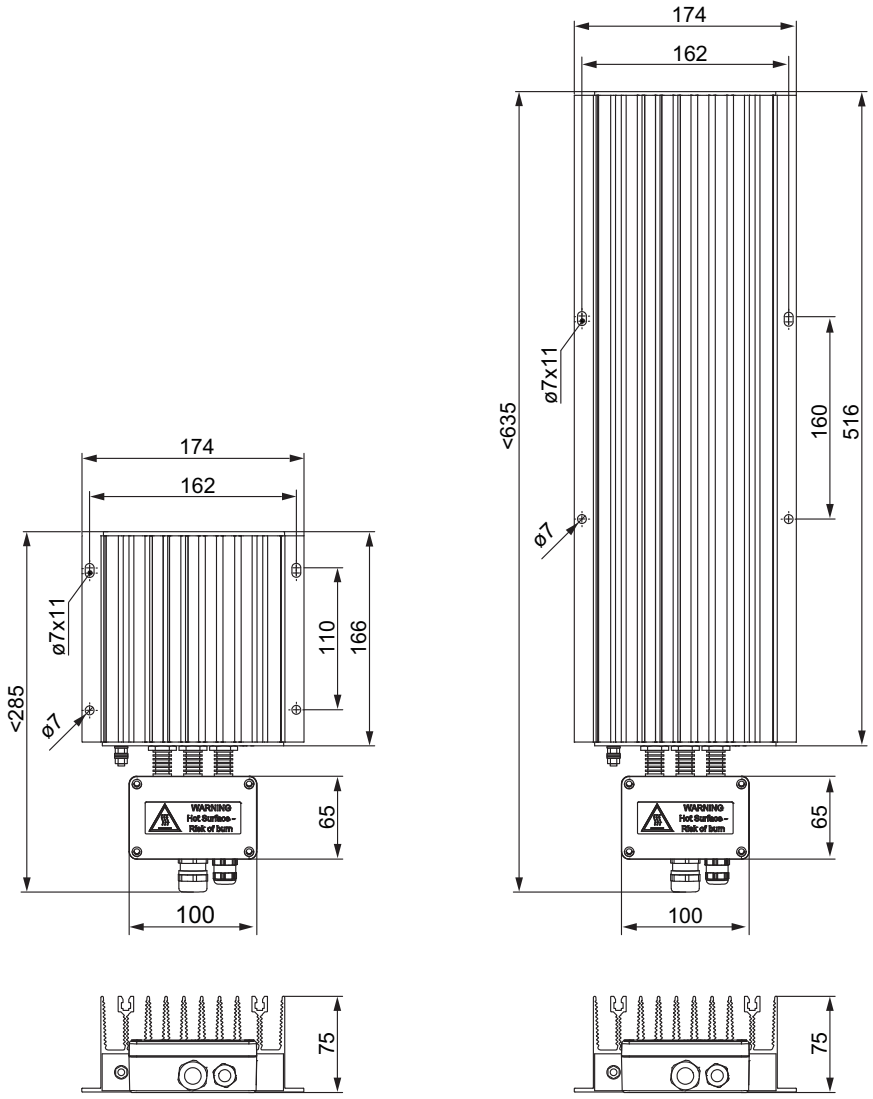


1490212491

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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-T[1]:



BW150-006-T
BW068-006-T

BW068-012-T

18014399999698315

1) The braking resistor is equipped with a temperature sensor.

15 Address directory SEW-EURODRIVE

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	Santa Fe	SEW EURODRIVE ARGENTINA S.A. Ruta Prov. 21 Km 7, Lote 41 Parque Industrial Alvear (2126) Gral. Alvear Prov. de Santa Fe	Tel. +54 341-317-7277 http://www.sew-eurodrive.com.ar sewsfe@sew-eurodrive.com.ar
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	Neuquén	SEW EURODRIVE ARGENTINA S.A.	Tel. +549 299 588 7950 http://www.sew-eurodrive.com.ar sewnqn@sew-eurodrive.com.ar
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	Brisbane	SEW-EURODRIVE PTY. LTD. 1 /34 Collinsvale St Rocklea, Queensland, 4106	Tel. +61 7 3276 5100 Fax +61 7 3276 5102 enquires@sew-eurodrive.com.au
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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
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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
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	Xi'An	SEW-EURODRIVE (Xi'An) Co., Ltd. No. 12 Jinye 2nd Road Xi'An High-Technology Industrial Development Zone Xi'An 710065	Tel. +86 29 68686262 Fax +86 29 68686311 xian@sew-eurodrive.cn
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	Hradec Králové	SEW-EURODRIVE CZ s.r.o. Čechova 498 50202 Hradec Králové	Tel. +420 495 510 141 Fax +420 495 521 313 miroslav.moravec@sew-eurodrive.cz

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Egypt			
Technical Office	Cairo	SEW-EURODRIVE Representative Office in Egypt REGUS Paramount Business Complex, Block 1258M, Unit 1, Ground Floor, Sheraton Heliopolis Cairo	Tel. +20 2 2503 2807 Fax +20 2 2503 2801 info@sew-eurodrive.eg
Estonia			
Sales	Tallin	ALAS-KUUL AS Loomäe tee 1, Lehmja küla 75306 Rae vald Harjumaa	Tel. +372 6593230 Fax +372 6593231 http://www.alas-kuul.ee info@alas-kuul.ee
Finland			
Assembly Sales Service	Hollola	SEW-EURODRIVE OY Vesimäentie 4 15860 Hollola	Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi
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	Tornio	SEW-EURODRIVE Oy Lossirannankatu 5 95420 Tornio	Tel. +358 201 589 300 Fax +358 3 780 6211 http://www.sew-eurodrive.fi sew@sew.fi
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	Oulu	SEW Industrial Gears Oy Paulaharjuntie 22 90530 Oulu	Tel. +358 201 589 300 sew@sew.fi
	Vaasa	SEW Industrial Gears Oy Asemakatu 7 65100 Vaasa	Tel. +358 201 589-300 sew@sew.fi
	Kuopio	SEW Industrial Gears Oy Leväsentie 23 70780 Kuopio	Tel. +358 201 589-300 sew@sew.fi
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Production	Forbach	SEW USOCOME Zone industrielle Technopôle Forbach Sud B. P. 30269 57604 Forbach Cedex	Tel. +33 3 87 29 38 00
	Brumath	SEW USOCOME 1 Rue de Bruxelles 67670 Mommenheim Cedex	Tel. +33 3 88 37 48 00
Assembly Sales Service	Bordeaux	SEW USOCOME Parc d'activités de Magellan 62 avenue de Magellan – B. P. 182 33607 Pessac Cedex	Tel. +33 5 57 26 39 00 dtcbordeaux@usocome.com
	Haguenau	SEW USOCOME 48-54 route de Soufflenheim B. P. 20185 67506 Haguenau Cedex	Tel. +33 3 88 73 67 00 dtchaguenau@usocome.com
	Lyon	SEW USOCOME 75 rue Antoine Condorcet 38090 Vaulx-Milieu	Tel. +33 4 74 99 60 00 dtclyon@usocome.com
	Nantes	SEW USOCOME Parc d'activités de la forêt 4 rue des Fontenelles 44140 Le Bignon	Tel. +33 2 40 78 42 00 dtcnantes@usocome.com
	Paris	SEW USOCOME Zone industrielle 2 rue Denis Papin 77390 Verneuil l'Étang	Tel. +33 1 64 42 40 80 dtcparis@usocome.com
Gabon			
Representation: Cameroon			
Germany			
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Service Competence Center	Mechanics / Mechatronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 76676 Graben-Neudorf	Tel. +49 7251 75-1710 Fax +49 7251 75-1711 scc-mechanik@sew-eurodrive.de
	Electronics	SEW-EURODRIVE GmbH & Co KG Christian-Pähr-Straße 12 76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 scc-elektronik@sew-eurodrive.de
	MAXOLUTION® Factory Automation	SEW-EURODRIVE GmbH & Co KG Eisenbahnstraße 11 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 sew@sew-eurodrive.de
Drive Technology Center	North	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 43 30823 Garbsen (Hannover)	Tel. +49 5137 8798-30 Fax +49 5137 8798-55 dtc-nord@sew-eurodrive.de

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	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 85551 Kirchheim (München)	Tel. +49 89 909551-21 Fax +49 89 909551-50 dtc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 40764 Langenfeld (Düsseldorf)	Tel. +49 2173 8507-10 Fax +49 2173 8507-50 dtc-west@sew-eurodrive.de
Drive Center	Berlin	SEW-EURODRIVE GmbH & Co KG Melitta-Schiller-Straße 8 12526 Berlin	Tel. +49 306331131-30 Fax +49 306331131-36 dc-berlin@sew-eurodrive.de
	Bremen	SEW-EURODRIVE GmbH & Co KG Allerkai 4 28309 Bremen	Tel. +49 421 33918-10 Fax +49 421 33918-22 dc-bremen@sew-eurodrive.de
	Hamburg	SEW-EURODRIVE GmbH & Co KG Hasselbinnen 11 22869 Schenefeld	Tel. +49 40298109-60 Fax +49 40298109-70 dc-hamburg@sew-eurodrive.de
	Saarland	SEW-EURODRIVE GmbH & Co KG Gottlieb-Daimler-Straße 4 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 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 97076 Würzburg-Lengfeld	Tel. +49 931 27886-60 Fax +49 931 27886-66 dc-wuerzburg@sew-eurodrive.de
Drive Service Hotline / 24 Hour Service			0 800 SEWHELP 0 800 7394357
Technical Offices	Augsburg	SEW-EURODRIVE GmbH & Co KG August-Wessels-Straße 29 86156 Augsburg	Tel. +49 821 22779-10 Fax +49 821 22779-50 tb-augsburg@sew-eurodrive.de
	Lake Constance	SEW-EURODRIVE GmbH & Co KG Dornierstraße 4 88677 Markdorf	Tel. +49 7544 96590-90 Fax +49 7544 96590-99 tb-bodensee@sew-eurodrive.de
	Dortmund	SEW-EURODRIVE GmbH & Co KG Hildastraße 8 44145 Dortmund	Tel. +49 231 229028-10 Fax +49 231 229028-20 tb-dortmund@sew-eurodrive.de
	Dresden	SEW-EURODRIVE GmbH & Co KG Hauptstraße 32 01445 Radebeul	Tel. +49 351 26338-0 Fax +49 351 26338-38 tb-dresden@sew-eurodrive.de
	Erfurt	SEW-EURODRIVE GmbH & Co KG Dubliner Straße 12 99091 Erfurt	Tel. +49 361 21709-70 Fax +49 361 21709-79 tb-erfurt@sew-eurodrive.de
	Güstrow	SEW-EURODRIVE GmbH & Co KG Glasewitzer Chaussee 33 B 18273 Güstrow P.O. Box Postfach 1216 – D-18262 Güstrow	Tel. +49 3843 8557-80 Fax +49 3843 8557-88 tb-guestrow@sew-eurodrive.de
	Hamburg	SEW-EURODRIVE GmbH & Co KG Hasselbinnen 11 22869 Schenefeld	Tel. +49 40298109-60 Fax +49 40298109-70 dc-hamburg@sew-eurodrive.de
	Hannover / Garbsen	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Str.40-42 30823 Garbsen	Tel. +49 5137 8798-10 Fax +49 5137 8798-50 tb-hannover@sew-eurodrive.de
	Heilbronn	SEW-EURODRIVE GmbH & Co KG Franz-Lutz-Straße 18 74391 Erligheim	Tel. +49 7143 8738-0 Fax +49 7143 8738-25 tb-heilbronn@sew-eurodrive.de
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Koblenz	SEW-EURODRIVE GmbH & Co KG Carl-Benz-Straße 8 56218 Mülheim-Kärlich	Tel. +49 2630 91930-10 Fax +49 2630 91930-90 tb-koblenz@sew-eurodrive.de
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Mannheim	SEW-EURODRIVE GmbH & Co KG Besselstraße 26 68219 Mannheim	Tel. +49 621 71683-10 Fax +49 621 71683-22 tb-mannheim@sew-eurodrive.de
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Münster	SEW-EURODRIVE GmbH & Co KG Hafenplatz 4 48155 Münster	Tel. +49 251 41475-11 Fax +49 251 41475-50 tb-muenster@sew-eurodrive.de
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Great Britain			
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Service Competence Center	Southern England	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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	Northern Ireland	Heyn Engineering (NI) Ltd. 1 Corry Place, Belfast, BT3 9AH	Tel. +44 02890350022 Fax +44 02890350012 http://www.heyn.co.uk info@heyn.co.uk
Drive Center	Scotland	SEW-EURODRIVE Ltd. 133-135 Deerdykes View Cumbernauld G68 9HF	Tel. +44 17 8647-8730
Greece			
Sales	Athens	Christ. Boznos & Son S.A. 12, K. Mavromichali Street P.O. Box 80136 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			
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Sales	Reykjavik	Varma & Vélaverk ehf. Knarrarvogi 4 104 Reykjavík	Tel. +354 585 1070 Fax +354 585)1071 https://vov.is/ vov@vov.is
India			
Registered Office Assembly Sales Service	Vadodara	SEW-EURODRIVE India Private Limited 302, NOTUS IT PARK, Sarabhai Campus, Beside Notus Pride, Genda Circle, Vadodara 390023 Gujarat	Tel. +91 265 3045200 Fax +91 265 3045300 https://www.seweurodriveindia.com salesvadodara@seweurodriveindia.com
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	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 35 628700 Fax +91 21 35 628715 salespune@seweurodriveindia.com
	Tapukara	SEW-EURODRIVE India Private Limited Plot No SP-6-46, Tapukara, Karoli Industrial Area, No. 1, district : Alwar , Rajasthan - 301707	Tel. +91 265 3045200 Fax +91 265 3045300 tapukara.plant@seweurodriveindia.com
Sales	Gurgaon	SEW-EURODRIVE India Private Limited Global Business Park, Sector -26, M.G. Road, Sikanderpur Unit No. 205, 2nd Floor, Tower – D Gurugram 122002, Haryana	Tel. +91 9958376669 salesgurgaon@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 – 431005, Maharashtra.	Tel. +91 86000 12333 salesaurangabad@seweurodriveindia.com
	Bangalore	SEW-EURODRIVE India Private Limited Sy.no:41-P3, Peenya1, Phase 1A, Peenya Village, Yeswanthapura Hobli, Bangalore North Taluk, Bangalore - 560058, Karnataka	Tel. +91 80 28370664 Fax +91 80 28370665 salesbangalore@seweurodriveindia.com
	Bangalore	SEW-EURODRIVE India Private Limited # C-104, 3rd Block, KSSIDC Complex, Electronic City. Bangalore – 560100, Karnataka	Tel. +91 80 28522662 / 28522663 salesbangalore@seweurodriveindia.com
	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 #5358/59, Gali No.-4, SBS Nagar, Adjoining Utsav Palace, Rupnagar - 140001 Ropar, Punjab	Tel. +91 81462 67606 saleschandigarh@seweurodriveindia.com
	Chennai	SEW-EURODRIVE India Private Limited 2nd Floor, Josmans Complex, No. 5, McNichols Road, Chetpet Chennai - 600031, Tamil Nadu	Tel. +91 44 42849812 / 13 / 14 / 15 Fax +91 44 42849816 saleschennai@seweurodriveindia.com
	Coimbatore	SEW-EURODRIVE India Private Limited JK Center No,55, offc No.1, I Floor Sowripalayam Pirivu Road, Opp.Kannapiran Mills Coimbatore - 641028, Tamil Nadu	Tel. +91 422 2322420 Fax +91 422 2323988 salescoimbatore@seweurodriveindia.com
	Cuttack	SEW-EURODRIVE India Private Limited Sekhar Galaxy Flat No-302, 3rd Floor GGP Colony,Bhubaneswar Dist-Khordha State-Odisha-751025	Tel. +91 9937446333 salescuttack@seweurodriveindia.com
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	Faridabad	SEW-EURODRIVE India Private Limited H.No.:-1172 ,Sector-9 , Near St Anthony School Faridabad 121006	Tel. +91 99580 09275 salesfaridabad@seweurodriveindia.com
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	Secunderabad	SEW-EURODRIVE India Private Limited 408, 4th Floor, Meridian Place Green Park Road, Amerpeet Hyderabad - 500016, Telangana	Tel. +91 40 23414698 Fax +91 40 23413884 saleshyderabad@seweurodriveindia.com
	Jaipur	SEW-EURODRIVE India Private Limited E-54, Roop Vihar, Near vivek vihar metro station, New sanganer Road Jaipur 302019, Rajasthan.	Tel. +91 7728896489 salesjaipur@seweurodriveindia.com

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Mumbai	SEW-EURODRIVE India Private Limited 312 A, 3rd Floor, Acme Plaza, J.B. Nagar, Andheri Kurla Road, Andheri (E) Mumbai - 400059, Maharashtra	Tel. +91 22 28348440 Fax +91 22 28217858 salesmumbai@seweurodriveindia.com
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Nashik	SEW-EURODRIVE India Private Limited F Road , Mahatma Nagar Flat No 1, Plot No: 144, SHAMBHAVI Appt, Nashik – 422 007, Maharashtra	Tel. +91 96657 52978 salesnashik@seweurodriveindia.com
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	Surabaya	PT. TRIAGRI JAYA ABADI Jl. Sukosemolo No. 63, Galaxi Bumi Permai G6 No. 11 Surabaya 60111	Tel. +62 31 5990128 Fax +62 31 5962666 sales@triagri.co.id http://www.triagri.co.id
	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
Ireland			
Sales Service	Dublin	Alperton Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11	Tel. +353 1 830-6277 Fax +353 1 830-6458 http://www.alperton.ie info@alperton.ie
Israel			
Sales	Tel Aviv	Liraz Handasa Ltd. Ahofer Str 34B / 228 58858 Holon	Tel. +972 3 5599511 Fax +972 3 5599512 http://www.liraz-handasa.co.il office@liraz-handasa.co.il
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Assembly Sales Service	Milan	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Via Bernini,12 20033 Solaro (Milano)	Tel. +39 02 96 980229 Fax +39 02 96 980 999 http://www.sew-eurodrive.it milano@sew-eurodrive.it
Drive Technology Center	Caserta	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Strada Consortile, Zona Industriale ASI 81032 Carinaro (Caserta)	Tel. +39 0823 219011 Fax +39 02 96 980 599 caserta@sew-eurodrive.it
Drive Center	Bologna	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Via della Grafica, 47 40064 Ozzano dell'Emilia (Bo)	Tel. +39 051 65-23-801 Fax +39 02 96 980 499 bologna@sew-eurodrive.it

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	Pescara	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Viale Europa,132 65010 Villa Raspa di Spoltore (PE)	Tel. +39 085 41-59-427 Fax +39 02 96 980 699 pescara@sew-eurodrive.it
	Turin	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Filiale Torino c.so Unione Sovietica 612/15 - int. C 10135 Torino	Tel. +39 011 3473780 Fax +39 02 96 980 799 torino@sew-eurodrive.it
	Verona	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Via Antonio Meucci, 5 37042 - Caldiero (VR)	Tel. +39 045 89-239-11 Fax +39 02 96 980 814 verona@sew-eurodrive.it
Ivory Coast			
Sales	Abidjan	SEW-EURODRIVE SARL Ivory Coast Rue des Pêcheurs, Zone 3 26 BP 916 Abidjan 26	Tel. +225 27 21 21 81 05 Fax +225 27 21 25 30 47 info@sew-eurodrive.ci http://www.sew-eurodrive.ci
Japan			
Assembly Sales Service	Iwata	SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Iwata Shizuoka 438-0818	Tel. +81 538 373811 Fax +81 538 373814 http://www.sew-eurodrive.co.jp sewjapan@sew-eurodrive.co.jp
Technical Offices	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 kyoto@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 5408-0521 Fax +81 3 5408-7550 tokyo@sew-eurodrive.co.jp
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	Pavlodar	SEW-EURODRIVE LLP 6/2, Lunacharsky str., office 46 140000, Pavlodar	Tel. +7 (771) 993 09 16 pavlodar@sew-eurodrive.com
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Sales	Riga	SIA Alas-Kuul Katlakalna 11C 1073 Riga	Tel. +371 6 7139253 Fax +371 6 7139386 http://www.alas-kuul.lv info@alas-kuul.com
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 , Saudi Arabia, Syria)	Beirut	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 63431 Alytus	Tel. +370 315 79204 Fax +370 315 56175 http://www.irseva.lt irmantas@irseva.lt
Luxembourg			
Representation: Belgium			
Macedonia			
Sales	Skopje	Boznos DOOEL Dime Anicin 2A/7A 1000 Skopje	Tel. +389 23256553 Fax +389 23256554 http://www.boznos.mk
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Drive Technology Center	Bernolákovo	SEW-Eurodrive SK s.r.o. Priemyselná ulica 6267/7 900 27 Bernolákovo	Tel.+421 2 48 212 800 http://www.sew-eurodrive.sk sew@sew-eurodrive.sk
Slovenia			
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Sweden			
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	Stockholm	SEW-EURODRIVE AB Björkholmsvägen 10 141 46 Huddinge	Tel. +46 8 449 86 80 Fax +46 8 449 86 93 stockholm@sew.se
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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
Tanzania			
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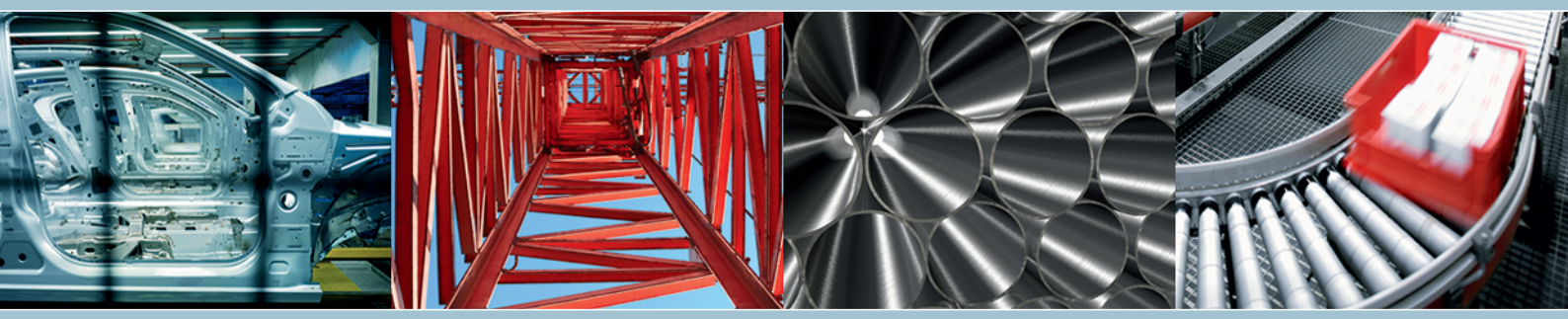
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